



OCTOBER 2011 NS NEWSLETTER

THE 2011 AUXILIARY PATON PROGRAM IS A SUCCESS

PATON Program Status as of 10/12/2011

Sector	Total Aids	Total Verified on system	Missed Must be Verified	Estimated Percent Complete In 2011
Boston	497	340	49	68.4%
SENE	1,700	693	248	40.8%
Woods Hole	1,250*	512	200	41.0%
Bristol	450	181	48	41.1%
NENE	410***	104	159	25.3%
Southwest Harbor	183**	57	126	31.1%
South Portland	227	47	33	20.7%
TOTAL	2,607	1,137	456	43.6%

The 2011 PATON goal was the verification of one-third of the aids. A great job was done by our active AVs this year. We are continuing to analyze the AV reports for groups of PATONS and submitting “Heads Up” reports identifying the discrepancy and documentation to the responsible parties as part of our DPW-1 support activity. We are performing this service for both First Northern and Southern.

- *Working with DPW-1, the PATON records of many aids are being corrected.*
- *Also, many aids that have been missing or removed are being deleted as problems are identified and reported by an AV or AUXAIR. This work will continue year round.*

Unfortunately 456 PATONS that have never been verified or were last verified in 2009 or before still remain unverified this year. These aids will be given a top priority in 2012.

Planning for the 2012 season will be based on our 2011 experience.

1. We will be making specific PATON verification assignments to the AVs in 2012. ANT Bristol did it this year and was very successful.
2. We would like to get the lateral aids verified earlier in the season, weather permitting. These are the most important to the marine public and, if needed, we want them fixed and watching properly as soon as possible.
3. We need to resolve the 109 northern Maine private aid problem in 2012. These aids are predominantly aquaculture with one main owner. We plan to work with the owners to, perhaps, submit verification reports on their aids. We also want to revisit the verification process with aircraft from AUXAIR.
4. We will be working with the system programmer on a copy of the AV Verification Report that will be sent to the PATON owners plus other updates to the system.
5. We have a new National AV PQS that needs to be introduced in 2012. The April Conference will have a full day of AV training available.
6. We plan to run a Navigation Systems Staff Officer Leadership Program which we will promote and run at the January Conference in 2012. One of the keys to success with this program is to develop enthusiastic Navigation Systems leaders that:
 - Know the Navigation Systems programs – PATON, ATON, Bridges, Chart Updating and Small Craft Facility reporting.
 - Know what is expected of them organizationally. How do they get the job done?
 - Learn how to communicate and work with the CG ANTS.
 - Learn how to work with the aid owners and harbormasters.
 - Know how to organize, work with and motivate their AVs. This is the key to a successful program. “**NO**” is not allowed in the Navigation System vocabulary.

NEW AV PQS Approved by National

National has issued an AV PQS recently. Any Auxiliarist who now wants to become AV Qualified must comply with this instruction as well as First District requirements focused on using the On-Line PATON System. There will be a full day Aid Verifier Qualification Workshop at the April District Workshop. E-Mail your ADSO-NS for a copy of the AV PQS and the D1 requirements. Use the information provided on the D1 NR Navigation Systems web site at www.uscgaan.com for self training and orientation on the bridge program requirements. Make a reservation for the April District Conference by e-mailing your ADSO-NS.

THINGS YOU CAN DO TO IMPROVE YOUR GPS POSITIONING SKILLS AND REPORT MORE ACCURATE FIXES AS AN AV

These navigation skills are extremely important when fixing the location of a **lateral aid**. Remember the off-station criteria for a lateral aid is only **50 feet** and it is very easy to report a lateral aid in an off-station condition by not paying strict attention to these details.

Documentation: You can be dealing with up to four different Lat/Longs for a single private aid.

- **Permitted position** – This is the Lat/Long that is printed at the left on a *One Page Verification Report* or *7054 Verification Report*. Compare it with the Light List position. I find many that exceed the 50 off-station criteria but are reported as watching properly.
- **Light List position** – You will only find this Lat/Long in the Light List. Compare it to the permitted and the charted Lat/Long. PATONs with no LLNR-Light List Number will not appear in the Light List. The Light List number should match the permitted Lat/Long. The Light List is available on-line on the Navigation Systems Web Site at www.uscgaan.com.
- **Charted position** - You must review the latest NOAA chart to verify that a PATON is charted. Many PATONs will not be charted. NOAA makes these decisions depending on the availability of chart space in the area where the aid is located. Compare the charted position to the permitted and Light List position(s). It is a good practice to use the “*NOAA On-Line Chart Viewer*” that is available under “*Helpful Links*” on the *NS Web Site* at www.uscgaan.com. These charts are digitally updated to the LNMs. Check the last LNM reference at the top right hand side of each chart. It is usually only a week or two old.
- **Observed position** – This is the fix that you take on-scene alongside the PATON. When you experience a large distance error between these positions, always double check your observed fix. Mention that you double-checked the fix in the Accuracy Statement.

It is a good practice to deal with PATON documentation before the patrol so you can make better judgments about the aid when on scene.

- Plotting each aid on an electronic chart and printing out a chartlet is another good practice.
- Entering each aid that you plan to verify as a waypoint on your GPS before the patrol and using the GoTo command to locate it is another good practice.
- Capturing the observed LAT/LONG on your GPS while on scene is also a way to insure that you collect the right data.
- Plot each fix on a NOAA chart to insure that you are not submitting a position error to the Coast Guard.

The GPS as an instrument: A faulty or erroneously set up GPS can easily build in 50 to 100 foot errors into your LAT/LONG readings. Don't trust other GPS sets. Always bring your own hand held set to the job site.

- **WAAS Enabled** – Review the setup screen on the GPS to insure that WAAS is enabled.
- **3D Differential reading** – Be positive that your set is reading four or more satellites and is showing a “3-D Differential” mode before you use it to take a fix. 2-D readings can produce large geographical errors.
- **EPE – Estimated Position Error** – This feature provides clues as to the correct set up and accuracy of the satellite geometry that you are currently experiencing. If the error is over 20 feet, wait a while for new satellites to appear. Satellites are constantly rising and setting. Remember that your off-station criteria are only 50 feet.
- **DGPS** – Accuracy readings should be between 1 and 2. Always, review and report an EPE.
- **Make it a practice to review these three important position quality features for every fix that you take.**
- **Always record these three GPS quality indicators on the Accuracy Statement for each PATON that you verify.**

The Floating PATON itself – You must understand the nature of the aid to navigation in order to get an accurate fix.

- The location of an aid to navigation is the position of the mooring or the anchor that holds it to the seabed. It is not the floating buoy itself.
- The aid is attached to the mooring with a harness which can be either a chain or a rope or both. This harness will usually be longer than the Depth at Datum plus the range of tide in the area. A shorter harness will cause the aid to submerge or could drag the aid off station at high water.

Auxiliarists are not allowed to pull a PATON up to short stay in order to determine the exact position of the aid's mooring.

- Floating aids are also affected by current and wind that can move the buoy away from its mooring in a circular motion called a watch circle.

Using your GPS accurately

- The Lat/Long reading on a GPS originates from the location of the GPS antenna on the vessel. Position of GPS antennas on large vessels can easily cause 10 to 20 foot Lat/Long errors depending on their placement on the vessel. Hand-held GPS sets are more convenient to use when fixing an aid.
- **For Fixed PATONs** – use a hand-held GPS with the vessel maneuvered close aboard the aid (if safely possible) with the hand-held GPS as close to the aid as possible. If you can't maneuver close aboard the PATON, always provide an estimate of your

GPS' distance off the aid when the fix was taken. *Record this distance on your Accuracy Statement.*

- **For Floating PATONs with no wind of current** – Follow the process as stated for the fixed aid above.
- **For Floating PATONs with wind or current** – Maneuver the vessel into the wind or current a distance of the depth of the water in the area and take the fix. While this practice is not precise, it will probably get you a more accurate fix of the PATON's mooring. In the shallower channels, where private lateral aids are often found, simply maneuver the vessel to the up wind or up current side of the aid and take the fix from the opposite side of the vessel from the aid.
- *Always make a note in the Accuracy Statement about the extent of this maneuver.*

IMPORTANT:

In order to update a Federal document, the person submitting the data must always provide supporting evidence as to the accuracy of their report. This is the reason why an “Accuracy Statement” is required with every 7054 PATON Verification Report.

Unfortunately, we receive many great reports that have no accuracy statement attached. In these cases, we cannot correct the PATON records. If the aid is an important lateral aid, we often have to go back to the AV or the owner to confirm the accuracy of the position in order to update the Light List or the NOAA chart. This is a lot of extra work for the Coast Guard which is our goal to prevent.

Please make it your practice to attach an “Accuracy Statement” with each 7054 PATON Verification Report that you submit.

ATTENTION DCDRs and FCs:

As you select candidates for your SO-NS and FSO-NS staff positions for 2012, please try to select **active** and **AV-qualified** members for these important jobs. You are not assisting the Coast Guard by assigning untrained and disinterested members to these jobs. Please realize that over **85%** of the Navigation Systems staff appointees in 2011 have done absolutely nothing. Yet we surpassed our Coast Guard assigned goals. Imagine what could be accomplished with full staff participation.

Thanks to all for your support of the PATON and Bridge Programs.

PLEASE PASS OR E-MAIL THIS NEWSLETTER ON TO YOUR FLOTILLA COMMANDER AND USE THE INFORMATION AS PART OF YOUR NS MONTHLY DIVISION REPORT.

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