



**Cape Fear Sail and Power Squadron
Standard Operating Procedure # 7
On-the-Water Procedure
for America's Boating Course**

Introduction

The Cape Fear Sail and Power Squadron (CFS&PS) offers an optional local knowledge and on-the-water (OTW) teaching cruise included for students who take the public boating course called America's Boating Course® (ABC). This on-the-water teaching cruise makes our course unique compared to competitor courses offered in this area (by USCG Auxiliary and NC Wildlife Resources Commission) and online. This cruise has become an integral part of the ABC since its introduction in 2011. Student surveys confirm its value and appeal. Students frequently comment that this optional on-the-water session reinforces what is learned in the classroom setting and enhances their actual understanding of navigation aids, safety, communications, and so on.

The purpose of this procedure is to describe the logistics and content of the local knowledge and on-the-water teaching cruise. Two options for conducting the OTW teaching cruise are offered by the CFS&PS. This procedure describes both options. Option 1 is to charter a commercial cruise ship and provide private instruction for ABC students using squadron instructors. Option 2 is to seek squadron members willing to take smaller groups of students on their boats with a CFS&PS instructor. Both or either OTW options may be utilized associated with an offering of the ABC classroom education at the discretion of the Squadron Education Officer (SEO).

Student safety and comfort will be of paramount concern. All dealings with students must be professional and comply with USPS, District and Squadron doctrines. The minimum age of a student is 14 years, and students under the age of 18 must be accompanied by a parent or guardian.

This OTW exercise will be conducted in good weather with acceptable wind and sea conditions and is limited to daylight hours only.

1 Approvals

CFS&PS Boat Operators Certification Committee (BOC)

This procedure and all amendments/revisions will be submitted to the CFS&PS BOC committee for approval and endorsement. This endorsement will remain attached to the procedure.

CFS&PS Safety Officer

This procedure and all amendments/revisions will be submitted to the CFS&PS Safety Officer for approval and endorsement. This endorsement will remain attached to the procedure.

CFS&PS Legal Officer

This procedure and all amendments/revisions will be submitted to the CFS&PS Legal Officer for approval and endorsement. This endorsement will remain attached to the procedure.

CFS&PS Executive Committee (ExCom)

A copy of this procedure and future revisions will be given to the Squadron Commander and all members of the ExCom and posted in the procedures section of the CFS&PS website.

At the start of each calendar year the SEO will provide the ExCom the dates of the ABC Course in writing; dates typically are February, May and August. The course will be posted on the Squadron calendar in an attempt to avoid conflicts with cruise trips/outings and other events.

National/District

A copy of this procedure will be forwarded to the current District Education Officer (DEO) following BOC committee approval.

2 Personnel Involved

SEO or Assistant SEO

The SEO or ASEO will recruit, maintain and instruct an ample number of trained instructors to satisfy OTW requirements for Option 1 and 2. The SEO or ASEO will be designated the Lead Instructor for the ABC classroom instruction and will schedule the OTW outings, assign certified squadron instructors, and designate boat captains for Option 2.

Underway Instructors (UIs)

Underway Instructors will have a current Instructor Development (ID) certification and must have audited both ABC and Local Knowledge and On-the-Water sessions offered as Option 1 or 2. UIs must have a USPS advanced grade of S (Seamanship), at a minimum, however a USPS advanced grade of P (Piloting) or higher is preferred. Also preferred is recent experienced teaching ABC classroom sections.

Boat Captains (BCs) for Option 2

While not required, it is preferred that BCs also be Instructor Development (ID) certified. While underway, BCs will concentrate on the safe handling of the boat and leave student instruction/narration to the UI. BCs are required to

operate their boat safely, observing prudent speed and maneuvering at all times. While it is understood that BCs are in command of their vessel, when participating in the OTW exercise BCs will comply with OTW procedures and NOT act in an independent or unilateral manner. Decisions as to Inlets and river channel choices will be jointly decided by the Lead UI and Lead BC - the BC of the Lead UI will be designated Lead BC. While not required as of the date of this procedure it is hoped that all future BCs will have an Inland Navigator BOC certification. VHF communication will exist between all OTW boats under Option 2.

Registrar

The Registrar tracks enrollment for ABC. For instance, they track ABC student names, contact information, payments, book shipments, etc. (typically using an Excel spreadsheet). The Registrar will also track attendance for the OTW session.

Students

It is mandatory that students offered the optional OTW teaching cruise have completed the ABC classroom segments *before* participating in OTW. Students will not operate the boat nor assume any onboard duties.

During the ABC classroom instruction, students will be instructed to arrive 30 minutes before scheduled departure and to dress in layers appropriate for the weather expected for the OTW outing. Flip-flops will not be allowed because of the possibility of tripping; non-marking, non-slipping footwear is expected. Students will be encouraged to bring water and snacks. Binoculars are optional, as well as reading glasses (for reviewing charts).

3 Option 1-Commercial Vessel

As mentioned, Option 1 for offering the OTW teaching cruise is to hire a commercial vessel to take the class of ABC students on the water.

3.1 ARRANGEMENTS

Currently the CFS&PS has partnered with Wilmington Water Tours (WWT) to take students out on the water in their boat the *Wilmington*. The WWT point of contact for making arrangements is:

Diane Upton
Wilmington Water Tours
212 S. Water Street (downtown)

Wilmington, NC
910-338-3134 and cell 910-632-4095
diane@wilmingtonwt.com

The SEO or ASEO will contact Diane in January once the dates for the ABC for the coming year are established. The OTW is typically offered the Sunday following the Saturday ABC. Diane will check their schedule and notify the SEO/ASEO of the times for the tour (based on tides and currents). The cruise is a 4-hour charter departing from the WWT docks downtown.

The passenger capacity of the *Wilmington* is 49, including UIs. Typically, 43-45 students are taken with 4-6 CFS&PS instructors. While underway the boat is managed by Captain Doug Springer, a mate, and Diane who may join to sell drinks and snacks. The *Wilmington* has a head aboard and clear plastic windows that can be zipped closed during rain or cold weather.

The price for the charter varies depending on the season. The February and August charters are typically \$900 each and the May charter is \$1200 (2018 prices). Recovery of this expense is built into the price of the ABC course. The OTW is optional and typically not refunded for students who cannot attend. Students that cannot attend the OTW session following their class will be offered the opportunity to join a subsequent OTW session. The Registrar will track attendance for the OTW and coordinate with students deferring to other dates.

3.2 UNDERWAY OBJECTIVES

This exercise is to reinforce what is taught in the ABC classroom. Students surveys have confirmed that this teaching cruise “brings it all together” for them. The WWT teaching cruise is informal, but includes educational topics presented by the UIs. The *Wilmington* has a microphone and speakers and all UIs are encouraged to use it to overcome the engine noise. Students are seated at tables with laminated charts and encouraged to meet the other students at their table. The laminated charts are brought by the ASEO and stored in the CFS&PS storage unit when not in use. There will be time allotted in between instructional topics for students to socialize, ask questions, and sightsee.

There is a handout prepared for the OTW Option 1 currently consisting of 8 pages ([see Appendix A](#)). Four pages of this handout include current or the most recent data. As such, this handout must be prepared (i.e., updated and printed) 1-2 nights before the cruise. It consists of:

- A cover page with squadron website and logo
- An hourly weather forecast chart for the day of the cruise (explained in 5-finger briefing). This is captured from the website <https://forecast.weather.gov/MapClick.php?lon=-77.91970823518933&lat=34.0840569690087#.Wu8kH4gvxPY> with the Green Point Forecast Area being “3 Miles NNW Carolina Beach NC 34.09°N 77.91°W (Elev. 16 ft).”

Then scroll down to the hourly weather forecast chart on the right. Double click the chart and “hide the menu” before printing or cutting and pasting.

- Tide chart for the day of the cruise can be captured from website https://tidesandcurrents.noaa.gov/tide_predictions.html?gid=1408 for Orton Point (the station on the Cape Fear River near Su Point. This tide chart is explained in 5-fingers briefing or Tides and Currents instruction).
- US Army Corps of Engineers survey of bottom depths for Carolina Beach Inlet dated 4-18-17 (for comparison to current survey)
- US Army Corps of Engineers survey of bottom depths for Carolina Beach Inlet (most current date) captured from website <http://www.saw.usace.army.mil/Missions/Navigation/Hydrographic-Surveys/Inlets-Crossings/> (contrasting the two charts visually shows shoaling in this inlet).
- US Army Corps of Engineers survey of bottom depths for Masonboro Inlet (most current date) captured from website <http://www.saw.usace.army.mil/Missions/Navigation/Hydrographic-Surveys/Inlets-Crossings/>
- Rule of 12th graphic (used in tides and current instruction)
- Snow’s Cut and Cape Fear River graphic showing lateral markers (used in Aids to Navigation instruction)

As the students board the *Wilmington*, the Registrar or their designee take attendance. Once the students are seated and before departing the dock, the Lead UI (typically the ASEO) will introduce the instructors and crew and present the “5-finger” pre-departure safety briefing (see Exhibit 2).

While underway, educational topics addressed during this teaching cruise include, but are not limited to, the following:

- The 3 Water Systems: Cape Fear River, Atlantic Ocean, and Intracoastal Waterway (see Appendix B)
- Tides and Currents (see Appendix C)
- Aids to Navigation: River lateral systems vs. ICW (see Appendix D)
- Weather (see Appendix E)
- Local Services, Marinas, Boat Launches, and Restaurants by Water (see Appendix F)

Appendices B-E referenced above provide general notes for UIs to use as guidelines. The Lead UI will identify squadron instructors to address these topics prior to the outing and provide the appendix material for their reference. These notes may be tailored, edited, and reorganized as the UI deems appropriate to fit their teaching style.

As mentioned, this is about a 4-hour cruise and it is informal. The Lead UI will identify a schedule for UIs to present their topic, but time will be allowed in between speakers for students to ask individual questions, to socialize, and to sightsee.

3.3 UNDERWAY ROUTE

The current OTW route consists of departing from the docks on the Cape Fear River downtown at 212 Water Street; heading under the Memorial Bridge, past the Port of Wilmington, down the Cape Fear River to channel marker 177; turning into the Intracoastal Waterway; transiting Snow's Cut and going under the Snow's Cut bridge; turning around after the bridge and backtracking the route. If time allows the boat will head toward the preferred channel maker at the confluence of the Cape Fear Fiver and the Northeast Cape Fear River and then turn around to return to the dock.

4 Option 2-Squadron Member Boats

Option 2 for offering the OTW teaching cruise entails the use of squadron member boats taking smaller groups of students on the water.

4.1 ARRANGEMENTS

The SEO or ASEO will solicit the appropriate number of boats and BCs days ahead of departure based on anticipated student attendance provided by the Registrar.

The departing marina of choice is the Inlet Watch Yacht Club, 801 Paoli Court, Wilmington. An alternative is Federal Point Yacht Club, 910 Basin Road, Carolina Beach. Other area marinas may also be used as necessary. This procedure addressing the route from Inlet Watch. If another marina is used, the waypoints and route must be modified accordingly. The duration of the exercise, including pre-departure activity will not exceed 4 hours.

BCs will be reimbursed for fuel based on usage and mileage as determined by the SEO.

UIs will have a laminated NOAA Chart No. 11534 and 11541 onboard as a teaching aid, as well as a laminated copy of the [UI Narrative Outline \(Exhibit 4\)](#) for reference. They are also responsible for reporting any mishap to the SEO and Safety Officer as soon as practical. A Lead UI for each outing will be designated.

4.2 BOAT REQUIREMENTS

Boats must have a current Vessel Safety Check certification. Proof of liability insurance must be on record with the current Lead Instructor. The boat(s) should be free from major defect and in proper working order. While not a federal, state or local requirement all boats will have a working VHF radio and a suitable anchor onboard. Maximum boat capacities (persons and weight) will not be exceeded. If more than one boat is used in an exercise, VHF radio communication between all boats is required. While it is understood that all boats with a VHF radio monitor channel 16, for this exercise, a "working channel" for group communication will be established by all boats. To satisfy the monitoring of channel 16, one boat will also be assigned to monitor channel 16 for

the group exercise (handhelds will be useful). Larger boats with enclosures will be preferred for the February winter outings. Vessels shall have sufficient fuel for the route identified.

4.3 UNDERWAY OBJECTIVES

This exercise represents “education through example” by demonstrating the skills necessary for safe boating. It is understood that this OTW exercise is part of the ABC and while students may, or may not, be experienced boaters we will present this exercise at a beginner’s level. Therefore, our approach and instructional objectives will aim to achieve an appropriate blend of (1) a tour of the Cape Fear waterways (ICW and River), (2) a review of selected classroom fundamentals of safe boating, and (3) a demonstration of safe boating techniques. This OTW session is not a “small boat handling” exercise nor is it a “slow speed maneuvering” exercise, both of which are geared to an advanced boater level. Student safety will be the overlying consideration. Before boarding the boat, students shall be given an opportunity to use the nearest bathroom facilities.

All students must sign the [Release and Waiver of Liability Agreement \(Exhibit 1\)](#). The SEO or Lead UI will collect the waivers and file them.

Approved USCG Personal Floatation Devices (PDFs) are mandatory for all persons (UI, BC and students) onboard. The BCs will confirm that each person has and is wearing a life jacket upon boarding.

The SEO will distribute a laminated chart to each BC for the UIs and collect them at the end of the day. The laminated charts are stored in the CFS&PS storage locker.

The BCs will conduct the [5-fingers Pre-departure Safety Briefing \(see Exhibit 2\)](#). As part of “finger 3” of the Pre-departure Safety Briefing the BCs will demonstrate an automated radio check (SEA\\TOW sponsored VHF Channel 27).

[Exhibit 3](#) is the route as discussed in the next section. [Exhibit 4](#) provides a detailed UI Narrative Outline by waypoint. The UIs are responsible for having a copy aboard and following it. In addition, the UIs may discuss, but are not limited to, the following topics with the students while underway:

- Charts (e.g., water depth, lateral buoys and beacons, ranges, bridges, etc.)
- Tides and currents
- Electronics (VHF radio, chart plotter, AIS, depth sounder, etc.)
- Local features (no wake zones, shoaling, boat launches, etc.)
- Rules of the Road (give-way and stand-on for passing, crossing, and overtaking, as well as the right-of-way hierarchy/pecking order)

4.4 OPTION 2 UNDERWAY ROUTE & WAYPOINTS

The attached [“Route and Waypoints” \(see Exhibit 3\)](#) provides an overview of the underway route and waypoints of selected teaching destinations. BCs will travel to the selected waypoints in

sequence, stop-at-idle at each one while the UI discusses the recommended narrative, and then proceed to the next waypoint.

NOAA charts and aerial views of the area of this exercise are shown in [Exhibits 5A – 5F](#). Supplemental views by *Coastal Explorer*, *Navionics*, *MX Mariner* and *Google Earth* may also be included.

As of the date of this procedure the below hyperlinks reference NOAA charts No. 11534, 11541, 11537 and 11539.

<http://www.charts.noaa.gov/OnLineViewer/11534.shtml>

<http://www.charts.noaa.gov/OnLineViewer/11541.shtml>

<http://www.charts.noaa.gov/OnLineViewer/11537.shtml>

<http://www.charts.noaa.gov/OnLineViewer/11539.shtml>

An in-depth review of the advantages/disadvantages of traveling 9 miles to Masonboro Inlet at Wrightsville Beach was completed by the SEO, BOC certifier, ABC Lead Instructor, UIs and BCs in November 2013. It was agreed that we'll continue to include this segment in our OTW route. The travel to and from this Inlet amply provides for boating instruction and observation of the Intracoastal Waterway (ICW), which is an important waterway in the Cape Fear area. Additionally, Masonboro Inlet is a safe and well-protected inlet allowing for the observation and study of an ocean Inlet in a safe and comfortable environment. Also, if (and only if) wind and sea conditions permit, a fast trip out to the Safe Water Buoy may be included. The Lead UI with the Lead BC will decide at the time of observation if conditions are optimal, otherwise boats will not enter the inlet.

Based on student surveys, when asked their favorite part, most often their remarks are either “going out to the Safe Water Buoy at Masonboro Inlet” followed closely by “going out on the Cape Fear River Channel” – two of the most daunting or intimidating locations for novice new boaters or boaters new to the Cape Fear area. They appreciate the fact that they get to experience these areas in a secure and comfortable manner, escorted by experienced and safe boating instructors.

5 Attachments

[Exhibit No. 1 – USPS Student Release and Waiver Form](#)

[Exhibit No. 2 – “5-Finger” Pre-departure Safety Brief](#)

[Exhibit No. 3 – Option 2 Route and Waypoints](#)

[Exhibit No. 4 – UI Narrative Outline for Option 2](#)

[Exhibit No. 5 A, B, C, D, E and F - Charts and Aerial Views](#)

6 APPENDICES

A – 3 Water Systems: Cape Fear River, Atlantic Ocean, and Intracoastal Waterway

B – Tides and Currents

C – Aids to Navigation: River lateral systems vs. ICW

D – Weather

E – Local Services, Marinas, Boat Launches, and Restaurants by Water

Signatures and Endorsements

*Ned Rhodes **

Lt/Cdr Ned Rhodes, SN
2018 Squadron Education Officer

*Meg Morrison **

1/Lt Meg Morrison, JN
2018 Assistant Squadron Education Officer

*Woody Williams **

P/C Woody Williams, SN-CN
Boat Operator Certification Committee Chair

*Doug Murray **

Lt Douglas Murray
Squadron Legal Officer

*Peter Spark **

Lt Peter Spark, P
Squadron Safety Officer

*Ron Tilmon **

Ron Tilmon, SN-CN
2018 Commander
Date: May 7, 2018

(* electronic signature)

**UNITED STATES POWER SQUADRONS ON WATER ACTIVITIES
RELEASE AND WAIVER OF LIABILITY AND ASSUMPTION OF RISK AGREEMENT**

For the good and valuable consideration, including the opportunity to participate in the United States Power Squadrons' ("USPS") on-the-water activities, I hereby:

1. Acknowledge that my participation in the United States Power Squadrons' on-the-water activities and transportation on watercraft owned by USPS members is voluntary.
2. Acknowledge that there is an inherent risk of injury in boating whether as an operator or passenger. I fully understand that my participation may involve risk of serious injury or death, property damage, and economic losses.
3. Assume any and all risks that may be caused by or may arise from my presence and participation in on-the-water activities during the period from _____ to _____, whether as an operator or passenger, including:
 - a. personal injury, including serious injury, disability and death,
 - b. property loss and damage, and
 - c. economic losses, including medical bills and lost wages.
4. Release, waive, hold harmless, and discharge the United States Power Squadrons and their employees and agents from and against any claim, cause of action, or liability arising from my participation, including any claim, cause of action, or liability arising out of negligence. I further agree not to sue United States Power Squadrons or their employees or agents for any alleged claims, causes of action, or liability released hereunder.
5. Warrant that I am in good health and have no physical condition that would prevent me from participating in wellness program offerings.

THIS DOCUMENT RELIEVES UNITED STATES POWER SQUADRONS AND THEIR EMPLOYEES AND AGENTS FROM ANY LIABILITY FOR PERSONAL INJURY, WRONGFUL DEATH, PROPERTY DAMAGE, AND ECONOMIC LOSSES CAUSED BY NEGLIGENCE OR OTHERWISE.

I HAVE READ THIS DOCUMENT AND UNDERSTAND THAT I HAVE GIVEN UP SUBSTANTIAL RIGHTS BY SIGNING IT, AND SIGN VOLUNTARILY.

I understand that this document is binding upon me and my heirs, children, wards, personal representatives and anyone else entitled to act on my behalf.

Signature of Participant

Date

Printed Name of Participant

Certificate Number (if a USPS member)

E-Mail Address

Phone no.

“5-Finger” Pre-departure Safety Briefing



1. Who, What, When, Where
Weather, Tides & Currents

Lead UI will address in
Welcome statement



2. Safety Equipment (location and use)

Fire extinguishers, first aid kit, throwable floatation device, flares & sound devices, propeller injuries & Carbon Monoxide poisoning
Ask all: who cannot swim, health issues/concerns
Discuss Float Plan
Anything relevant about particular boat



3. VHF & Electronics

Chartplotter, Sounder, Radar (if present)
VHF (BC does radio check - Ch27)



4. Underway Instructions & MOB

2nd in command, MOB
Remain seated • Moving while underway



5. Discharge & Disposal

Discharge & Disposal trash and waste
Head usage

Exhibit No. 3

Route and Waypoints
(Using Inlet Watch Yacht Club - IWYC)

Waypoint 1	34° 4.666' N 77° 53.283' W	Dockside IWYC
Waypoint 2	34° 4.702' N 77° 53.041' W	Buoy R "154A" ICW
Waypoint 3	34° 3.659' N 77° 53.421' W	Special Purpose Distance Mark ST M 295
Waypoint 4	34° 3.536' N 77° 53.366' W	Light/Beacon "161" near Joyner's Marina
Waypoint 5	34° 3.363' N 77° 53.977' W	Snow's Cut Bridge
Waypoint 6	34° 3.118' N 77° 55.093' W	Buoy R "162A" ICW Snow's Cut
Waypoint 7	34° 1.787 N 77° 56.179' W	Light/Beacon G "177"
Waypoint 8	34° 1.395 N 77° 56.467" W	Buoy G "33" River Channel
Waypoint 9	34° 4.949' N 77° 52.145' W	Buoy G "5" Carolina Beach Inlet Buoy
Waypoint 10	34° 11.537' N 77° 49.580' W	Buoy G "129" turn to Masonboro Inlet
Waypoint 11	34° 11.337' N 77° 48.998' W	Beacon GR-RD "WC" Preferred Channel
Waypoint 12	34° 11.058' N 77° 48.887' W	Vicinity inside Masonboro Inlet
Waypoint 13	34° 10.372' N 77° 47.904' W	BUOY RWMO W WHIS "A" Red/White Safe Water

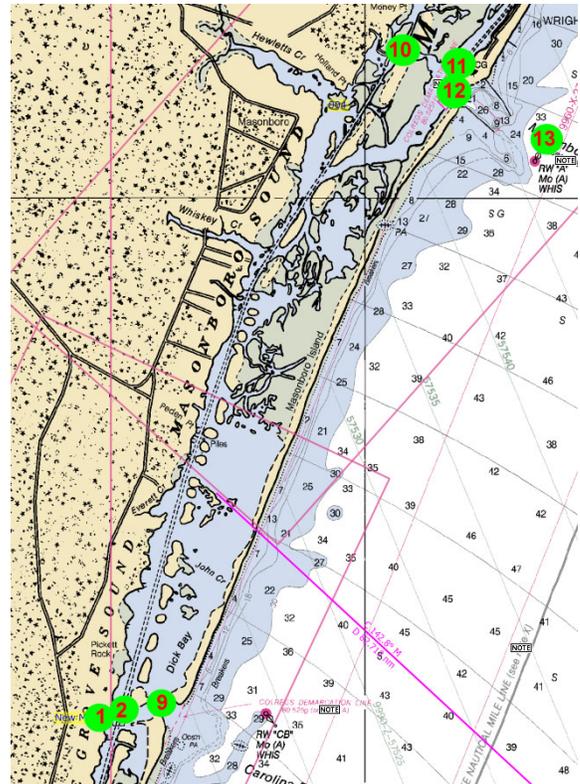
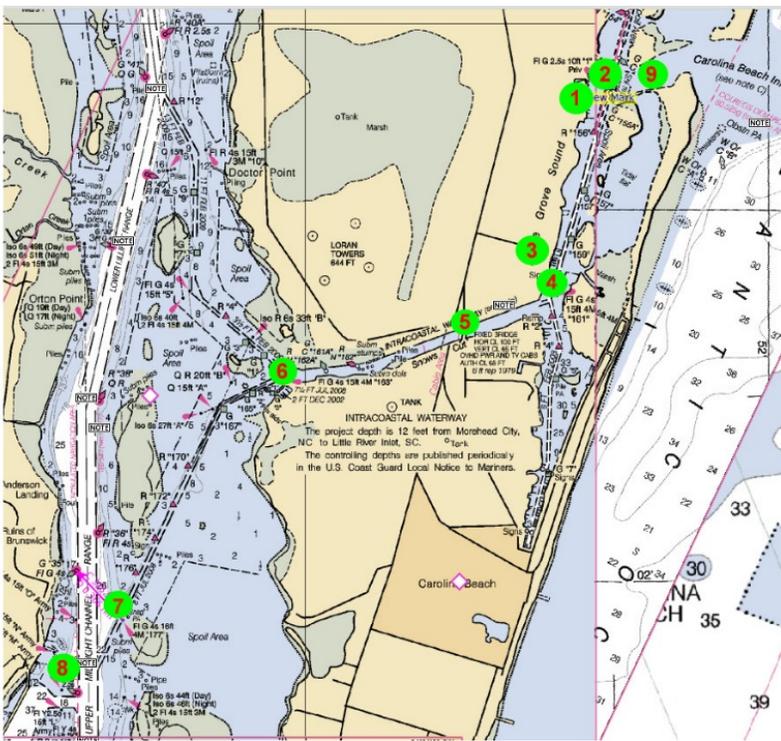


Exhibit No. 4

Underway Instructor Narrative Outline – IWYC
(Copy Carried on All Boats)

Welcome

- A. UIs and BCs assemble prior to student arrival – inspect and conduct bilge visual & sniff check, make ready and warm-up boat(s)
- B. Student arrival - Lead UI welcomes students, introduces UIs and BCs, presents “Finger-1” of Uniform Pre-departure Safety Briefing. – who, what, when, where, weather, tides, currents
- C. Student boat assignments
- D. Break for restroom facilities
- E. Everyone dons PFDs (UIs & BCs assist students)

Pre-departure

- A. At [Waypoint 1](#) – Dockside
- B. Students board assigned boat(s) supervised by BC assisted by UI
- C. BCs conduct Uniform 5 finger Pre-departure Safety Briefing omitting “finger 1” – (fingers 2 – 5) including the VHF radio check – channel 27 – as part of “finger 3”
- D. UI explains undocking procedures and captain’s considerations as students observe the undocking

Underway (IWYC Departure Route)

- A. BC(s) depart dock, proceed to [Waypoint 2](#), BC will sound 1 prolonged blast as boat leaves IWYC marina at the end of the retaining wall
- B. At [Waypoint 2](#) facing south – Discuss ICW, show Lateral Buoys & Beacons
- C. Proceed to [Waypoint 3](#) – Expand Aids to Navigation (ATONs), point out ICW yellow squares & triangles
- D. At [Waypoint 3](#) – Identify mile marker 295 – Discuss Statute vs Nautical mile (5280 feet vs 6076 feet – a ratio of 0.87:1)
- E. Proceed to [Waypoint 4](#)
- F. At [Waypoint 4](#) – Describe importance of added light to beacon, point out CB basin, Joyner’s Marina, NC State Ramp with “official no wake buoy” and Snows Cut channel.
- G. Proceed to [Waypoint 5](#) – Fixed Bridge- identify correct section of bridge to pass through and vertical height marks, discuss current flow in Snows Cut
- H. Proceed to [Waypoint 6](#) – Discuss green & red lateral nav aids, currents in a constricted waterway, boat wake. Point out rock ledges, comment on Snows Cut history.
- I. At [Waypoint 6](#) – Point out “Parking Lot”, shallow north channel (Wilmington) & south channel (Southport)
- J. Proceed to [Waypoint 7](#) – Discuss “finding your way” with the use of ATONs, Emphasize location (starboard/port) of Green/Red Buoys, emphasize ICW yellow indicators
- K. At [Waypoint 7](#) – Discuss transition to “River Rules & ATONs” introduce Cape Fear River to

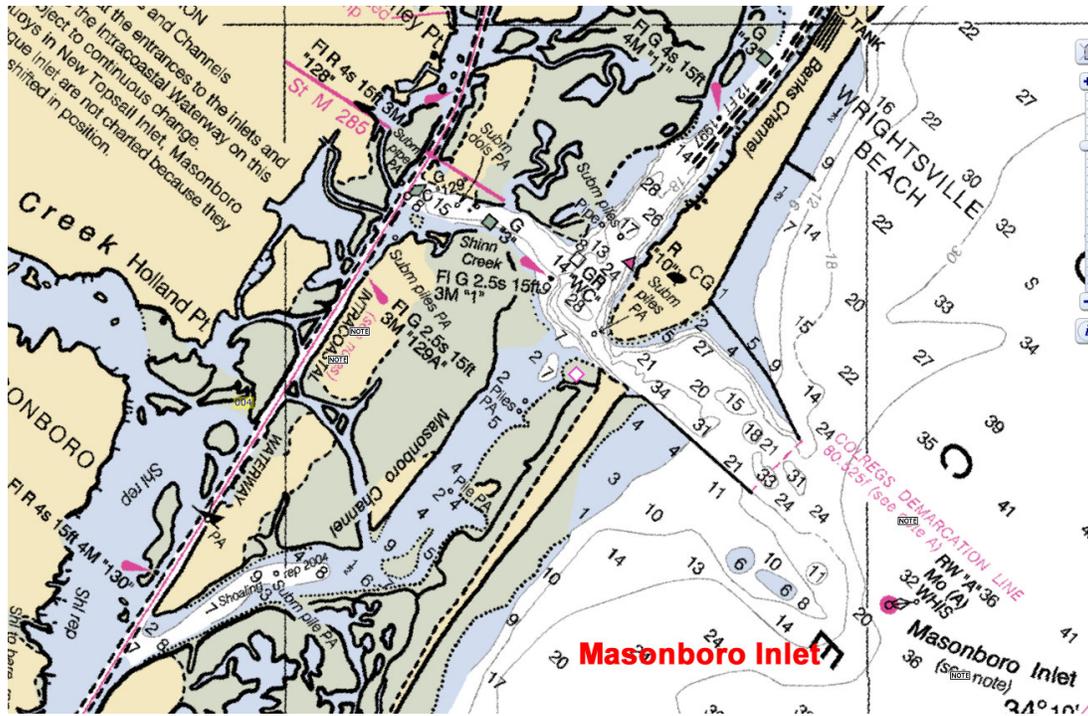
- students (channel dredged to 45 feet, tides & currents, avoidance of large ships)
- L. Proceed to [Waypoint 8](#) – Discuss transition to river rules (Red-Right-Return rule – river vs ICW)
 - M. AT [Waypoint 8](#) – Discuss River Channel, Depth, Point out: Direction to Southport & Wilmington, Sunny Point restricted area, Discuss lighted Red Flashing Range Markers (looking south)
 - N. Return to [Waypoint 2](#) – Answer student questions, during trip back UI should show students the laminated chart for the area and have them take turns in locating their position based on nav aids and landmarks. Discuss boat trim and steering pivot point. Collision risks & determination. Right-of-way (give way vs stand on).
 - O. At [Waypoint 2](#) – Proceed to [Waypoint 9](#) Vicinity CB Inlet (Do not enter inlet beyond first set of buoys) Discuss Inlet
 - P. At [Waypoint 9](#) – Discuss Inlet features, “ocean nozzle” venturi flow
 - Q. Return to [Waypoint 2](#) and proceed to [Waypoint 10](#) – Answer Student Questions, Discuss Rules of the Road and Meeting, Crossing and Overtaking techniques. Practice with VHF radios – boat to boat. Rotate students to observe GPS Chartplotter, Sonar and radar (if equipped) insure that all students learn to interpret chartplotter and depth finder displays.
 - R. At [Waypoint 10](#) turn and Proceed to [Waypoint 11](#)
 - S. At [Waypoint 11](#) – Discuss Preferred Channel Marker/Beacon. UI should show students the laminated chart for the area and have them take turns in locating their position based on nav aids and landmarks.
 - T. Proceed to [Waypoint 12](#) – Point out Banks Channel, Masonboro Channel (popular destination) and Coast Guard Station.
 - U. At [Waypoint 12](#) – LUI & LBC evaluate Inlet conditions and determine if conditions are optimal to proceed out of Inlet. If so, proceed to [Waypoint 13](#). If not, discuss Inlet features while stopped at idle.
 - V. At [Waypoint 13](#) Safe Water Buoy – Circle, point out features and return to [Waypoint 12](#)
 - W. At [Waypoint 12](#) – Discuss Ocean Experience, answer student questions
 - X. Return to [Waypoint 2](#) – Review thumb rules for remembering on which side we take red and green markers. If needed, continue to rotate students to observe GPS Chart plotter, Sonar and radar (if equipped). Review the Outing, General closing or post-cruise discussion of the exercise
 - Y. At [Waypoint 2](#) proceed to IWYC entrance
 - Z. Return to [Waypoint 1](#) Dockside – UI(s) discuss BC(s) technique and considerations preparing to dock

This route can be completed within a 3-hour time allocation

Exhibit No. 5A

Chart and Aerial Views

Masonboro Inlet – chart and aerial view



Carolina Beach Inlet – chart and aerial view

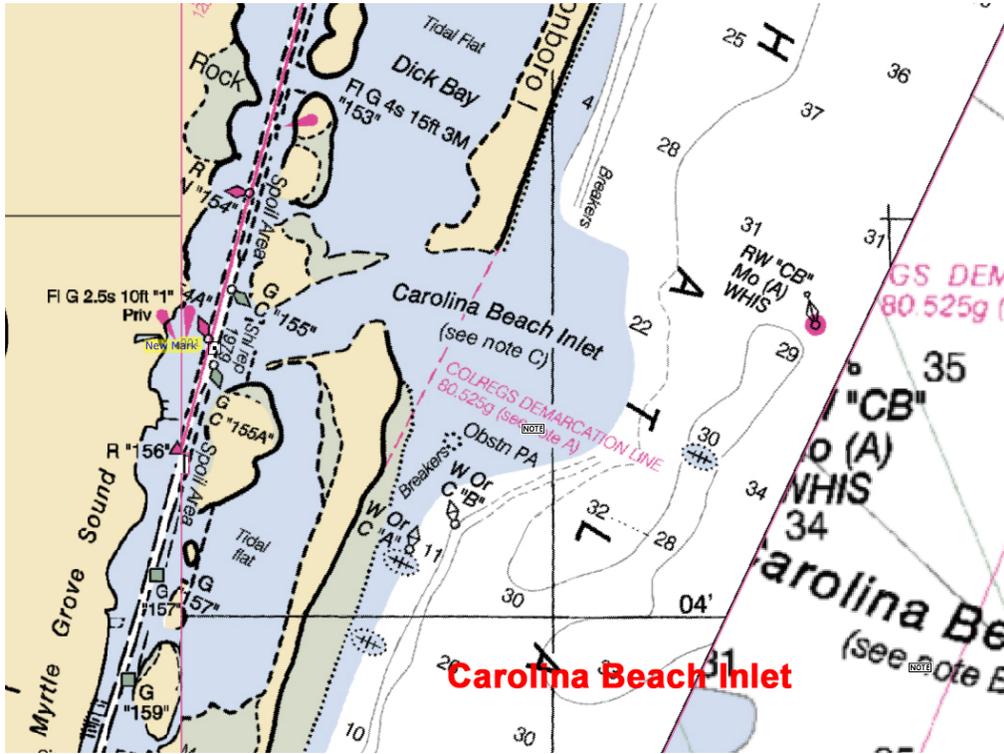


Exhibit No. 5C

Chart – Snows Cut to River Channel

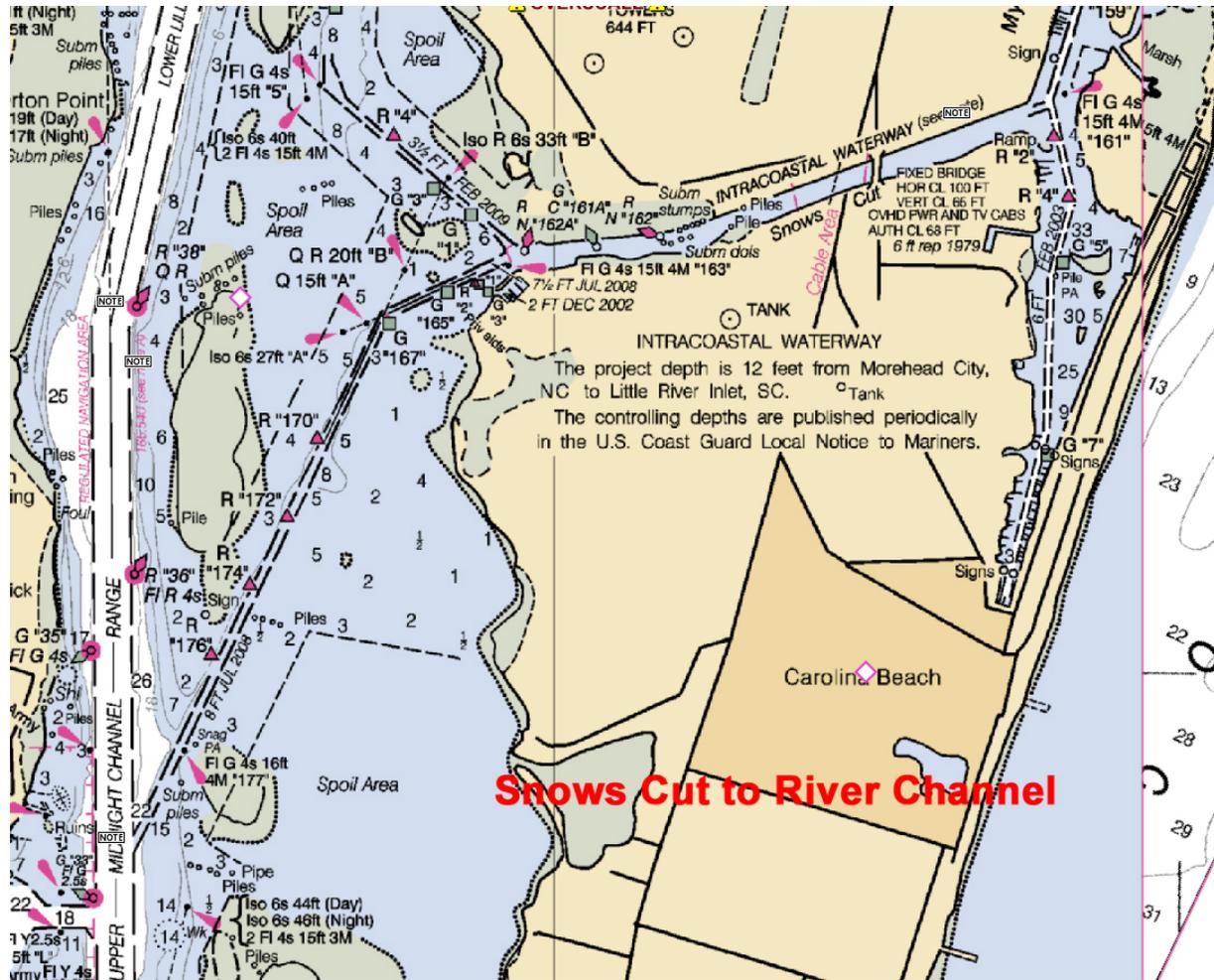


Exhibit 5D

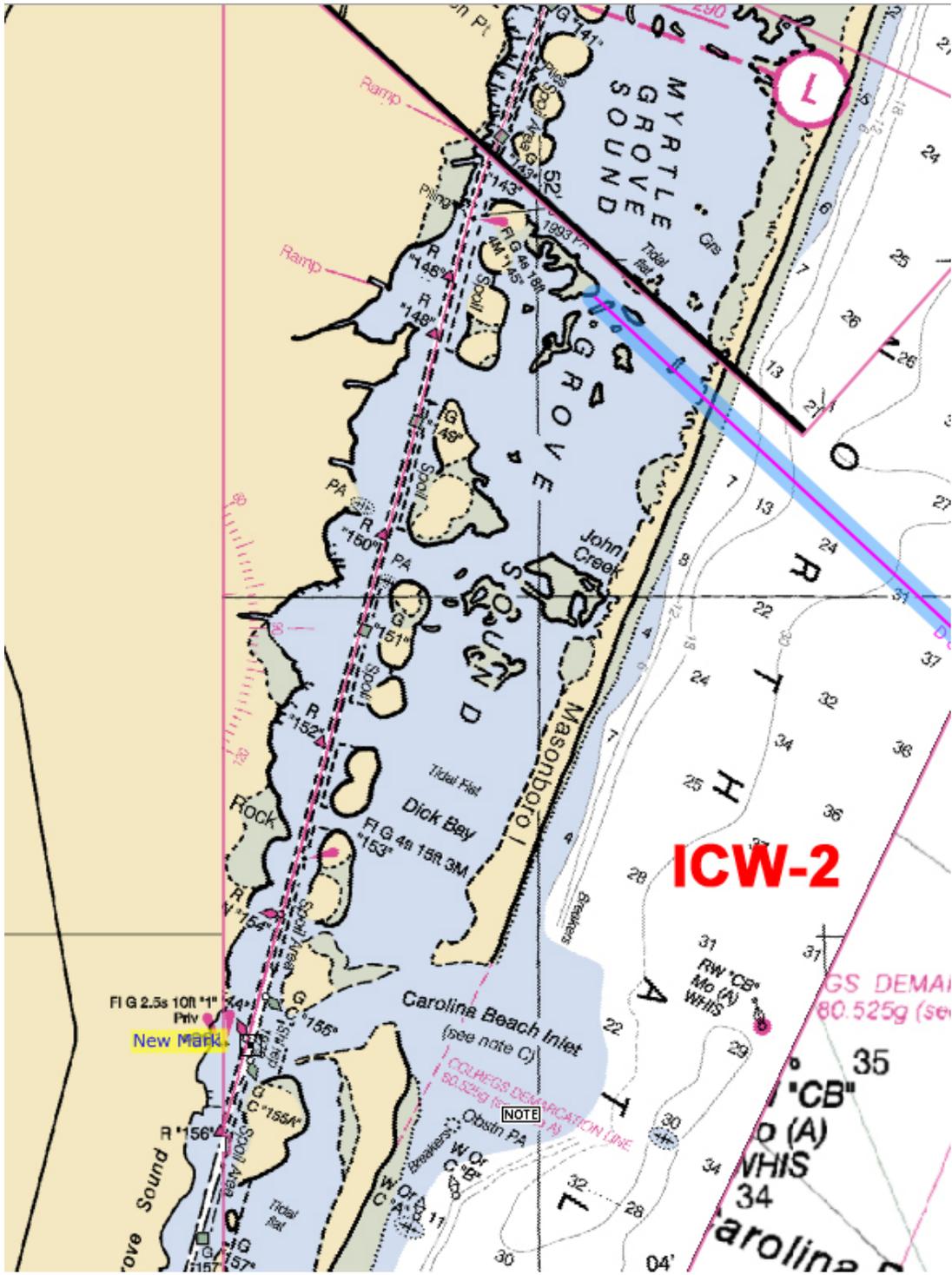


Exhibit 5E

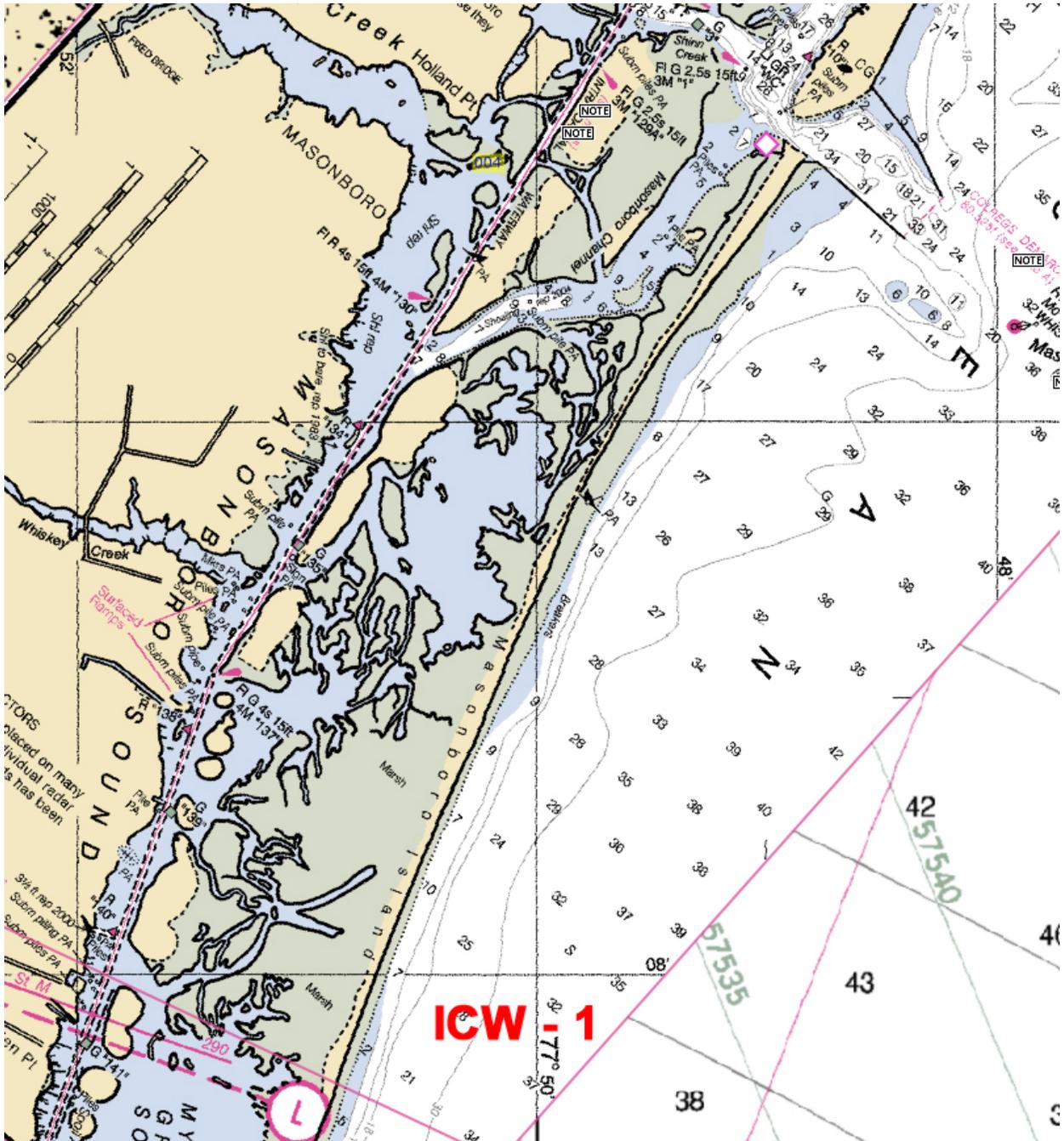


Exhibit No. 5F

