

## Port Information Guide

**Date issued:** September 8, 2017

**Date effective:** October 8, 2017

### Introduction

This notice of amendment is posted publicly to notify industry, stakeholders and the public of several intended amendments to the Vancouver Fraser Port Authority's practices and procedures document, the Port Information Guide. Anyone that may be affected by these amendments may comment on the proposed changes. All comments received will be taken into consideration before any change is implemented.

Pursuant to the *Canada Marine Act*, and the *Port Authorities Operations Regulations*, Vessels within the jurisdiction of the Vancouver Fraser Port Authority will be required to comply with the revisions and additions below.

The below amendments will be incorporated into the Port Information Guide on or after October 8, 2017. There will also be several corrections to language errors, and general housekeeping of the document that will not affect intent or application. New or amended sections are shown in red.

### Proposed amendments

#### 1. Section 5.7: Construction, Works or Development

Addition/Amendment:

The addition of information about Transport Canada's Navigation Protection Program.

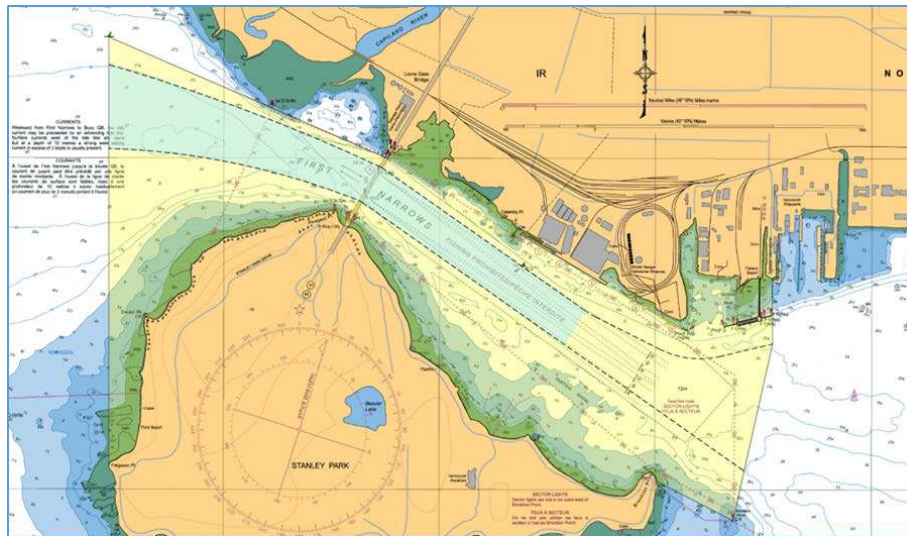
"Any proposals for construction, works, demolition or development may also require approval from Transport Canada Navigation Protection Program under the Navigation Protection Act. For more information visit their website."

#### 2. Section 8.12: First Narrows MRA Procedures (MRA-1)

Addition/Amendment:

The implementation of a Movement Restriction Area to be known as the First Narrows Movement Restriction Area (MRA-1). Below is a high-level summary of the material changes to the procedures contained in Section 8.12 of the Port Information Guide.

Figure 1: Updated First Narrows MRA boundary



## Definition of Tier 1 vessel and Tier 2 vessel

All vessels operating within the MRA-1 are designated as either Tier 1 or Tier 2 vessels, and as such, are prescribed with specific procedures that must be adhered to at all times. The designations for vessels, are as described below.

**Tier 1 vessel:** Means any vessel which falls under the following categories:

- All piloted vessels and tug and barge combinations when piloted, regardless of tonnage;
- All non-piloted tug and barge combinations specifically designed for pushing and tractor tugs towing alongside with a barge of 10,000 tonnes or more carrying capacity;
- All non-piloted vessels including barges and articulated tugs and barges (ATBs) when in product.

**Tier 2 vessel:** Means all other vessel traffic operating in the MRA-1 boundaries.

## Vertical clearances

For consistency, all previous references to the First Narrows Bridge and Lions Gate Bridge are now consolidated into the term “First Narrows Lions Gate Bridge”.

Due to the curvature of the bridge deck, the maximum air draft for transit is subject to the moulded breadth of the vessel, actual tidal height, air temperature, bridge traffic load and the requirement for a minimum safe overhead clearance of 2m for an MRA-1 transit without port authority approval based on the height of the First Narrows Lions Gate Bridge above the boundaries of the navigation channel. Reference should be made to Appendix A: *First Narrows Controlling Depths and Bridge Heights based on MRA moulded breadth factor for Channel Width*.

The width of the navigable channel is 222 metres. The minimum channel width required for transiting MRA-1 without tug assist is 3.7 times the vessel moulded breadth. The maximum allowable moulded breadth with the navigation channel design is therefore 60 metres.

## **Under Keel Clearances (UKC)**

The maximum unrestricted draft for transit is 13.6m at chart datum (0.0m tide). A minimum Under Keel Clearance (UKC) of 10% of a vessel's static draft is required across the profile of, and up to the boundaries of, the navigation channel. The control depth of the navigation channel is therefore 15m at chart datum (0.0m tide), however deeper draft vessels may transit subject to tidal windows.

## **Communications**

The role of Marine Communications and Traffic Services (MCTS), in the context of providing oversight to traffic movements in First Narrows including the declaration of a Clear Narrows under prescribed conditions, is clearly defined.

The requirement to provide notice in advance to the port authority's operations centre and MCTS when planning warping operations alongside at berths within MRA-1 is emphasized. Similarly, a reminder is provided of port authority conditions related to such operations.

Bunkering operations, including delivery of lubricating oils, at berths within MRA-1 are now subject to port authority approval whether delivery is to the offshore side of the vessel by barge or from the dock. The requirement to notify MCTS prior to and on completion of bunkering operations is prescribed.

## **MRA-1 Restrictions**

Specific length overall (LOA), moulded breadth, draft and air draft restrictions for an MRA-1 transit are defined. These have been determined by simulation studies conducted on behalf of the port authority by BC Coast Pilots under the supervision of LANTEC Marine.

An MRA-1 requirement for loaded tankers to be at an even keel or trimmed by the stern is introduced and the protocol to be followed in the case of a vessel which is defective or difficult to manoeuvre is described.

Non-piloted tug and barge combinations with a barge of 15,000 tonnes or more carrying capacity are now restricted from transiting MRA-1 without the prior approval from the port authority.

## **Clear Narrows declaration**

Vessels for which a Clear Narrows declaration is required by MCTS are now defined. Similarly, the required actions of vessels impacted by the declaration are laid down.

## **Speed restrictions**

Vessel speed limits to be followed during an MRA-1 transit are prescribed including the need to take account of possible interaction with vessels at berth within MRA-1.

## **Visibility restrictions**

Guidance on navigation within MRA-1 in restricted visibility of less than one mile is introduced. Under these circumstances all Tier 1 vessels, including vessels engaged in towing, may request the declaration of a Clear Narrows by MCTS.

## **Wind restrictions**

While no specific wind restrictions are introduced, high wind impacted vessels such as cruise ships, container vessels and car carriers are advised to exercise caution in the event of strong cross winds.

## **Order of transit**

In circumstances where more than one vessel seeks to transit MRA-1 simultaneously, a prescribed order of seniority for transit is introduced. The flexibility for logical amendment of transit sequence is maintained in order to ensure overall efficiency of traffic movement.

## **Overtaking and safe distance between vessels**

New regulations governing overtaking and minimum safe distance between vessels within MRA-1 are introduced.

- Tier 1 vessels in transit are not permitted to meet or overtake each other within 0.75 nautical miles either side of First Narrows Lions Gate Bridge.
- Tier 1 vessels transiting in the same direction are required to maintain a safe separation of 0.3 nautical miles or more distance between them.

## **Tier 2 vessel regulations including pleasure craft**

New regulations governing the conduct of pleasure craft and fishing vessels in MRA-1 are introduced, including the exclusion of small pleasure craft and vessels engaged in fishing from MRA-1.

## **Towing regulations**

New regulations are introduced with respect to towing operations within MRA-1 as related to articulated tugs and barges, conventional barge tows and log booms.

## **Pilotage requirements**

Users are reminded that pilotage within the port authority's jurisdiction is governed by the Pacific Pilotage Authority Regulations 9 and 10.

The existing pilotage authority requirement for two pilots to be assigned to tankers of 40,000 tonnes SDWT in product when executing an MRA-1 transit and to provide details of individual vessel Mooring and Towing Arrangement is added to port authority regulations.

## **Vessel assist tug requirements**

Tethered tractor/ASD tugs are now prescribed when providing assistance to a vessel transiting MRA-1. In addition, such tugs shall be tethered prior to entering MRA-1 and shall, as a minimum, remain tethered until clear of MRA-1.

In addition to existing tug assist requirements for tankers of LOA 185 metres and above and/or 40,000 tonnes SDWT and above when transiting MRA-1, tidal windows are introduced for very large container ships and bulk carriers. In certain cases, restricted tidal windows may be mitigated by the use of a tug(s).

Consistent with existing pilotage authority regulations, the interrupted passage of an outbound (westbound) tanker in product originating from a transit of MRA-2, does not reduce the requirement for a minimum of two escort tugs for MRA-1 transit.

### **Table 1: First Narrows MRA-1 Transit Procedures Deep-sea Vessels – Summary Matrix**

A new matrix has been developed to summarize important regulatory language now governing MRA-1 transit procedures.

Table 1 is broken down between tankers, container vessels and bulk carriers of varying specifications, categorized as follows:

- tug requirements
- restricted transit window based on tidal height
- current restriction
- wind restriction

## **3. Section 8.13: Second Narrows MRA Procedures (MRA-2)**

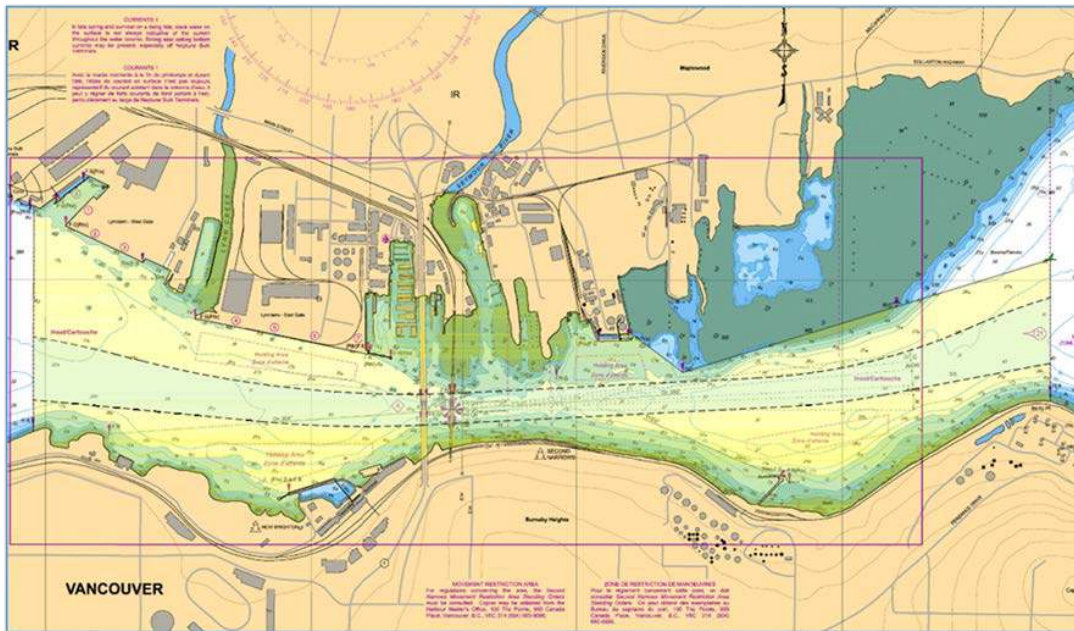
### **Addition/Amendment:**

The alteration of the Second Narrows MRA-2 boundary and an updated drawing reflecting the change that excludes Maple Flats from the MRA. Additionally, various amendments to achieve consistency and interoperability with MRA-1 procedures, such as the inclusion of terms Tier 1 vessel, Tier 2 vessel and moulded breadth. As well, clarification of air draft requirements in MRA-2 to refer to the maximum vessel air draft dependent on vessel beam instead of a control height based on the design vessel beam. A minimum two-metre overhead clearance is built into the limits.

MRA-2 amendments as they appear in the updated Port Information Guide are as follows:

- **Entire MRA-2 procedures**
  - Various instances where “beam” has been replaced with “moulded breadth.”
  - Various instances where “MRA Vessels” has been replaced by “Tier 1 vessel.”
  - Various instances where “Non-MRA Vessels” have been replaced by “Tier 2 vessel.”
- **MRA-2 Introduction**
  - To the east, by a line drawn north from Berry Point Light (approximately 1.5 miles east of the Second Narrows Railway Bridge on the south shore of Burrard Inlet) and the intersection of a line drawn from the southeast corner of the Canexus dock to the “West Nexun” Navigational marker through the “LL410” navigational marker.

Figure 2: Updated Second Narrows MRA boundary



- **MRA-2 Application**
  - MRA-2 procedures shall supersede the Department of Fisheries and Oceans Canada Pacific Fishery Management Regulations in the area of Sub-Area 28-11 which overlaps the MRA-2 area.
- **MRA-2 Restrictions**
  - Tier 1 vessel: Means any of the following vessels:
    - All piloted vessels and tug and barge combinations when piloted, regardless of tonnage.
    - All non-piloted tug and barge combinations specifically designed for pushing and tractor tugs towing alongside with a barge of 10,000 tonnes or more carrying capacity.
    - All non-piloted vessels including barges and articulated tugs and barges (ATBs) when in product.
  - Tier 2 vessel: Means all other vessel traffic operating in the MRA-2 boundaries.
- **MRA-2 Restrictions (Transit Windows)**
  - All Tier 1 vessels are subject to observing MRA-2 transit windows during their transit and when manoeuvring within MRA-2.
  - Predicted transit windows for vessels restricted by air draft can be provided by VPFA on request to VFPA Operations Centre well in advance of the actual transit.
- **MRA-2 Vessel Assist Tug Requirements**
  - “Tractor tugs or tugs of equivalent capability” replaced with “tractor/ASD tugs.”

Appendix B to the Port Information Guide, SECOND NARROWS – CONTROLLING DEPTHS AND BRIDGE HEIGHTS BASED ON MRA-2 MOULDED BREADTH FACTOR FOR CHANNEL WIDTH, has been amended to replace the column “Bridge Height (HHWLT)” with a column for “Maximum Vessel Air Draft (HHWLT).” The maximum air draft allowed for transiting MRA-2 without VFPA approval allows for a 2 metre overhead clearance, and is based on the height of the Second Narrows Ironworkers Memorial Bridge above the navigation channel.

Refer to **Appendix B, SECOND NARROWS – CONTROLLING DEPTHS AND BRIDGE HEIGHTS BASED ON MRA-2 MOULDED BREADTH FACTOR FOR CHANNEL WIDTH:**

- Vessels with a moulded breadth of 27m and less have a maximum unrestricted air draft of 42.7m
- Vessels with a moulded breadth of between 27.1 metres and 36 metres have a maximum unrestricted air draft of 42.38 metres
- Vessels with a moulded breadth of between 36.1 metres and 45 metres have a maximum unrestricted air draft of 41.82 metres
- Vessels with a moulded breadth of between 45.1 metres and 48 metres have a maximum unrestricted air draft of 40.95 metres

Vessel Moulded Breadth	Channel Width	Control Depth at Chart Datum	Maximum Vessel Air Draft (HHWLT)
<b>20.0</b>	57.0	14.7	<b>42.7</b>
<b>20.1</b>	57.3	14.6	<b>42.7</b>

#### 4. Section 8.19: Recreational Vessels

Addition/Amendment:

The amendment of the boundary of First Narrows MRA-1 and Second Narrows MRA-2 to delineate where recreational activities are not permitted. This amendment minimizes the MRA boundaries to permit recreational activity, such as fishing and sailing, in areas that it has historically occurred such as Maplewood Flats or Ambleside Beach. Images of the amended boundaries are contained in items 2 and 3 of this notice.

“For safety reasons, vessels engaged in fishing, personal watercraft such as jet skis, row boats, canoes and vessels, sailing or proceeding without mechanical power, are not permitted within the boundaries of First Narrows MRA (MRA-1), Second Narrows MRA (MRA-2) and all areas of Vancouver Harbour in between. Fishing, sailing and other non-powered recreational activity is permitted only in designated areas outside of the boundaries of MRA-1, MRA-2 and Vancouver Harbour, for example west of the MRA-1 western boundary or east of the MRA-2 eastern boundary.”

“No person shall operate a Jet Ski, flyboard, kiteboard, parasail or similar recreational apparatus:

- Within the boundaries of First Narrows MRA (MRA-1), Second Narrows MRA (MRA-2) and all areas of Vancouver Harbour in between,
- In a traffic separation zone
- Within 300 metres of a vessel at anchor
- At a speed of more than five knots within 300 metres of a swimming area
- At a speed of more than five knots within 300 metres of a launch ramp”

#### 5. Section 8.20: Fishing Vessels

Addition/Amendment:

The amendment of the boundary of First Narrows MRA-1 and Second Narrows MRA-2 to delineate where fishing is not permitted. This amendment minimizes the MRA boundaries to permit fishing activity in areas that it has historically occurred, such as Maplewood Flats or at

Ambleside Beach. Images of the amended boundaries are contained in items 2 and 3 of this notice.

“Fishing or the use of fishing-related equipment (including crab-by-trap) is prohibited within the boundaries of First Narrows MRA (MRA-1), Second Narrows MRA (MRA-2) and all areas of Vancouver Harbour in between.”

## 6. Section 8.21: Log Operations

### Addition/Amendment:

The amendment of the numbering related to the North Arm Jetty. The previous numbering was not aligned with actual signage on site. Also, updated management and billing information.

No boom moored in the log transit grounds shall exceed:

- When fronting mooring dolphins 1 to 71, inclusive, in the North Arm Jetty log transit grounds, three boom sections in width
- When fronting mooring dolphins 72 to 82, inclusive, in the North Arm Jetty log transit grounds, four boom sections in width
- When fronting mooring dolphins 83 to 85, inclusive, in the North Arm Jetty log transit grounds, three boom sections in width
- When fronting mooring dolphins 86 to 96, inclusive, in the North Arm Jetty log transit grounds, two boom sections in width
- When fronting mooring dolphins 1 to 9, inclusive, in the Sea Island (Sheeting) log transit grounds, two boom sections in width
- Boom sections moored at dolphins 1 thru 96, inclusive, in the North Arm Jetty log transit grounds longer than 72 hours will be charged a fee as detailed in the fee document for each 24 hour period.

CMH Consulting is responsible for management and billing for the Fraser River North Arm Jetty on behalf of the authority. Daily Log Boom Delivery reports with dolphin numbers, if applicable, must be e-filed with both the authority and CMH. Any amounts invoiced by the port authority continue to be payable to the port authority. Contact information is noted below.

Vancouver Fraser Port Authority	CMH Consulting Inc.
100 the Pointe, 999 Canada Place	3651 Shuswap Avenue
Vancouver, BC, V6C 3T4	Richmond, BC, V7E 2A9
(P) 604-665-9000	(P) 604-802-2719
vpastats@portvancouver.com	chris@cmhconsulting.ca

## 7. Section 11.7 Gangways

### Addition/Amendment:

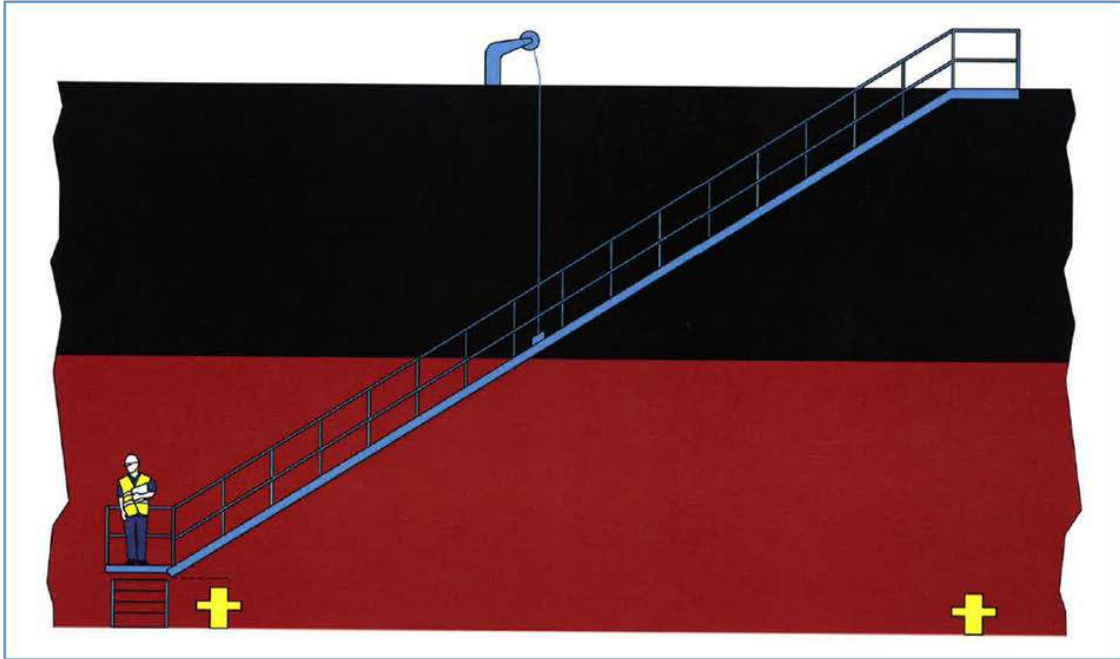
The addition of a requirement to rig gangways in a floating manner at Kinder Morgan Vancouver Wharves terminal, berths 1 and 5.

“Vessels berthed at Vancouver Wharves berth 1 and 5 must ensure that the gangway is rigged as a floating gangway in combination with a pedestal staircase provided by the terminal operator, as illustrated in the image below. The ship’s gangway must be monitored



and kept at a height above the bollards, rails and other fixed structures on the dock. Whenever possible the mid ship gangway should be used instead of the aft gangway.”

Figure 3: Floating gangway in combination with pedestal staircase



## 8. Section 14.5: Environmental Requirements

Addition/ Amendment:

The clarification of the application of requirements for greywater discharge.

The discharge of black water (waste from toilets) and grey water (waste from sinks, showers and drains) into the environment, by any vessel certified to carry more than 15 passengers or over 400 tons, is not permitted within the Port of Vancouver, **unless an overview of the approved Transport Canada waste water treatment plant is provided to the port authority and accepted.** Pleasure craft must also ensure they comply with the regulatory restrictions and best management practices related to the discharge of black water and grey water within the port.

## 9. Section 14.7: Bunkering and Fueling

Addition/ Amendment:

Multiple amendments intended to clarify the application of the bunkering procedures. The majority of procedures were previously intended to apply to deep-sea vessels but some of the procedures should be followed by all vessels in the port. These amendments are intended to divide the procedures into those that apply only to deep-sea vessels and those that apply to all other vessels. Additionally, the introduction of Bunkering with natural gas (LNG) procedures including the addition of LNG Bunker Checklist (ship-to-ship) – Appendix E.

## GENERAL

**Bunkering** refers to the supply and transfer of fuel oil, lube oil, diesel, LNG or any other petroleum product in bulk for the purpose of fueling or maintaining engines to a **deepsea vessel**.

**Fueling** refers to the supply and transfer of fuel oil, lube oil, diesel, LNG, gasoline or any other petroleum product in bulk for the purpose of fueling or maintaining engines to **any vessel that is not a deepsea vessel**.

**Bunkering and fuelling** may take place at anchor or alongside. It may be pumped from a bunker barge, another tanker or ship, or a road tanker, with the exception of a road tanker afloat on a deck barge when the liquid to be transferred is defined as a Class 3 flammable liquid, or a marine pollutant by the International Maritime Dangerous Goods Code. Irrespective of the method and provider, the practices and procedures outlined herein apply to all vessels receiving bunkers **or fuel** within the port.

These procedures are developed to enhance safe bunkering **and fueling** operations within the port. They cover pre-delivery, actual delivery and post-delivery requirements, checks and documentation related to bunkering operations.

Requirements for bunkering with liquid natural gas (LNG) are contained at the end of this section.

## BUNKERING WITH LIQUID NATURAL GAS (LNG)

Vessels utilizing liquid natural gas as a fuel must have received approval from Transport Canada to use LNG and must comply with all operating practices and procedures requirements as established by Transport Canada particular to the vessel, the company.

The authority is a member of the *Society for Gas as a Marine Fuel* (SGMF) and recognizes the recommended competence guidelines for the supply and bunkering of LNG for marine vessels.

Vessels transferring LNG ship-to-ship, shore-ship or truck-to-ship must use a recognized bunkering checklist. Included in this guide, Appendix E LNG Bunker Checklist, is an example of a recognized bunkering checklist for ship-to-ship transfers. Recognized checklists for ship-to-ship, shore-ship and truck-to-ship can also be found online at:

<http://Ingbunkering.org/Ing/bunker-checklists>

A recognized LNG bunkering checklist must be kept on file for at least one year and a copy emailed to the Operations Center at [harbour\\_master@portvancouver.com](mailto:harbour_master@portvancouver.com) after bunkering is completed.

Any incidents involving LNG used as a fuel on a vessel must be reported to the operations centre at 604.665.9086 or [harbour\\_master@portvancouver.com](mailto:harbour_master@portvancouver.com).

## FUELING OPERATIONS

All fueling operations must be carried out in accordance with best practices and the additional information provided in these practices and procedures.

English is the language to be used during all aspects of the fueling operation.

Commercially operated vessels such as tugs, fishing vessels, passenger ferries and water taxis must complete applicable sections of the safety checklist (Appendix C) to be kept on file for at least one year. The completed safety checklist must be produced when asked for by a representative of the authority.

Both the receiving vessel and the supplier of fuel must be fully aware of the specific requirements in the safety checklist.

Safe access between vessels is required during fueling operations. The gangway or access must be safely and securely fastened at all times.

## 10. Definitions

### Addition/ Amendment:

The addition of definitions to support various Port Information Guide amendments.

First Narrows MRA Holding Areas	Areas to which vessels, in agreement with MCTS, can hold themselves in readiness until conditions are such that a safe transit of MRA-1 can be executed.
Freshet	The substantial rise in water level of a stream or river caused by melting snow in the spring.
Moulded Breadth	Moulded breadth is the maximum breadth of the ship measured amidships to the moulded line of the frame in a ship with a metal shell and to the outer surface of the hull in a ship with a shell of any other material.
Second Narrows MRA Holding Areas	Designated areas to which Tier 1 vessels subject to transit windows may be directed MCTS or in which Tier 2 vessels, including non-piloted tugs and barges, in agreement with MCTS can hold themselves in readiness until conditions are such that a safe transit of MRA-2 can be executed.
Ship's Beam	The widest part of the ship in the transverse athwartships direction.
Tier 1 vessel	Means any of the following vessels: <ul style="list-style-type: none"> <li>• All piloted vessels and tug and barge combinations when piloted, regardless of tonnage.</li> <li>• All non-piloted tug and barge combinations specifically designed for pushing and tractor tugs towing alongside with a barge of 10,000 tonnes or more carrying capacity.</li> <li>• All non-piloted vessels including barges and articulated tugs and barges (ATBs) when in product.</li> </ul>
Tier 2 vessel	Means all other vessel traffic operating in the MRA boundaries.
Tractor / ASD tug	Refers to a tug with either Z-drive (or azimuth thruster) or Azimuth Stern Drive (ASD) propulsion systems capable of generating all directional propulsions forces.
Vessel in product	Refers to a tanker (including barges and articulated tugs and barges), carrying over 6,000 tonnes of cargo.

## Comments

All comments with respect to these amendments can be made in writing and directed to the attention of:

**Sean Baxter**  
**Marine Operations Specialist**  
[navigation.review@portvancouver.com](mailto:navigation.review@portvancouver.com)

Following a 30-day period, the port authority will take all comments into consideration before implementing these changes.