



## **MAC Transit Advisories as of January 25, 2018**

The Mariners' Advisory Committee for the Bay and River Delaware was established in October 1964. Its members and associate members are mainly comprised of master mariners, local pilots, shipping agents and marine managers. Additional support and information is provided by representatives from the U.S. Coast Guard, NOAA and the U.S. Army Corps of Engineers.

Local safety concerns are brought to the attention of the committee, which in turn comes to a non-binding recommendation through a consensus. Any recommendations contained in these advisories are just that, non-binding. They have been derived using "normal" tidal and weather scenarios without regard to river traffic or other variables. Before any vessel movement, the master should take into consideration all of the prevailing circumstances, including the advice of his local pilot.

### **Delaware Bay Approaches and Entrance**

1. Vessels arriving at the Delaware Bay entrance are advised to use the Delaware to Cape Henlopen traffic lane or the Five Fathom Bank to Cape Henlopen traffic lane. It is recommended that vessels with a draft exceeding 34 feet use the Delaware to Cape Henlopen traffic lane from the southeast. Towing traffic transiting off the southeastern New Jersey coast is requested to use the inshore traffic sea lane.
2. Vessels arriving at the Delaware Bay entrance are advised to contact the voluntary vessel traffic information service through the Delaware Pilot traffic tower on VHF Channel 14. Contact should be made upon a vessel's entrance into the appropriate sea lane. Inbound towing traffic using the inshore sea lane should contact the tower when off of the McCrie shoal buoy 2MS.
3. Vessels outbound are requested to contact the traffic tower when they are passing the Brown Shoal or the A buoy if exiting Big Stone Beach Anchorage. Additionally, outbound towing traffic should report out of the entrance area while passing the 8 buoy.

## **ANCHORAGE RECOMMENDATIONS**

### **Kaighns Point Anchorage**

Vessels using anchorage #12 off of Kaighns Point in Philadelphia Harbor are recommended not to exceed 600 feet in length (LOA) or to exceed 34 feet in draft. Vessels over 30 feet in draft should anchor between Pier 78 and the Walt Whitman Bridge .

### **Mantua Creek Anchorage**

Vessels using anchorage #9 off of Mantua Creek are recommended not to exceed 700 feet in length (LOA) or to exceed 37 feet in draft. Vessels are requested to anchor in sections A or C, whenever there is sufficient room. Anchorage areas within sections B and D are used for maneuvering when docking and undocking vessels at adjacent piers. Vessels are requested to only anchor in sections B and D when there is insufficient space in sections A and C.

### **Marcus Hook Anchorage**

Vessels in excess of 700 feet in length (LOA) may anchor at anchorage #7 off of Marcus Hook, PA with a maximum draft of 40 feet. Vessels under 700 feet are requested to anchor in section A whenever there is sufficient room. Section B is needed for vessels over 700 feet in length.

### **Deepwater Point Anchorage**

Vessels using anchorage #6 off of Wilmington, DE are recommended not to exceed 700 feet in length (LOA) or to exceed 35 feet in draft. It is also recommended that vessels with a LOA less than 350 feet to use the southern end of the anchorage.

In the event that anchorage #3 (Reedy Point) is full, it is recommended that vessels waiting for clearance to use the C & D Canal, use anchorage #3 (Artificial Island) or the upper end of Bombay Hook anchorage on Liston Range.

## **VESSEL REPORTING**

Please remember to contact the Maritime Exchange over VHF channel 14 to report when you anchor, your anchoring position, and when you get underway. It is important to stand by on channels 14 and 16 at all times. If your vessel is equipped with AIS, please be sure that it is always turned on. It is recommended that all vessels report their position and status to the Maritime Exchange over VHF Channel 14 in the following situations:

1. When anchoring.
2. When getting underway.
3. When passing through Marcus Hook.
4. When entering or exiting the C & D Canal.
5. When making fast to the dock.

## **OTHER RECOMMENDATIONS**

Tugs operating without a barge are exempt from this recommendation.

### **Lower River and Bay**

1. The maximum fresh water draft for river transit from sea to Delair, NJ is 40 feet.
2. All vessels arriving with a fresh water draft in excess of 37 feet are to transit during flood current only.
3. All vessels over Panamax size beam (106 feet) with a block coefficient of .70 and above (see appendix) having a fresh water draft in excess of 35'-06", shall only transit during flood current.
4. All vessels up to and including Panamax size beam (106 feet) having a fresh water draft of 37 feet and under should arrange their river transit to afford a minimum of three feet clearance in the Marcus Hook area. The clearance should give due consideration to vessel squat, predicted tide, and the wind effect on actual tide.
5. Vessels outbound from Paulsboro, NJ and above, having a fresh water draft of 37 feet and up to 40 feet should arrange to sail 2 hours after low water. Due to the extended time of transit for these particular deep draft vessels, two (2) river pilots will be arranged for transit to sea.
6. The maximum salt water draft for entrance into the Delaware Bay and Big Stone Beach Anchorage is 55 feet, as per federal regulation. Qualified offshore advisors with portable DGPS units are available upon request from the Pilots' Association for the Bay and River Delaware.

### **Chesapeake and Delaware Canal**

1. There is no recommended length limitation for vessels using the C & D Canal; however, the maximum draft limitation is 33 feet.
2. Vessels in excess of 800 feet are required to have an operational bow thruster for transit. These vessels may use a tug assist instead of a working bow thruster.
3. The maximum combined beam of vessels transiting the C & D Canal at the same time is 190 feet.
4. Some vessels may be determined to maneuver poorly and need to meet other requirements such as tug assistance, daylight passage or one-way traffic while transiting the canal, regardless of the vessel's length. These requirements will be determined on a case-by-case basis.

### **Upper Delaware River**

The Upper Delaware River pertains to the area of navigation from Delair, New Jersey to the head of navigation on the Delaware River at Trenton, NJ. The maximum drafts referred to in these advisories pertain to navigation within the federally maintained 40 foot channel which ends off Newbold Island, NJ.

### Vessel Particulars

1. Any vessel whose beam exceeds 128 feet should transit through the Tacony Palmyra Bridge during daylight only. Vessels of greater beam and vessels known to be difficult to maneuver should be scheduled on a case by case basis after consultation between the pilots and the operators prior to arrival and departure.
2. Maximum air draft should not exceed 132 feet.
3. Vessels of combined beam greater than 185 feet should not meet between the Delair Railroad Bridge and the Burlington Bristol Bridge.
4. Shipping traffic should avoid meeting above the Burlington Bristol Bridge.

### Vessel Draft Inbound

1. Vessels less than 32'06" FW may transit on any stage of the tide or current.
2. Vessels 32'06" or greater up to 35'00" FW in draft should arrive in Philadelphia Harbor no later than 9 hours and 15 minutes, or earlier than 5 hours and 45 minutes from slack flood current at Cape Henlopen.
3. Vessels 35'01" FW or greater up to 38'06" FW in draft should arrive in Philadelphia Harbor no later than 8 hours and 15 minutes, or earlier than 5 hours and 45 minutes from slack flood current at Cape Henlopen.
4. Vessels 32'06" FW or greater up to 38'06" FW in draft shall avoid meeting outbound shipping traffic above the Delair Railroad Bridge.

### Vessel Draft Outbound

1. Vessels less than 32'06" FW may transit on any stage of the tide or current.
2. Vessels 32'06" FW or greater up to 38'06" FW in draft, should sail from terminals above the Delair Railroad Bridge between 1 hour before high water and 3 hours after high water at the dock at which it is sailing.
3. Vessels 32'06" FW or greater up to 38'06" FW in draft shall avoid meeting inbound shipping traffic above the Delair Railroad Bridge.

### Tug Attendance

Vessels in excess of 375 feet should have a tug in attendance during upper river transit.

Upper River Bridge VHF Marine Radio Protocols

Vessels transiting in the upper river should utilize the following location calling points when contacting the upper river lift bridges to arrange openings for vessel passage:

Conrail Delair Railroad Bridge

Inbound

First call                    One hour out (Navy Yard approximately)  
Second call                Ben Franklin Bridge

Outbound

First call                    Buoy 26  
Second call                Northern Metals

Tacony-Palmyra Bridge

Inbound

First call                    Buoy 76  
Second call                Buoy 2

Outbound

First call                    Buoy 26  
Second call                Buoy 18

Burlington-Bristol Bridge

Inbound

First call                    Buoy 28  
Second call                Buoy 33

Outbound

First call                    Buoy 56  
Second call                Buoy 53

ULCV Transits (version 2.28.18)

This document is intended to work in conjunction with the draft document “MAC Recommendations for 45’ Project Channel Transition- Delaware River”, and seeks to

specifically address river transits of Post-Panamax and Neo-Panamax sized container vessels. These vessels shall be referred to as Ultra Large Container Vessels (ULCVs).

**As such, these recommendations shall apply to all container vessels with an LOA of 1000 feet (305m) or greater.**

#### **Transit Draft Limitations**

Vessel draft transit restrictions shall be subject to the applicable MAC Recommendation/45' Transition Plan restriction in place at the time of transit. The Transition Plan is graduated and the USCG, MAC, and Pilots shall agree upon the phase/restrictions in place at any given time.

#### **Tug Horsepower Requirements**

All tugs utilized for ULCV escort (tethered/untethered) shall be tractor tugs with a minimum of 50 tons bollard pull and constructed to A.B.S. standards.

For docking/undocking, all of the tugs assigned to a vessel movement shall have a minimum of 50 tons bollard pull and be constructed to A.B.S. standards. Of the tugs assigned, at least two shall be tractor tugs.

#### **Tug Escort for Inbound Transit**

Inbound ULCV's shall have a stern-tethered tractor tug escort (made fast to the center lead, aft) commencing on Fort Mifflin Range and continuing for the remainder of the transit. The strongest, most capable tug assigned to the job shall be utilized for tethered escort work.

Tethered escort tugs will be accompanied by a Docking Pilot who will join the Bridge Team at the time of tug assist commencement. Orders for these evolutions shall be placed as early as practicable.

Untethered escort tugs may be utilized at any time during a river transit in response to weather conditions, traffic, etc. at the discretion of the Bridge Team. Orders for such escorts shall be placed as soon as possible after Pilot boarding at the Capes.

#### **Tug Escort for Outbound Transit**

Upon sailing from Packer Avenue, a stern-tethered escort tug shall be made fast to the ULCV center lead, aft and remain tethered until the ship clears Ft. Mifflin. The escort tug may be requested to remain tethered for further outbound assistance beyond Ft. Mifflin at the discretion of the Bridge Team.

A second untethered tug shall ride along after sailing until the ship clears Ft. Mifflin and Bridge Team releases it. Tug shall be utilized at the discretion of the Bridge Team and may be requested to remain for further escort work based on circumstances of transit.

Tethered escort tugs will be accompanied by a Docking Pilot who will remain a part of the Bridge Team until the completion of tethered tug assist work.

#### **Tug Requirements-Docking/Undocking (assumes working bow thruster)**

All ULCV's shall be assisted by a minimum of three tugs upon arrival and docking or for undocking/sailing at Packer Avenue, subject to weather restrictions.

#### **Weather Restrictions**

In the interest of consistency and collaborative planning, it is recommended that all forecast information be obtained from either DBOFS(Delaware Bay Operational Forecast System) or the Delaware Bay and River Weather Decision Support Page (under development).

If winds are forecast to be in excess of 20 knots at the time of docking/undocking, four tugs shall be used for the evolution.

If winds are forecast to exceed 25 knots sustained and/or 30 knot gusts during the transit or docking/undocking, transit is not recommended.

Transits shall not commence when visibility is less than two nautical miles.

### **Bow Thruster Requirement**

All aforementioned tug requirements are predicated on vessel bow thruster in fully operational status. Inoperative/compromised bow thruster status may require an additional tug(s).

### **Transit Planning Considerations**

Two River Pilots shall be assigned to the river transit of these vessels.

These transits shall be scheduled for 7.5 hours from POB to Hog Island/8.5 hours from POB to berth. However, departures from this basic plan may be necessary due to conditions at time of passage.

Inbound ULCV transits shall be arranged to arrive at the lower end of Ft. Mifflin Range one hour before high water Philadelphia.

Two ULCV's shall avoid meeting above Mantua Creek Anchorage.

The southern portion of Marcus Hook Anchorage shall be kept unoccupied and available to ULCV's during their transits to provide a bailout/turnaround location.

Docking Pilots who board inbound vessels at Hog Island should be boarded early enough to allow the escort tug to be in position prior to arrival at Ft. Mifflin Range.

**These guidelines will be amended as transit experience is gained and lessons learned are applied to future transit recommendations.**

## **APPENDIX**

### **Block Coefficient**

1. Block coefficient ( $C_b$ ) is defined as:  $V$  divided by the  $LWL \times BWL \times T$ .

- $V$  is the volume or the vessel's displacement.
- $LWL$  is the vessel's length at the waterline.

- BWL is the vessel's breadth at the waterline.
- T is the vessel's draft.

2. Typically, full form vessels such as tank vessels and bulk carriers will have high  $C_b$  in excess of .70 and fine form vessels, such as container vessels, will have low  $C_b$  below .70.

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