



REQUIRED DISTRICT SPECIFIC TRAINING CHECKLIST FOR THE AV - AID VERIFIER

Version D1NR – 2012 (Revised 1/22/2012)

AVC Name _____

Auxiliary Member Number _____

District/Division/Flotilla **0 1 3** - ____ - ____

INTRODUCTION

1. The Auxiliary Aid to Navigation Verifier District Specific Task Training Guide has been designed to help an Auxiliarist become AV-Aid Verifiers. Each section of this guide contains a listing of District Specific training tasks that allows you to demonstrate your proficiency needed to complete the AV qualification process.
2. This guide can function as the agenda for a workshop or may be used as a self-study tool.
3. If an **AVC – Aid Verifier Candidate** has difficulty finding Verifier Officers, they are encouraged to contact:
 - a. The **Verifying Officer** appointed for your area shown on the D1NS Web Site.
4. Their Navigation Systems Staff Officers (FSO-NS, SO-NS or ADSO-NS). A list of Verifier Officers is available on the PATON Web Page on the NS Web Site at www.uscgaan.com.
5. Have your Verifying Officer check off each task as you complete it so you don't lose track of each training element.
6. Attach this completed ***First District Specific Training Checklist*** to your AV/PQS.
7. Remember that AV Certification is complete only when endorsed by the District Director of Auxiliary and posted to the member's Auxiliary record.

List of assisting Verifying Officers:

Each participating Verifying Officer should be listed in this section.

Name of AVQ	CG ANT	Date.
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Task No. Number	District Specific Task	Date Completed	Verifying Officer's Initials.
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1. PATON Policy Statement.

- a. Review the First District PATON Policy Statement available on the Navigation Systems PATON Web Page at www.uscgaan.com.

2. Boat Crew Qualification.

- a. Check this box if you are already qualified as Boat Crew or Coxswain and go to Task #3 below.
- b. Non-Qualified Boat Crew Auxiliaries Members pursuing AV qualification must complete the following sections of the *Boat Crew Qualification Guide*. These tasks must be checked off by a qualified Boat Crew QE. Presentation of a Boat Crew Qualification Guide with the tasks listed below checked off is required for a Verifying Officer check off.
- BCM-02-08-AUX Type III PFD, Anti-Exposure Coverall Or Dry Suit Swim
 - BCM-02-09-AUX Identify Boat Crew Survival Equipment
 - BCM-02-10-AUX Use The Emergency Signaling Mirror
 - BCM-02-11-AUX Describe The Use Of Hand Held Distress Flares
 - BCM-02-12-AUX Describe The Use Of Aerial Flares
 - BCM-02-13-AUX Operate The Personal Marker Light (PML) or Strobe Light
 - BCM-02-14-AUX State Survival Procedures In Event The Boat Capsizes Or Swamps
 - BCM-06-01-AUX Identify The Basic Parts, Symbols And Abbreviations Found On A Nautical Chart
 - BCM-06-02-AUX Identify Common Aids To Navigation Used In Small Boat Piloting
 - BCM-06-03-AUX Identify Local Landmarks Used In Piloting On A Nautical Chart
 - BCM-06-04-AUX Plot A Position Using Latitude And Longitude
 - BCM-06-05-AUX Plot A Magnetic Course On A Nautical Chart
 - BCM-06-06-AUX Measure Distance On A Nautical Chart
 - BCM-06-07-AUX Compute Time, Speed And Distance
 - BCM-06-08-AUX Determine The Depth Of Water Using A Fathometer and/or a Sounding Pole

Task No. Number	District Specific Task	Date Completed	Verifying Officer's Initials.
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3. Required readings and downloads:

These are on-shore tasks.

a. **NOS Chart No. 1.**

- _____ AVC should download a copy of the *NOS Chart No.1* to their Desktop which is available on the “*Aid Verifier AV*” Web Page at www.uscgaan.com or can purchase a copy of this publication.

b. **NOAA Nautical Chart.**

- _____ AVC will acquire the latest NOAA nautical chart for the patrol area where you plan to verify PATONs or they downloaded the NOAA CPN charts to their Desktop (***Recommended***).

There is no charge for this service. Monthly updates are also available at no charge. Instructions for download are available on the “*First Northern Web Site Home Page*.” Also, provided at Navigation Systems Workshops. Bring your laptop to these sessions

4. Other Navigational document publications.

These are on-shore tasks.

a. **LNM – Local Notice to Mariners.**

- _____ AVC will sign up for the free weekly copy of *LNM-Local Notice to Mariners* on the First District Aid to Navigation Web Site. Access to this site is available on the “*Helpful Links*” Web Page at www.uscgaan.com.

b. **U.S. Coast Pilot**

- _____ AVC will download and read a copy of the local *Coast Pilot* edition to your PC’s Desktop, focusing on the local Bridge Federal Regulations at the front of this publication and the pages that cover the area where they usually operate. Links to the on-line Coast Pilot 1 and 2 are available on the “*Aid Verifier AV*” Web Page at www.uscgaan.com.

c. **Light List – Volume 1 – Atlantic Coast COMDTPUB P16502.1.**

- _____ AVC will download and review the pages of the local *Light List* edition focusing on reflects the AOR where you normally operate to your Desktop. A link to the on-line Light List is available on the “*Aid Verifier AV*” Web Page at www.uscgaan.com

5. NS-AN02 Auxiliary Short Range Aids to Navigation Training Guide

These are on-shore tasks.

- _____ AVC will read the [NS-AN02 Auxiliary Short Range Aids to Navigation Training Guide](#). This guide is available on the “*Federal ATON*” Web Page at www.uscgaan.com .
- _____ AVC will read and understand the [33CFR, Part 66-Private Aids to Navigation](#) section in this training guide. This document is available on the “*Aid Verifier AV*” Web Page at www.uscgaan.com.

6. Understanding the I-ALA-B Aid to Navigation System.

These are on-shore tasks.

- _____ AVC will acquire, read and place a copy of the [USCG Aids to Navigation System Booklet](#) in your Navigation Kit for use as a reference document. This document is available from your MA Officer or from your FSO-NS or SO-NS.
- _____ AVC will read and study pages 9 through 24 of the [NS-AN 02 Auxiliary Short Range Aid to Navigation Training Guide](#).

Task No. Number	District Specific Task	Date Completed	Verifying Officer's Initials.
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7. Reviewing lights and lanterns used on Aids to Navigation.

These are on shore tasks.

- a. ____ AVC will read pages 25 and 26 of the [NS-AN02 Auxiliary Short Range Aid to Navigation Training Guide](#) available on the “*Federal ATONs*” web page at www.uscgaan.com.
- b. ____ AVC will review the PowerPoint presentation, “[NS-PN03-07 Basic ATON System](#)” that is available on the “*Aid Verifier AV*” web page at www.uscgaan.com.
- c. ____ AVC will simulate a lighted aid report by entering the information relating to the lighting system specified for the aid in [Section 5 – AID TO NAVIGATION Characteristics on a NS-PN04 Private Aid to Navigation Report](#) available on the “*Private ATONs*” web page at www.uscgaan.com.
- d. ____ AVC will practice using the guidelines for checking the light characteristic and period of a light is performed by using a stop watch to time five successive period light cycles and by dividing the total time by five. Light checking activity must be performed at night.

8. Understanding the sources of information about a Private Aid to Navigation.

These are on shore tasks.

- a. ____ AVC should understand that **not** all of the permitted PATONs are available from the downloaded pages of the local *Light List* or reflected on the NOAA chart of the area. Realize that all permitted PATONs are listed in the Web-Based PATON System.
- b. ____ AVC should be able to select a PATON on the Light List and locate it on the NOAA Chart.
- c. ____ AVC should be able to use the “[One Page Verification Report](#)” as a source of information about a PATON. You can click on the PATON Name to access this report when operating on-line.

9. Become familiar with the typical conditions that can cause a PATON to be discrepant.

These are on shore tasks.

- a. ____ AVC should print out and review a copy of the [NS-AN03 ATON Kit](#) and include a copy in your PATON Navigation Kit for future reference while on a patrol. This document is available on the “*Federal ATONs*” web page at www.uscgaan.com.
- b. ____ AVC should understand that a private aid is discrepant when it does not conform to descriptions of the PATON described in *I-ATONIS*, in the *Light List*, listed in the *Web-Based PATON System* and/or displayed on a NOAA chart.
- c. **NS-PN03-09 PATON DISCREPANCY REVIEW**
 - ____ AVC should review this PowerPoint presentation on-line on the PATON web page at www.uscgaan.com.
 - ____ AVC should review the typical discrepancies found on a private aid and correlate them to the discrepancy listings shown on a “[NS-PN04 Private Aid to Navigation Report](#)” that is available on the PATON web page at www.uscgaan.com.
- d. ____ AVC should understand the importance of providing clear data, the name and address of the owner, and a photo of the aid. Basically, nothing can happen to resolve this issue until the aid’s owner applies for a permit to the DPW.

Task No. Number	District Specific Task	Date Completed	Verifying Officer's Initials.
10.	<u>Guidelines for reporting the depth of water to a Federal Agency.</u>	_____	_____

These are on-shore tasks.

a. **Echo Sounder Set Up:**

- _____ AVC should read an echo sounder's operating manual to fully understand the operation of your unit. Proper echo sounders used to measure depth of aids to navigation should have a digital reading for partial feet.
- _____ AVC should understand how to set up an echo sounder in order to insure it is operating accurately before getting underway.
- _____ AVC should understand how to determine the correct depth unit of measure by referencing the current **General Information Block** on a NOAA Chart.
- _____ AVC should always re-check that the correct depth unit of measure on the NOAA Chart is set up in their echo sounder--feet, meters, or fathoms.
- _____ AVC should understand the correction required for the location of the echo sounder's transponder on an OPFAC's hull and how it is determined.
- _____ AVC should understand how to use of depth alarms on an echo sounder.

b. **Compensating for Current and Wind.**

- _____ AVC should understand the effects on a floating aid from the influence of Set and Drift of the current, wind and other elements and the meaning of the term, "**Watch Circle.**"
- _____ AVC should understand how more accurate depth readings are possible by taking the reading up wind and/or up current from the aid.

c. **Correcting the depth for the height of tide.**

- _____ AVC should understand how to use a GPS set to look up and state estimated tide predictions for a specific date and time.
- _____ AVC should understand that the depth reading from an echo sounder is corrected by adding the correction for the position of the echo sounder's transducer to the echo sounder's depth read out.
- _____ AVC should understand and be able to actually correct the "**Substation**" reference on the Almanac screen of the GPS. Also, understand that Substations change as you transit from one area to another.
- _____ AVC should understand how to correct a depth reading to charted datum by subtracting the **HOT-Height of Tide** taken from the Almanac screen on their GPS that is referenced to the correct "**Substation.**"

d. **On-scene precautions and processes:**

- _____ AVC should be aware that while taking soundings near any aid to navigation that the boat should never transit outside of the navigable channel at any time for any reason while verifying PATONs.
- _____ AVC should understand that the OPFAC should be maneuvered close aboard the private aid taking extra precautions that the aid could be positioned over shoals and/or obstructions. Depths, recorded from an electronic echo sounder, are always corrected for the position of the echo sounder's transducer.

Task No. Number	District Specific Task	Date Completed	Verifying Officer's Initials.
	<ul style="list-style-type: none"> • _____ AVC should be aware that special precautions must be taken near fixed aids to navigation due to the possibility of shoaling or obstructions near the aid's position. Understand the term "<i>riprap</i>" and how it should be handled when positioning a private aid and how to recognize the symbols used to identify riprap on a nautical chart. Identify the chart symbol for <i>riprap</i>. • _____ AVC should be aware that floating aids are anchored to the seabed with a harness and that the real position of an aid to navigation is the location of its anchor or mooring. • _____ AVC should understand the importance of recording and reporting the exact time when each depth is taken. 		

11. Understanding the use of GPS.

These are on shore tasks.

a. Background Information:

- _____ AVC should view the PowerPoint presentation "[NS-PN03-11 GPS Orientation](#)" available on the AV Training Page at www.uscgaan.com.
- _____ AVC should be aware that the accuracy of a "**WAAS**" reading is approximately 10 feet, 95% of the time. State those "**WAAS**" corrections are satellite generated in conjunction with ground stations and additional satellites.

b. GPS Set Ups

- _____ **Horizontal Datum** - Be aware that only charts showing NAD83 or WGS84 datum may be used for verifying PATONs.
- _____ **Heading** – Understand that the term "Heading" is related to the type of Compass used on the vessel and that an analog compass generates magnetic headings that must be compensated and corrected for Deviation Error in the area.
- _____ **Speed Unit of Measure** – Understand that while operating on the water, the Speed Unit of Measure in a GPS set must be set to Knots – Nautical Miles per Hour. Most sets come preset to MPH—Statute Miles.
- _____ **Deviation** – Understand that certain magnetic influences aboard an OPFAC can affect the direction of your compass and that a Deviation Table is necessary for accurate navigation.
- _____ **Variation** – Understand that new GPS sets have automatic variation correction capability while older sets may have to be corrected manually. Variation can be obtained from the nearest compass rose on your chart.
- _____ **Date and Time** – Understand that most GPS sets obtain date and time data from the satellites which is more accurate than any watch or clock.
- _____ **Latitude and Longitude** – Understand that the Coast Guard uses *Deg—Min—Sec* formatted readings and that GPS sets must be adjusted to reflect this Coast Guard standard.

c. GPS Alarms

Be aware of the following available alarms:

- _____ **Waypoint Alarm** – Defines a pre-set diameter in miles that triggers an alarm whenever a boat penetrates the protective circle around the waypoint entered on a GPS Set.
- _____ **Off Course Alarm** – Establishes a XTE—Cross Track Error parameter in the GPS, creates this alarm which sounds whenever the boat crosses the error limit on either side of a track line.

Task No. Number	District Specific Task	Date Completed	Verifying Officer's Initials.
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- _____ **Anchor Alarm** – Indicates that an alarm is created by establishing a diameter (nautical miles) that triggers an alarm whenever a boat drifts outside the limits of the circumference.

d. **Quality readouts:** _____

- _____ **THREE DIMENSION (3D) POSITIONS** – Understand that a three-dimension position is obtained by the GPS after acquiring data from *four* or more satellites and that a three-dimension fix must be attained at a minimum when locating (fixing) private aids. This condition must also be included on your PATON Report. 3D Differential fixes are highly desirable.
- _____ **HDOP – Horizontal Dilution of Position Error** – Understand that this statistic is a measure of the accuracy of the geometry of the satellites in relation to your position on the earth's surface. Lower readings indicate possible higher accuracy. If DGPS is being used, review the HDOP scale in the GPS' Operating Manual and express the accuracy of the current satellites position readings being generated by the GPS set – Optional. This condition must also be included as part of your PATON Report.
- _____ **EPE – Estimated Position Error** (in feet) – Know that this error is an expression of the accuracy of the fix being generated by your GPS and that the expression, in feet, represents the diameter of a circle in which the fix exists. This quality measurement must also be included as part of your PATON Report.

e. **Waypoints:** _____

- _____ AVC should understand the composition of a Waypoint as used by GPS, including Latitude and Longitude, a number, and a symbol.
- _____ AVC should review the PowerPoint presentation, "[NS-PN03-12 GPS Waypoints](#)" available on the "[Aid Verifier AV](#)" web page at www.uscgaan.com.
- _____ **WAYPOINT VALIDATION PROCEDURE** – AVC should be aware to follow the practice that considers every new waypoint as suspect until verified by actually visiting the waypoint site and by correcting any LAT-LON position error in the GPS while at the site.

f. **Routes:** _____

- _____ AVC needs to understand the composition of a Route as used by a GPS to be a series of verified waypoints linked together in a planned sequence.
- _____ AVC should review the PowerPoint presentation, "[NS-PN03-13 GPS Routes](#)" available on the "[Aid Verifier AV](#)" web page at www.uscgaan.com.
- _____ AVC should read the section on Routes in their GPS' Operating Manual.

12. Guidelines for taking and reporting a fix to a Federal Agency.

These are on shore tasks

a. **Background Information:** _____

- _____ AVC should understand the need to record and report the manufacturer's name and model number for the GPS(s) being used.

b. **Pre-underway activity:** _____

- _____ AVC should understand how their GPS set should be checked for accuracy before getting underway.
 - Verified that units of measure are correct.
 - Horizontal DATUM is set correctly.
 - LAT/LON is formatted correctly.
 - WAAS is enabled.
 - GPS readout is compared to a known location or other GPS.

Task No. Number	District Specific Task	Date Completed	Verifying Officer's Initials.
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c. On Scene Activity:

- ____ AVC should review [NS-PN10 On Scene Operation Presentation](#)” to view a summary of the tasks required for an accurate PATON report. This presentation also provides graphics showing the proper maneuvering techniques for compensating for wind and current.
- ____ AVC should understand that a coxswain must be able to hold the OPFAC alongside the aid while remaining in the navigable channel when a fix and depth is being recorded so that the AV can record all of the required information.
- ____ AVC should understand the need to record the accuracy of the GPS readings as the Fix is taken:
 1. EPE or HDOP reading.
 2. 3D Differential indications.
- ____ AVC should know how to report this data to the Coast Guard.

13. Activity reports to AUXDATA:

These tasks are performed on shore.

- ____ AVC should understand that the purpose of reporting PATON activity in a timely manner is to provide support statistics regarding the performance of the PATON program concerning PATON Missions, PATON Verifications and PATON Discrepancies that Mission 31 is used for reporting PATON activity.
- ____ AVC should know that each person performing PATON verifications is responsible for preparing their own **ANSC 7030 ACTIVITY REPORT – MISSION**, referencing **UNIT/INDIVIDUAL** as **Type of Resource**. Annual awards are determined from this data.
- ____ AVC presents or accurately completes an **ANSC 7030 – ACTIVITY REPORT – MISSION – INDIVIDUAL** report. If possible, attach an on-line generated copy to this check off document.
- ____ AVC understands that when the PATON verification is performed as part of an authorized Patrol, the total time allowed for Individual ATON activity is limited to a few minutes since your time underway is recorded in POMS by the coxswain.

14. Registering on the Web-Based PATON System.

These tasks are performed on shore.

- ____ AVC should read the [“NS-PN06 Web-Based PATON System Training Guide.”](#) This guide is available on the PATON Web Page at www.uscgaan.com.
- ____ AVC can use the format below to practice entering the personal data needed for registering on the Web-Based PATON System.

PATON - PRIVATE AIDS TO NAVIGATION SYSTEM

User Login

If you are a registered user please login below

Otherwise use the [Registration Form](#)

Username:

Password:

PATON REGISTRATION

First Name *

Last Name *

Company / Organization name *

Type of User *

ANT Sector Harbormaster Private USCG Auxiliary Non-Reporting User

Address *

City *

State *

Zip Code *

Email Address*

Email Address 2:

Work Phone: *

Work Phone Ext :

Work Phone 2 :

Home Phone:

Cell Phone:

Fax Number:

Username: *

Password: *

Re-Enter Password: *

USCG AUXILIARY ADDITIONAL FIELDS:

DISTRICT/DIVISION/FLOTILLA:

SUBMIT REGISTRATIO

* Indicates required fields

Task No. Number	District Specific Task	Date Completed	Verifying Officer's Initials.
15.	<u>Preparing a 2554 PATON Application Report.</u>	_____	_____

This task is performed on shore.

- a. _____ AVC should use the on-line "[2554 – WEB-BASED PATON APPLICATION FORM](#)" below, enter the PATON data as if you are applying for a private aid permit on the Web-Based PATON System as a PATON owner.

Private Aids to Navigation Application - CG 2554

Entry Form

* Indicates required fields

FIRST NAME *	Frank	?
LAST NAME *	Larkin	?
WORK PHONE *	978-263-3023	?
EMAIL ADDRESS*	FrankJLarkin@verizon.net	?
USER ORGANIZATION	USCG DISTRICT 1	?

Location, Depth and PATON Type.....

LATITUDE *	Degrees	Minutes	0	Seconds N	?
LONGITUDE *	Degrees	Minutes	0	Seconds W	?
GENERAL LOCALITY *		?			
DEPTH AT DATUM		(Feet - corrected to chart datum)	?		
SUGGESTED PATON NAME *		?			
PATON TYPE*	<input type="radio"/> FLOATING <input type="radio"/> FIXED <input type="radio"/> LIGHTED <input type="radio"/> UN-LIGHTED ?				
PATON PURPOSE *		?			
PATON CATEGORY *		?			

AID COLOR		?
SOUND SIGNAL		?

Establishment REQUESTED

ACTION REQUESTED *		?
AID DURATION	Set: <input type="text"/>	?
	Pull: <input type="text"/>	?
COMMENTS *		

Submit Query

* Indicates required fields

Task No. Number	District Specific Task	Date Completed	Verifying Officer's Initials.
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16. Logging on to the Web-Based PATON System. _____

Need access to the PATON System to perform this task. Verifying Officer should logon to the PATON System using their access code. These tasks are performed on shore.

- a. _____ AVC will demonstrate how to sort data and find specific PATONs.

-
- b. _____ AVC will demonstrate how to access and print out a one-page PATON Report.

17. Reporting a PATON Verification on the Web-Based PATON System.

Need access to the PATON System to perform this task. Verifying Officer should logon to the PATON System using their access code. This task is performed on shore.

- a. _____ Using the [WEB-BASED 7054 USCG AUXILIARY AV PATON REPORT](#) below, simulate a PATON verification and enter the data for reporting the verification of a private aid on the Web-Based PATON System report.

b. AVC will not submit the report.

18. Review of the Federal Regulations for Bridges.

These tasks are performed on shore.

- a. _____ AVC should read the “[NS-BP02 Auxiliary Bridge Program Training Guide.](#)” available on the Bridge Web page at www.uscgaan.com.
- b. _____ AVC should read “[NS-BP02 – How to Conduct a Bridge Survey](#)” available on the Bridge web page at www.uscgaan.com.
- c. _____ AVC should read “[NS-BP03 – 33CFR 117 Bridges](#)” available on the Bridge webpage at www.uscgaan.com.
- d. _____ AVC should review the procedure for reporting bridges using the Bridge Database System.

19. Aquaculture Aids and Facilities.

GLOSSARY OF AV TERMINOLOGY

ADSO	Assistant District Staff Officer.
ANT	ATON Team. This name is followed by a location: Boston, Bristol, Portland, Woods Hole or SWH.
AOR	Area of Responsibility.
ATON	Aid to Navigation.
AV	ATON Verifier
AVC	ATON Verifier Candidate.
BM(#)	Boson Mate. The number suffix indicates the class of Petty Officer. BMs are the Coast Guard's operational personnel for vessels.
CFR	Code of Federal Regulations.
CGD1	Coast Guard District 1—properly written as “First Coast Guard District.”
Coxswain	Coast Guard person in charge of a small boat.
DGPS	Differential Global Positioning System.
DSO-NS	Auxiliary, District Staff Officer - Navigation Systems
EPE	Estimated Position Error.
FSO-NS	Flotilla Staff Officer – Navigation Systems.
GPS	Global Positioning System.
HDOP	Horizontal Dilution of Precision.
IALA	International Association of Lighthouse Authorities.
KNOTS	Nautical Miles per Hour. (Abbreviated Kts.)
LNM	Local Notice to Mariners.
MPH	Miles per Hour—normally refers to statute miles.
NOS	National Ocean Service
OINC or OIC	Officer in Charge.
OTO	Assistant Director of Auxiliary, Operations and Training Officer.
PATON	Private Aid to Navigation.
PTE	Position Tolerance Estimate.
QM (#)	Quarter Master. The number suffix indicates the class of Petty Officer. QMs are the Coast Guard's navigation and signaling personnel.
SO-NS	Division Staff Officer – Navigation Systems.
USACE	United States Army – Corps of Engineers.
USC	United States Code.
WAAS	Wide Angle Augmentation System
XPO	Executive Petty Officer.
XTE	Cross Track Error.