

# Piloting On-the-Water Training

## On-The-Water Teaching Aid Guide

The purpose of this guide is to outline for course instructors and assistants their preparation to help students experience various aspects of the Piloting curricula on the water. Instructors may choose those elements from this guide that apply to their situation and incorporate them in their plan. On the water activities normally will not last longer than about four hours. It may be necessary for them to be conducted at times not closely associated with a classroom course. The waters on which this is conducted and the type of boat available will have a significant effect on the elements selected for use and the method of instruction. For example, in inland areas navigational charts from the National Oceanic and Atmospheric Administration or the U.S. Army Corps of Engineers may not be available. Local maps may be useful in such cases. If nav aids are not available it may be possible to make effective use of buildings or other objects shown on maps. The instructor should encourage students to be involved as they feel comfortable and can do it safely. While underway, other situations may arise that the student will experience beyond those tabulated in this guide. The instructor should acknowledge those unique opportunities with the best responses possible.

This is an optional part of the Piloting Course. Participation will not affect the credit given for the course. It does not provide any certification or credential to the student. Separately, the USPS Boat Operator Certification (BOC) program provides several elements for certification of skills via hands-on training and completion documentation is provided from that program.

This time together with the students on the vessel provides a good environment for sharing the "Boating is FUN ... We'll show YOU how" part of USPS. Questions may be answered about the value of membership in USPS and the local squadron. Other courses and seminars should be shared as a way to show how students can gain additional boating knowledge and skill even if they do not become members.

### General considerations:

#### Weather:

- The activity should be conducted in good weather with moderate seas.
- Winds and waves not to exceed the capabilities of the boat and crew.
- Discuss wind, tide, and current conditions that may affect boat operation.
- This activity should not include "heavy weather sailing," "handling under adverse conditions" or similar activities.

#### Navigation Limits:

- Within range of a cell phone (10 miles) or VHF shore station- Near shore.
- Limited to daylight hours

#### Vessel:

- The vessel should have a current VSC sticker
- The vessel must be insured. USPS insurance becomes primary when the first participant comes on board for the activity, not while moving the boat to the activity location.
- The vessel should be in good condition with no significant problems.
- The vessel should have sufficient fuel on board for the activity.
- The vessel should have a VHF radio, cell phone, or other appropriate communication device.
- Conduct engine room/bilge visual and sniff check, and start blower before starting engines.
- Allow engine to warm up to operating temperature.

### **Knowledge and Expectations:**

- For larger more complicated vessels the boat owners should be aboard even if not participating in the OTW exercise.
- The squadron OTW exercise should be documented, preferably in squadron executive committee meeting minutes or in e-mails saved until no longer needed.
- It is Mandatory that every person wear a PFD when entering the dock area and while on board the vessel unless they remain below deck.
- Participants should be told what to bring and what not to bring.
- Appropriate clothing should be recommended to participants.
- Issue a USPS float plan and complete the check list on the float plan. The form may be downloaded at:  
[http://www.usps.org/o\\_stuff/fp\\_form.html](http://www.usps.org/o_stuff/fp_form.html)
- Check for any medical conditions of participants

### **Suggested materials**

- Local Charts
- Plotter
- Dividers
- Hand Bearing Compass
- Wind Speed/Direction indicator
- Pencils & erasers
- GPS (Fixed or Hand Held)

### **Safety**

There must be a safety briefing about the boat. Consider the following items as appropriate and relevant to the activity:

- Weather check
- Thru-hulls
- Battery switches/electrical panel
- Engine controls
- Head usage
- Trash disposal
- Location of First Aid kit
- Warning about sitting down or holding on during maneuvers
- Location of throwable devices for MOB
- Location of VHF /DSC radio and usage
- Location of flares and other visual distress signals
- Location of fire extinguishers and extinguisher ports to engine compartment (if applicable)
- Anything relevant about the particular vessel being used

REMINDER: All OTW programs must be pre-approved by the Squadron or District to comply with insurance coverage requirements.

This Piloting On-The-Water Teaching Aid Guide has been approved as required and no additional approvals are necessary unless modifications are made to intent and contents.

Feedback comments should be directed to the [Inland/Coastal Navigation Committee Chair](#) to assist in making this Teaching Aid Guide the best possible.

## Let's Have Fun!

The following items should be considered in the plan for Piloting OTW Training as appropriate:

ACTIVITY	TOPIC	DETAIL	INSTRUCTOR NOTES	COURSE REF.
Ashore or prior to getting underway	Plan the voyage	Review chart of area. Note nav aids and prominent objects. Note wind direction and current if any.	Identify areas to be avoided. Consider establishing hazard WPTs.	Ch. 1, 2, 3
	Plot waypoints and enter into GPS/electronics	May be virtual and/or visible objects on water or land.	Two or more WPTs for route	Ch. 3, 5
			Consider additional navigation WPTs, including dock.	Ch. 3, 5
			Determine & plot magnetic courses & leg durations.	Ch. 3, 5
	Prequalify route	Check existing conditions against chart datum.	Check clearance under keel.  Check overhead clearance.	Ch. 2
		Be aware of tide and current in location.	Discuss general effect on route. Instructor should strive to minimize these effects for this exercise.	AP
Underway	Carry out the planned voyage	Navigate the planned route.	Compare compass courses and bearings with GPS directions to waypoints. Compare nav aids with chart information.	Ch. 4,5,6
	Simulate failure of all electronics at some time while navigating with GPS	Revert to DR Navigation. Take bearings. Plot and label bearings, and new DR track.	Restore electronics after appropriate time	Ch.7
	Fixes	Plot & label a fix	Hand bearing compass is helpful. Compare FIX with GPS	Ch. 3
	Ranges	Determine a range & incorporate range as a bearing if opportunity exists	Either formal or informal ranges as available	Ch. 3

ACTIVITY	TOPIC	DETAIL	INSTRUCTOR NOTES	COURSE REF
	Seaman's Eye	Confirm position by use of Seaman's Eye	At any convenient time	Ch. 6
	Positioning Techniques	Plot bearing & distance to waypoint	GPS	Ch. 5,6
		Plot position using two electronic bearings	GPS	Ch. 5,6
On shore or after completing voyage	Review experience on the water	Discuss lessons learned.	What went well. Opportunities for improvement.	