Lower Columbia Region Harbor Safety Committee
Harbor Safety Plan | Chapter 14

TOWED BARGE STANDARD OF CARE

CHANGE LOG:

Changes Made	Sub-Committee	Date Approved
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A. Towed Barge Standard of Care

1. Purpose

The Columbia River Towed Barge Standard of Care is intended to eliminate conflicts between towing vessels conducting astern towing and deep-sea vessels on the lower Columbia River with a resulting improvement in navigation safety.

2. Background

The most predominant method of barge towing on the lower Columbia River is in the "push" or "river" mode of towing, whereby a towboat or tugboat faces up directly against the stern, or into a towing "notch" on the stern of a barge, and connecting to the barge with a system of wires or with a mechanical articulated connection system in the cases of articulated tug-barge units (ATBs). For the purposes of this standard of care, towing a barge in the alongside towing mode is considered equivalent to the push mode.

Since the earliest days of navigation on the river, it has been necessary on occasion for barges to be towed on a tow wire or hawser in the astern towing mode. This mode of towing may be required when the towing vessel or the tow is not equipped or suitable for utilizing the push mode, visibility over the tow is impaired or non-existent, or weather conditions preclude using the push mode. The last factor is particularly the case for barges being towed across the Columbia River Bar, whether entering or departing the river.

The concerns that most commonly arise with respect to towed barge operations being addressed by this SOC are:

- The ability of the towing vessel to safely control the tow under all anticipated river conditions during a transit.
- The tracking characteristics of the tow in the astern mode.
- Communications between towing vessels and deep-sea vessels on the lower Columbia River.

3. Scope

Geographic Area of Applicability

Notwithstanding Section 3(C), as noted, this SOC applies to all towed barge operations on the lower Columbia River between the Astoria Port Docks at approximately mile 13+00 and to the Bonneville Dam, and the Willamette River from mile 0+00 at Kelley Point to Oregon City locks. Occasionally, when rough weather or operational restraints prohibit making up astern or releasing below the Astoria Bridge this can be accomplished in the Astoria South Anchorage.

Vessels Covered by the SOC
This SOC applies to towed astern barge operations. The standard does not apply to log raft towing operations, short-duration astern towing operations as in harbor shifts or tug assist operations, or operations that take place outside of the main shipping channel.

B. General Requirements

The master and pilots of both deep-sea vessels and tugs towing barges astern should have due regard for the needs and considerations of each other's respective vessels.

The master of a tug towing astern should ensure that the tug is able to exert positive control of their towed vessel(s) at all times. Positive control means that the Master is able to maintain the tow on a stable track astern and maneuver the tow under all reasonably anticipated river conditions during a transit.

The tug master should ensure that appropriate voyage planning takes place to identify one-way traffic and holding areas which require close coordination and passing arrangements with deep-sea vessels in both meeting and overtaking situations. During the voyage planning process, the Master of the towing vessel should identify cable and pipeline crossings and ensure that in these areas the towing gear is not allowed to drag on the bottom.

The master of a tug towing astern should be familiar with the inherent towing characteristics of the towed barge or vessel. The length of the tow wire should be maintained at the minimum length necessary to maintain control and maximize the directional stability of the tow.

The deck officer on watch on a towing vessel is required to meet the Federal pilotage requirements as per 46 CFR 15.812 as may be applicable to their respective vessels.

When either the tug or the deep draft vessel recognizes that a meeting or overtaking situation is developing, they should communicate directly on the bridge-to-bridge radio and coordinate their actions in accordance with the Inland Rules of the Road to accomplish a safe passage. As a general rule, tugs with tows should give maximum channel clearance to laden deep-sea vessels.

C. Tail/Tag Boat Requirements

Tail/tag boats should be used for transit both inbound and outbound when:

- The towing characteristics of the towed barge or vessel, regardless of the cargo carried, are such that it does not reasonably remain in the same trackline as the towing vessel.
- The tow is a loaded oil barge of more than 25,000 barrels capacity being towed astern. A loaded barge is defined as a barge carrying cargo of more than 25% of its cargo-carrying capacity.

A rule of thumb for the barge to be considered "under positive control" is that the barge should be able to track within one barge width either side of the tug's trackline. A barge that yaws or "runs" continuously from side to side in an unpredictable manner, or consistently in excess of one barge width either side of the tug's trackline would be considered not under positive control.

Loaded barges not carrying oil or hazardous materials being towed astern that are under positive control at all times do not require a tail/tag boat.

Towing vessel masters and/or their respective operating companies should develop procedures to be followed for determining the necessity of tail/tag boats and how the tail/tag boat is to be used during the transit.

The tag/tail boat should be of sufficient size, configuration, and horsepower to keep the towed barge behind the tugboat when full underway.

Particular care should be exercised when planning and executing tandem tow operations. Triple tows should never be considered on the Columbia River, but if emergency circumstances require it, permission from the COTP is needed.

Barges carrying oil should not be towed in tandem so that if the tow wire parts, the tug is free to recover the barge. This SOC applies to all oil carrying, barge operations on the lower Columbia River between mile -3+00 and to the Bonneville Dam, and the Willamette River from mile 0+00 at Kelley Point to Oregon City locks.

D. Communications

Clear and timely communications between the deep-sea and towing vessel are absolutely essential to safe navigation. The primary communication method is by VHF radio on Channel 13. All vessels should ensure that the automatic identification systems (AIS) on their respective vessels are updated, properly programmed and operating.

The master and pilots of both deep-sea vessels and tugs towing barges astern should respond to security calls when appropriate and encourage timely and thorough bridge-to-bridge communications to effect safe passing arrangements.

Tows intending to use an anchorage in the Lower Columbia River should refer to the Anchorage chapter for additional information and contact requirements.

1. Security Call Checkpoints

In addition to the information provided by AIS, a voluntary system of security call checkpoints is recommended to be used at all times when using the ship channel and during periods of reduced visibility. These calls are broadcast on the bridge-to-bridge radio (VHF channel 13). Both tugs with tows and pilots of deep-sea vessels are encouraged to participate in the checkpoint system. When reporting at the points listed below, the following information should be provided:

- Tug/vessel identification.
- Tug/vessel type.
- Current position or check point.
- Direction of travel.

Example: "Tug Sirius with a loaded oil barge on the wire is inbound Morgan's 40 for Willbridge"

The following list of checkpoints is recommended, but may not be inclusive of all locations or situations when the use of a security call would be appropriate.

INBOUND FOR PORTLAND		
NAME	**LOCATION**	**REASON**
Columbia River Buoy "2"	Abeam Buoy "2"	Traffic inbound/outbound Columbia River
Buoy "14"	Abeam Buoy "14"	Meeting at Tansy Point Turn and Astoria Bridge
Astoria Bridge or Tongue Point	Mile 13+30 or Mile 18	Outbound traffic from Harrington Point
Elliot Point	Mile 28	Skamokawa traffic
Three Tree	Mile 31	Skamokawa traffic
Cliffton Dikes	Mile 39	Bugby Hole traffic
Westport 66	Mile 46	Eureka Channel traffic

INBOUND FOR PORTLAND		
NAME	**LOCATION**	**REASON**
Beaver Dock	Mile 54	Stella Turn
Lord Island Towers	Mile 63	Longview Outbound traffic
Kalama	Mile 75	Traffic to Martin Island
Columbia City	Mile 84	Warrior Rock, Duck Club traffic
Morgan's 40	Mile 100.5	When passing or entering Willamette River

OUTBOUND FOR ASTORIA/COLUMBIA RIVER ENTRANCE		
NAME	**LOCATION**	**REASON**
Columbia Grain	Mile 01	Traffic vicinity of river mouth
Fales 17	Mile 93	Inbound traffic in Duck Club area
Martin Island	Mile 80	Kalama traffic
Cottonwood 36	Mile 70	Longview traffic
Fisher Island 5	Mile 59	Traffic inbound near Stella
Westport 68	Mile 46	Traffic inbound to Bugby Hole
Wauna	Mile 42	Traffic near Bugby Hole
Steamboat Reach	Mile 36	Skamokawa Turn traffic
Elliot Point	Mile 28	Miller Sands traffic
Astoria Bridge	Mile 14	Inbound traffic from Col River Bar
Buoy 14	Abeam buoy 14	Inbound traffic from Col River Bar