

PACIFIC PILOTAGE AUTHORITY

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NOTICE TO INDUSTRY

Date Issued: 09 May 2022

Notice Number: 02/2022

Subject: **Cascadia** - Tug requirements for ship berthing/unberthing

Geographic Area: Vancouver Harbour, BC

Details: Following extensive live trials of ship departures in tidal current velocity exceeding 2.0 kts, the below tug matrix has been developed. It is intended to be used for a full one-year trial to allow departures from Cascadia at currents over 2.0 kts. The tug matrix below provides guidance on tug requirements based on Bollard Pull rating.

If any safety concerns are noted, or after one year, this notice will be reviewed.

Guideline:

Length Overall	Draft	Current Strength at Second Narrows	Berthing Tugs: Line Forces Required	Unberthing Tugs: Line Forces Required
≤ 180m	≤ 10m	≤ 2.0 kts	2 x 30t	2 x 30t
		2.1 – 2.5 kts	N/A	2 x 30t
	> 10m	≤ 2.0 kts	2 x 30t	2 x 30t
		2.1 – 2.5 kts	N/A	2 x 30t
181m - 210m	≤ 10m	≤ 2.0 kts	2 x 30t	2 x 30t
		2.1 – 2.5 kts	N/A	2 x 40t
	> 10m	≤ 2.0 kts	2 x 40t	2 x 40t
		2.1 – 2.5 kts	N/A	2 x 40t
210m - 230m	≤ 10m	≤ 2.0 kts	2 x 40t	2 x 40t
		2.1 – 2.5 kts	N/A	2 x 60t
	> 10m	≤ 2.0 kts	2 x 60t	2 x 60t
		2.1 – 2.5 kts	N/A	2 x 60t

Length Overall	Draft	Current Strength at Second Narrows	Berthing Tugs: Line Forces Required	Unberthing Tugs: Line Forces Required
230m - 240m	≤ 10m	≤ 2.0 kts	2 x 60t	2 x 60t
		2.1 – 2.5 kts	N/A	2 x 60t
Beam ≤ 40m	> 10m	≤ 2.0 kts	2 x 75t	2 x 75t
		2.1 – 2.5 kts	N/A	2 x 75t

Note:

1. This berth normally has a 2.0 knot tidal current restriction, based on Second Narrows predictions, and ships will not be docked/undocked outside this parameter except as below.
2. For any departures with tidal current velocity > 2.0 kts:
 - a. The *maximum* current velocity on the specific tide must be looked at:
 - If the *maximum* current velocity ≤ 2.5 kts, then departures up to 2.5 kts are allowed over that full tidal cycle.
 - If the *maximum* current velocity > 2.5 kts, then departures up to 2.5 kts are only allowed on a **reducing** current (i.e., approaching slack water).
 - b. The Pilot Order Time must be at least 30 minutes *before* the window closes.
 - c. Line crew *must* be ready on the dock 15 minutes *before* the pilot order time.
 - d. **For any arrivals or departures over 2.0 kts, a third tug may be required at the discretion of the pilot.**
3. All ship berthing tugs must have certification indicating sustained bollard pull rating in metric tonnes.
4. Due to currents within TCZ-2, no consideration will be given for ships with bow or stern thrusters.
5. Pilot discretionary considerations include:
 - visibility
 - predicted current
 - freshet
 - vessel draft
 - other vessel traffic
 - manoeuvring characteristics or mechanical history of the vessel
 - other relevant factors
6. The Real-Time AIS tide gauge at Second Narrows Bridge will be utilized to verify the tidal predictions.

Please contact the PPA at marineops@ppa.gc.ca if there are any queries or concerns.

Brian Young
Director, Pilotage and Industry Liaison