

## NAVIGATION WORK GROUP

From: Bruce Horton, Work Group Chair

Subject: Work Group Recommendation on Speed Restrictions in Reduced Visibility

Date: May 8, 2008

---

### **Introduction**

In response to the Cosco Busan oil spill incident, Governor Schwarzenegger directed a state investigation into the causes of and response to the oil spill. The directive outlined a number of issues to ensure “any action necessary to prevent this from ever happening again.” OSPR tasked the Harbor Safety Committee (HSC) of the San Francisco Bay Region to “analyze the navigational safety-related issues of the Governor’s directive and make appropriate recommendations regarding the prevention aspects of the incident.”

The HSC Work Groups addressed the issues raised in the Governor’s directives based on information available, noting that the National Transportation Safety Board (NTSB) report on the cause is not expected to be completed until autumn 2008, and the State Board of Pilot Commissioners Accusation (Case No. 07-01) of the pilot is scheduled for hearing before an Administrative Law Judge beginning September 2, 2008. Other investigations are focused on oil spill response efforts.

On March 20, 2008, the Harbor Safety Committee forwarded to OSPR its findings and recommendations related to large vessel transit of San Francisco Bay during reduced visibility, based on the advice of the Navigation Work Group. Subsequently, the Work Group met to consider the speed of large vessels transiting the region during periods of reduced visibility.

Note: the following findings and recommendations should be considered preliminary, as not all evidence was accessible. As new information becomes available, the Harbor Safety Committee may revisit or address other policy implications.

### **Role of Speed in Cosco Busan Incident**

In addition to reduced visibility, speed also is being explored as a possible causal factor in the allision of the Cosco Busan with the San Francisco-Oakland Bay Bridge: the State Board of Pilot Commissioners found in its Accusation (Case No. 07-01) that the pilot charged had “reason to doubt whether the ship could safely proceed under the prevailing circumstances... [and proceeded] at a speed that was excessive for the circumstances....”

The Board of Pilot Commissioners Accusation states that the speed of the Cosco Busan just prior to the allision was 11 knots with a one-knot flood current. It should be noted that this is a preliminary accusation that has not been confirmed through any investigation as of the time of this writing.

## **COLREGS**

Maritime practices accepted worldwide are codified under the International Regulations for Prevention of Collisions at Sea (COLREGS), which address safe transit speed, risk of collision, and conduct of vessels in restricted visibility.

COLREGS Rule 6 states, in part, that, “Every vessel shall at all times proceed at a safe speed so that [the vessel] can take proper and effective action to avoid collision and be stopped within a distance appropriate to the prevailing circumstances and conditions.” Rule 6 continues, stating that factors to be taken into account in determining a safe speed include, but are not limited to, the state of visibility and the manageability of the vessel with special reference to stopping distance and turning ability in the prevailing conditions.

Rule 7 addresses risk of collision, and states, in part, that, “Every vessel shall use all available means appropriate to the prevailing circumstances and conditions to determine if risk of collision exists. If there is any doubt such risk shall be deemed to exist.”

Rule 19, Conduct of Vessels in Restricted Visibility, states, in part, that, “Every vessel shall proceed at a safe speed adapted to the prevailing circumstances and conditions of restricted visibility [and] [e]very vessel shall have due regard to the prevailing circumstances and conditions of restricted visibility when complying with the Rules....”

### **U.S. Coast Guard Authority to Regulate Vessel Speed**

The Federal Ports and Waterways Safety Act of 1972 (33 USC 1223) grants authority to the Coast Guard to further regulate vessel speed, and specifically states:

[The Coast Guard] may control vessel traffic in areas subject to the jurisdiction of the United States which the Secretary [of the Department of Homeland Security] determines to be hazardous, or under conditions of reduced visibility, adverse weather, vessel congestion, or other hazardous circumstances by [a number of means, including] establishing vessel traffic routing schemes and by establishing vessel size, speed, draft limitations and vessel operating conditions.

Under 33 Code of Federal Regulations (CFR) 161.11, the Coast Guard may, through the Vessel Traffic System (VTS), issue measures or directions to enhance navigation and vessel safety and to protect the marine environment, including establishing vessel traffic routing schemes.

### **Existing Coast Guard Speed Restrictions in San Francisco Bay**

The San Francisco Bay region, consisting of several bays and rivers, is one of the foggiest harbors in the United States. Navigating San Francisco Bay during periods of reduced visibility requires mariners to exercise additional caution and vigilance. To aid mariners, the Coast Guard established several Regulated Navigational Areas (RNAs) in the Bay region in 1995, which were designed to improve navigation safety by organizing traffic flow patterns; reducing meeting, crossing, and overtaking situations in constricted channels; and by limiting vessel speeds.

Federal regulation 33 CFR Parts 162 and 165 state in part that the maximum speed for all power driven vessels of 1,600 or more gross tons shall not exceed 15 knots through the water from the COLREGS Demarcation Line to the southern tip of Bay Farm Island, Alameda and the Union Pacific Railroad Bridge in Benicia. This standard also applies to a tug with a tow of 1,600 or more gross tons.

### **Harbor Safety Committee Endorsements of RNAs**

The Harbor Safety Committee endorsed the RNAs, as they were established based on the operating characteristics of ships transiting the Bay. For example, industry related that lower speeds, such as a 12 knot limit, would unnecessarily restrict the maneuverability of some ships in swift currents.

Within the San Francisco Bay region, boundaries of the specific areas where the 15 knot speed limit apply are described in 33 CFR 165.1181 (attached as an addendum):

- Golden Gate Traffic Lanes, which include the westbound and eastbound lanes west of the Golden Gate Precautionary Area
- Golden Gate Precautionary Area
- Central Bay Traffic Lanes, which include the Deep Water Traffic Lane, the eastbound lane (south of Alcatraz Island) and the westbound lane (south of Harding Rock)
- Central Bay Precautionary Area
- North Ship Channel between North Channel Lighted Buoy “A” and the Richmond-San Rafael Bridge
- Southampton Shoal Channel including the Richmond Long Wharf maneuvering area
- Richmond Harbor Entrance Channel
- Oakland Harbor Bar Channel including the Outer and Inner Harbors Entrance Channels
- San Pablo Strait Channel
- Pinole Shoal Channel
- Benicia-Martinez Railroad Drawbridge

Additionally, the Harbor Safety Committee recommended that all vessels remain in a response mode, allowing for an immediate response to an engine order. 33CFR165 states that, “Power driven vessels of 1,600 or more gross tons shall have their engines ready for immediate maneuver and shall not operate in control modes or with fuels that prevent an immediate response to any engine order ahead.”

It should be noted that in instances where a slower speed than the 15 knot RNA limit is required for safe navigation, the COLREGS will prevail.

**Conclusion.** In reviewing the speed restrictions in place in San Francisco Bay, the Work Group agreed that sufficient regulations and guidelines exist regarding speed limitations for large vessels transiting the San Francisco Bay region during periods of reduced visibility.

**Recommendation to the Harbor Safety Committee.** The Work Group recommends that no additional measures are required to restrict the speed of large vessels in reduced visibility.

# **COLREGS Addressing Speed Restrictions**

(data taken from <http://www.navcen.uscg.gov/mwv/navrules/navrules.htm>)

---

## **RULE 6 SAFE SPEED**

Every vessel shall at all times proceed at a safe speed so that she can take proper and effective action to avoid collision and be stopped within a distance appropriate to the prevailing circumstances and conditions.

In determining a safe speed the following factors shall be among those taken into account:

(a) By all vessels:

- i. The state of visibility;
- ii. The traffic density including concentrations of fishing vessels or any other vessels;
- iii. The manageability of the vessel with special reference to stopping distance and turning ability in the prevailing conditions;
- iv. At night, the presence of background light such as from shore lights or from back scatter from her own lights;
- v. The state of wind, sea and current, and the proximity of navigational hazards;
- vi. The draft in relation to the available depth of water.

(b) Additionally, by vessels with operational radar:

- i. The characteristics, efficiency and limitations of the radar equipment;
- ii. Any constraints imposed by the radar range scale in use;
- iii. The effect on radar detection of the sea state, weather and other sources of interference;
- iv. The possibility that small vessels, ice and other floating objects may not be detected by radar at an adequate range;
- v. The number, location and movement of vessels detected by radar;
- vi. The more exact assessment of the visibility that may be possible when radar is used to determine the range of vessels or other objects in the vicinity.

## **RULE 7 RISK OF COLISION**

(a) Every vessel shall use all available means appropriate to the prevailing circumstances and conditions to determine if risk of collision exists. If there is any doubt such risk shall be deemed to exist.

- (b) Proper use shall be made of radar equipment if fitted and operational, including long-range scanning to obtain early warning of risk of collision and radar plotting or equivalent systematic observation of detected objects.
- (c) Assumptions shall not be made on the basis of scanty information, especially scanty radar information.
- (d) In determining if risk of collision exists the following considerations shall be among those taken into account:
  - i. Such risk shall be deemed to exist if the compass bearing of an approaching vessel does not appreciably change;
  - ii. Such risk may sometimes exist even when an appreciable bearing change is evident, particularly when approaching a very large vessel or a tow or when approaching a vessel at close range.

#### **RULE 19: CONDUCT OF VESSELS IN RESTRICTED VISIBILITY**

- (a) This Rule applies to vessels not **in sight** of one another when navigating in or near an area of restricted visibility.
- (b) Every vessel shall proceed at a safe speed adapted to the prevailing circumstances and conditions of restricted visibility. A power-driven vessel shall have her engines ready for immediate maneuver.
- (c) Every vessel shall have due regard to the prevailing circumstances and conditions of restricted visibility when complying with the Rules [of Section I of this Part / 4 through 10].
- (d) A vessel which detects by radar alone the presence of another vessel shall determine if a close-quarters situation is developing and/ [Intl] or risk of collision exists. If so, she shall take avoiding action in ample time, provided that when such action consists of an alteration in course, so far as possible the following shall be avoided:
  - (i) An alteration of course to port for a vessel forward of the beam, other than for a vessel being overtaken;
  - (ii) An alteration of course toward a vessel abeam or abaft the beam.
- (e) Except where it has been determined that a risk of collision does not exist, every vessel which hears apparently forward of her beam the fog signal of another vessel, or which cannot avoid a close-quarters situation with another vessel forward of her beam, shall reduce her speed to be the minimum at which she can be kept on her course. She shall if necessary take all her way off and in any event navigate with extreme caution until danger of collision is over.

# SFBay RNAs in 33CFR165

( VTS web site: <http://www.uscg.mil/d11/vtssf/33cfr165.1181.pdf>)

---

[Code of Federal Regulations]

[Title 33, Volume 2]

[Revised as of July 1, 2006]

From the U.S. Government Printing Office via GPO Access

[CITE: **33CFR165**]

[Page 762-766]

TITLE 33--NAVIGATION AND NAVIGABLE WATERS

CHAPTER I--COAST GUARD, DEPARTMENT OF HOMELAND SECURITY (CONTINUED)

PART 165 REGULATED NAVIGATION AREAS AND LIMITED ACCESS AREAS--Table of Contents

Subpart F\_Specific Regulated Navigation Areas and Limited Access Areas  
Sec. 165.1181 San Francisco Bay Region, California--regulated navigation area.

(a) Applicability. This section applies to all vessels unless otherwise specified.

(b) Deviations. The Captain of the Port, San Francisco Bay, or the Commanding Officer, Vessel Traffic Service San Francisco, as a representative of the Captain of the Port, may authorize a deviation from the requirements of this regulation when it is deemed necessary in the interests of safety.

(c) Regulated Navigation Areas--(1) San Francisco Bay RNA. (i) The following is a regulated navigation area--The waters bounded by a line connecting the following coordinates, beginning at:

37[deg]47[min]18[sec] N, 122[deg]30[min]22[sec] W; thence to  
37[deg]48[min]55[sec] N, 122[deg]31[min]41[sec] W; thence along the  
shoreline to 37[deg]50[min]38[sec] N, 122[deg]28[min]37[sec] W; thence  
to 37[deg]50[min]59[sec] N, 122[deg]28[min]00[sec] W; thence to  
37[deg]51[min]45[sec] N, 122[deg]27[min]28[sec] W; thence to  
37[deg]52[min]58[sec] N, 122[deg]26[min]06[sec] W; thence to  
37[deg]51[min]53[sec] N, 122[deg]24[min]58[sec] W; thence to  
37[deg]51[min]53[sec] N, 122[deg]24[min]00[sec] W; thence to  
37[deg]51[min]40[sec] N, 122[deg]23[min]48[sec] W; thence to  
37[deg]49[min]22[sec] N, 122[deg]23[min]48[sec] W; thence to  
37[deg]48[min]20[sec] N, 122[deg]22[min]12[sec] W; thence to  
37[deg]47[min]02[sec] N, 122[deg]21[min]33[sec] W; thence to  
37[deg]47[min]02[sec] N, 122[deg]23[min]04[sec] W;

[[Page 763]]

thence along the shoreline to the point of beginning.

Datum: NAD 83

(ii) The San Francisco Bay RNA consists of the following defined sub-areas:

(A) Golden Gate Traffic Lanes--(1) Westbound traffic lane: Bounded by the Golden Gate precautionary area and the COLREGS Demarcation Line (33 CFR 80.1142), between the separation zone and a line connecting the following coordinates:

37[deg]48[min]30[sec] N, 122[deg]31[min]22[sec] W; thence to  
37[deg]49[min]03[sec] N, 122[deg]29[min]52[sec] W.

Datum: NAD 83

(2) Eastbound traffic lane. Bounded by the COLREGS Demarcation Line (33 CFR 80.1142) and the Golden Gate precautionary area, between the separation zone and a line connecting the following coordinates:

37[deg]47[min]50[sec] N, 122[deg]30[min]48[sec] W; thence to  
37[deg]48[min]30[sec] N, 122[deg]29[min]29[sec] W.

Datum: NAD 83

(3) Golden Gate Separation Zone: The area 75 yards each side of a line connecting the following coordinates:

37[deg]48[min]08[sec] N, 122[deg]31[min]05[sec] W; thence to  
37[deg]48[min]46[sec] N, 122[deg]29[min]40[sec] W.

Datum: NAD 83

(B) Golden Gate Precautionary Area: An area bounded by a line connecting the following coordinates beginning at:

37[deg]48[min]30[sec] N, 122[deg]29[min]29[sec] W; thence to  
37[deg]48[min]52[sec] N, 122[deg]28[min]41[sec] W; thence to  
37[deg]48[min]52[sec] N, 122[deg]27[min]49[sec] W; thence to  
37[deg]49[min]36[sec] N, 122[deg]27[min]46[sec] W; thence to  
37[deg]49[min]55[sec] N, 122[deg]28[min]09[sec] W; thence to  
37[deg]49[min]28[sec] N, 122[deg]28[min]45[sec] W; thence to  
37[deg]49[min]03[sec] N, 122[deg]29[min]52[sec] W; thence returning to the point of beginning.

Datum: NAD 83

(C) Central Bay Traffic Lanes--(1) Westbound traffic lane: Bounded by the Central Bay precautionary area and the Golden Gate precautionary area, between the Central Bay and the Deep Water Traffic Lane separation zones.

(2) Eastbound traffic lane: Bounded by the Golden Gate precautionary area and the Central Bay precautionary area, between the Central Bay Separation Zone and a line connecting the following coordinates, beginning at:

37[deg]48[min]41[sec] N, 122[deg]25[min]17[sec] W; thence to  
37[deg]48[min]50[sec] N, 122[deg]26[min]14[sec] W; thence to  
37[deg]48[min]52[sec] N, 122[deg]27[min]49[sec] W.

Datum: NAD 83

(3) Deep Water (two-way) Traffic Lane: Bounded by the Central Bay precautionary area and the Golden Gate precautionary area, between the Deep Water Traffic Lane separation zone and a line connecting the

following coordinates, beginning at:

37[deg]49[min]55[sec] N, 122[deg]28[min]09[sec] W; thence to  
37[deg]50[min]36[sec] N, 122[deg]27[min]12[sec] W; thence to  
37[deg]50[min]47[sec] N, 122[deg]26[min]26[sec] W.

Datum: NAD 83

(D) Central Bay Separation Zone: The area 75 yards each side of a line connecting the following coordinates, beginning at:

37[deg]49[min]17[sec] N, 122[deg]27[min]47[sec] W; thence to  
37[deg]49[min]35[sec] N, 122[deg]25[min]25[sec] W.

Datum: NAD 83

(E) Deep Water Traffic Lane Separation Zone: The area 75 yards each side of a line connecting the following coordinates, beginning at:

37[deg]49[min]36[sec] N, 122[deg]27[min]46[sec] W; thence to  
37[deg]50[min]22[sec] N, 122[deg]26[min]49[sec] W; thence to  
37[deg]50[min]25[sec] N, 122[deg]26[min]22[sec] W.

Datum: NAD 83

(F) Central Bay Precautionary Area: An area bounded by a line connecting the following coordinates, beginning at:

37[deg]48[min]41[sec] N, 122[deg]25[min]17[sec] W; thence to  
37[deg]49[min]32[sec] N, 122[deg]25[min]13[sec] W; thence to  
37[deg]50[min]25[sec] N, 122[deg]26[min]22[sec] W; thence to  
37[deg]50[min]47[sec] N, 122[deg]26[min]26[sec] W; thence to  
37[deg]51[min]04[sec] N, 122[deg]24[min]58[sec] W; thence to  
37[deg]51[min]53[sec] N, 122[deg]24[min]58[sec] W; thence to  
37[deg]51[min]53[sec] N, 122[deg]24[min]00[sec] W; thence to  
37[deg]51[min]40[sec] N, 122[deg]23[min]48[sec] W; thence to  
37[deg]49[min]22[sec] N, 122[deg]23[min]48[sec] W; thence to  
37[deg]48[min]20[sec] N, 122[deg]22[min]12[sec] W; thence to  
37[deg]47[min]02[sec] N, 122[deg]21[min]33[sec] W; thence to  
37[deg]47[min]02[sec] N, 122[deg]23[min]04[sec] W; thence returning  
along the shoreline to the point of beginning.

Datum: NAD 83

(2) North Ship Channel RNA. The following is a regulated navigation area--The waters bounded by a line connecting the following coordinates,

beginning at:

37[deg]51[min]53[sec] N, 122[deg]24[min]58[sec] W; thence to  
37[deg]54[min]15[sec] N, 122[deg]27[min]27[sec] W; thence to  
37[deg]56[min]06[sec] N, 122[deg]26[min]49[sec] W; thence to  
37[deg]56[min]06[sec] N, 122[deg]26[min]34[sec] W; thence to  
37[deg]54[min]48[sec] N, 122[deg]26[min]42[sec] W; thence to  
37[deg]54[min]02[sec] N,

[[Page 764]]

122[deg]26[min]10[sec] W; thence to 37[deg]51[min]53[sec] N,  
122[deg]24[min]00[sec] W; thence to returning to the point of  
beginning.

Datum: NAD 83

(3) San Pablo Strait Channel RNA. The following is a regulated  
navigation area--The waters bounded by a line connecting the following  
coordinates, beginning at:

37[deg]56[min]06[sec] N, 122[deg]26[min]49[sec] W; thence to  
37[deg]57[min]26[sec] N, 122[deg]27[min]21[sec] W; thence to  
38[deg]00[min]48[sec] N, 122[deg]24[min]45[sec] W; thence to  
38[deg]01[min]54[sec] N, 122[deg]22[min]24[sec] W; thence to  
38[deg]01[min]44[sec] N, 122[deg]22[min]18[sec] W; thence to  
37[deg]57[min]37[sec] N, 122[deg]26[min]23[sec] W; thence to  
37[deg]56[min]06[sec] N, 122[deg]26[min]34[sec] W; thence returning to  
the point of beginning.

Datum: NAD 83

(4) Pinole Shoal Channel RNA. The following is a regulated  
navigation area--The waters bounded by a line connecting the following  
coordinates, beginning at:

38[deg]01[min]54[sec] N, 122[deg]22[min]25[sec] W; thence to  
38[deg]03[min]13[sec] N, 122[deg]19[min]50[sec] W; thence to  
38[deg]03[min]23[sec] N, 122[deg]18[min]31[sec] W; thence to  
38[deg]03[min]13[sec] N, 122[deg]18[min]29[sec] W; thence to  
38[deg]03[min]05[sec] N, 122[deg]19[min]28[sec] W; thence to  
38[deg]01[min]44[sec] N, 122[deg]22[min]18[sec] W; thence returning to  
the point of beginning.

Datum: NAD 83

(5) Benicia-Martinez Railroad Drawbridge Regulated Navigation Area  
(RNA): The following is a regulated navigation area--The waters bounded  
by the following longitude lines:

- (i) 122[deg]13[min]31[sec] W (coinciding with the charted location  
of the Carquinez Bridge)
- (ii) 121[deg]53[min]17[sec] W (coinciding with the charted location  
of New York Point)

Datum: NAD 83

(6) Southampton Shoal Channel/Richmond Harbor RNA: The following,  
consisting of two distinct areas, is a regulated navigation area--

(i) The waters bounded by a line connecting the following  
coordinates, beginning at:

37[deg]54[min]17[sec] N, 122[deg]22[min]00[sec] W; thence to  
37[deg]54[min]08[sec] N, 122[deg]22[min]00[sec] W; thence to  
37[deg]54[min]15[sec] N, 122[deg]23[min]12[sec] W; thence to  
37[deg]54[min]30[sec] N, 122[deg]23[min]09[sec] W; thence along the  
shoreline to the point of beginning.

Datum: NAD 83

(ii) The waters bounded by a line connecting the following coordinates, beginning at:

37[deg]54[min]28[sec] N, 122[deg]23[min]36[sec] W; thence to  
37[deg]54[min]20[sec] N, 122[deg]23[min]38[sec] W; thence to  
37[deg]54[min]23[sec] N, 122[deg]24[min]02[sec] W; thence to  
37[deg]54[min]57[sec] N, 122[deg]24[min]51[sec] W; thence to  
37[deg]55[min]05[sec] N, 122[deg]25[min]02[sec] W; thence to  
37[deg]54[min]57[sec] N, 122[deg]25[min]22[sec] W; thence to  
37[deg]53[min]26[sec] N, 122[deg]25[min]03[sec] W; thence to  
37[deg]53[min]24[sec] N, 122[deg]25[min]13[sec] W; thence to  
37[deg]55[min]30[sec] N, 122[deg]25[min]35[sec] W; thence to  
37[deg]55[min]40[sec] N, 122[deg]25[min]10[sec] W; thence to  
37[deg]54[min]54[sec] N, 122[deg]24[min]30[sec] W; thence to  
37[deg]54[min]30[sec] N, 122[deg]24[min]00[sec] W; thence returning to  
the point of beginning.

Datum: NAD 83

(7) Oakland Harbor RNA: The following is a regulated navigation area--The waters bounded by a line connecting the following coordinates, beginning at:

37[deg]48[min]40[sec] N, 122[deg]19[min]58[sec] W; thence to  
37[deg]48[min]50[sec] N, 122[deg]20[min]02[sec] W; thence to  
37[deg]48[min]29[sec] N, 122[deg]20[min]39[sec] W; thence to  
37[deg]48[min]13[sec] N, 122[deg]21[min]26[sec] W; thence to  
37[deg]48[min]10[sec] N, 122[deg]21[min]39[sec] W; thence to  
37[deg]48[min]20[sec] N, 122[deg]22[min]12[sec] W; thence to  
37[deg]47[min]36[sec] N, 122[deg]21[min]50[sec] W; thence to  
37[deg]47[min]52[sec] N, 122[deg]21[min]40[sec] W; thence to  
37[deg]48[min]03[sec] N, 122[deg]21[min]00[sec] W; thence to  
37[deg]47[min]48[sec] N, 122[deg]19[min]46[sec] W; thence to  
37[deg]47[min]55[sec] N, 122[deg]19[min]43[sec] W; thence returning  
along the shoreline to the point of the beginning.

Datum: NAD 83

(d) General regulations. (1) A power-driven vessel of 1600 or more gross tons, or a tug with a tow of 1600 or more gross tons, navigating within the RNAs defined in paragraph (c) of this section, shall not exceed a speed of 15 knots through the water.

(2) A power-driven vessel of 1600 or more gross tons, or a tug with a tow of 1600 or more gross tons, navigating within the RNAs defined in paragraph (c) of this section, shall have its engine(s) ready for immediate maneuver and shall operate its engine(s) in a control mode and on fuel that will allow for an immediate response to any engine order, ahead or astern, including stopping its engine(s) for an extended period of time.

(3) The master, pilot or person directing the movement of a vessel within the RNAs defined in paragraph (c) of this regulation shall comply with Rule 9 of the Inland Navigation Rules (INRs) (33 U.S.C. 2009) in conjunction with the provisions of the associated INRs.

[[Page 765]]

(e) Specific Regulations--(1) San Francisco Bay RNA: (i) A vessel shall navigate with particular caution in a precautionary area, or in areas near the terminations of traffic lanes or channels, as described in this regulation.

(ii) A power-driven vessel of 1600 or more gross tons, or a tug with a tow of 1600 or more gross tons, shall:

(A) Use the appropriate traffic lane and proceed in the general direction of traffic flow for that lane;

(B) Use the Central Bay Deep Water Traffic Lane if eastbound with a draft of 45 feet or greater or westbound with a draft of 28 feet or greater;

(C) Not enter the Central Bay Deep Water Traffic Lane when another power-driven vessel of 1600 or more gross tons or tug with a tow of 1600

or more gross tons is navigating therein when either vessel is:

(1) Carrying certain dangerous cargoes (as denoted in section 160.203 of this subchapter);

(2) Carrying bulk petroleum products; or

(3) A tank vessel in ballast if such entry would result in meeting, crossing, or overtaking the other vessel.

(D) Normally join or leave a traffic lane at the termination of the lane, but when joining or leaving from either side, shall do so at as small an angle to the general direction of traffic flow as practicable;

(E) So far as practicable keep clear of the Central Bay Separation Zone and the Deep Water Traffic Lane Separation Zone;

(F) Not cross a traffic lane separation zone unless crossing, joining, or leaving a traffic lane.

(2) Pinole Shoal Channel RNA: (i) A vessel less than 1600 gross tons or a tug with a tow of less than 1600 gross tons is not permitted within this RNA.

(ii) A power-driven vessel of 1600 or more gross tons or a tug with a tow of 1600 or more gross tons shall not enter Pinole Shoal Channel RNA when another power-driven vessel of 1600 or more gross tons or tug with a tow of 1600 or more gross tons is navigating therein if such entry would result in meeting, crossing, or overtaking the other vessel,

when either vessel is:

(A) Carrying certain dangerous cargoes (as denoted in Sec. 160.203 of this subchapter);

(B) Carrying bulk petroleum products; or

(C) A tank vessel in ballast.

(iii) Vessels permitted to use this channel shall proceed at a reasonable speed so as not to endanger other vessels or interfere with any work which may become necessary in maintaining, surveying, or buoying the channel, and they shall not anchor in the channel except in case of a deviation authorized under paragraph (b) of this section.

(iv) This paragraph shall not be construed as prohibiting any necessary use of the channel by any public vessels while engaged in official duties, or in emergencies by pilot boats.

(3) Benicia-Martinez Railroad Drawbridge Regulated Navigation Area

(RNA)--(i) Eastbound vessels: (A) The master, pilot, or person directing the movement of a power-driven vessel of 1600 or more gross tons or a tug with a tow of 1600 or more gross tons traveling eastbound and intending to transit under the lift span (centered at coordinates 38[deg]02[min]18[sec] N, 122[deg]07[min]17[sec] W) of the railroad bridge across Carquinez Strait at mile 7.0 shall, immediately after entering the RNA, determine whether the visibility around the lift span is  $\frac{1}{2}$  nautical mile or greater.

(B) If the visibility is less than  $\frac{1}{2}$  nautical mile, or subsequently becomes less than  $\frac{1}{2}$  nautical mile, the vessel shall not

transit under the lift span.

(ii) Westbound vessels: (A) The master, pilot, or person directing the movement of a power-driven vessel of 1600 or more gross tons or a tug with a tow of 1600 or more gross tons traveling westbound and intending to transit under the lift span (centered at coordinates 38[deg]02[min]18[sec] N, 122[deg]07[min]17[sec] W) of the railroad bridge across Carquinez Strait at mile 7.0 shall, immediately after entering the RNA determine whether the visibility around the lift span is  $\frac{1}{2}$  nautical mile or greater.

(B) If the visibility is less than  $\frac{1}{2}$  nautical mile, the vessel shall not pass beyond longitude line 121[deg]55[min]19[sec] W (coinciding with the charted position of the westernmost end of Mallard Island) until the visibility improves to greater

[[Page 766]]

than  $\frac{1}{2}$  nautical mile around the lift span.

(C) If after entering the RNA visibility around the lift span subsequently becomes less than  $\frac{1}{2}$  nautical mile, the master, pilot, or person directing the movement of the vessel either shall not transit under the lift span or shall request a deviation from the requirements of the RNA as prescribed in paragraph (b) of this section.

(D) Vessels that are moored or anchored within the RNA with the intent to transit under the lift span shall remain moored or anchored until visibility around the lift span becomes greater than  $\frac{1}{2}$  nautical mile.

(4) Southampton Shoal/Richmond Harbor RNA: A power-driven vessel of 1600 or more gross tons, or a tug with a tow of 1600 or more gross tons,

shall not enter Southampton Shoal/Richmond Harbor RNA when another power-driven vessel of 1600 or more gross tons, or a tug with a tow of 1600 or more gross tons, is navigating therein, if such entry would result in meeting, crossing, or overtaking the other vessel.

(5) Oakland Harbor RNA: A power-driven vessel of 1600 or more gross tons or a tug with a tow of 1600 or more gross tons shall not enter the Oakland Harbor RNA when another power-driven vessel of 1600 or more gross tons, or a tug with a tow of 1600 or more gross tons, is navigating therein, if such entry would result in meeting, crossing, or overtaking the other vessel.

[CGD11-94-007, 60 FR 16796, Apr. 3, 1995; 60 FR 30157, June 7, 1995. Redesignated by USCG-2001-9286, 66 FR 33642, June 25, 2001, as amended by USCG-2003-15404, 68 FR 37741, June 25, 2003; CGD11-03-001, 69 FR 2843, Jan. 21, 2004]