

PATONs and Bridges

WE GOT THE PATON JOB DONE IN 2016



One little aid to navigation doesn't look like much on the inland waters of New England. In fact, with an untrained eye, our aids are often ignored by local mariners. But, as you can see in the above photo, they can have a major influence on boating safety. Did you know that the First Northern Coast Guard Auxiliary are assigned the responsibility for over 2,640 private aids and 250 bridges that are deployed from the Canadian border in Maine to the Connecticut border. During 2016, 1,027 private aids were verified and another 482 were checked along with 129 bridges. And, the remarkable statistic is that **less than 10 percent** of our AVs actually performed 92% of the field work. **What a fantastic group of volunteers!**

AVs are needed for the new HMRAP program

NS needs AVs who are willing to participate in the new HMRAP program. Seasoned AVs or a new AVC are welcome. We will train you. However, you will need to make a commitment to follow through in a highly professional manner with local Harbormasters. Let the DSO-NS know of your interest as soon as possible.

New Run Sheet

We have been working vigorously getting the updated Run Sheets ready for the 2017 season. Check out an updated sample on page 2.

AV Currency and REYR Problems

Many AVs are not current or are in REYR. Check your personnel records. See Page 4 for more details,

New HMRAP Program

After two years of beta tests, the Harbor Master Ride Along Program will be expanded during 2017. This new approach for verifying private aids is designed to get the aid owner and the AV (Aid Verifier) working together in order to break down any communication barriers so that problems can be resolved quickly in the field with a minimum of red tape and paperwork. This is quick, easy and efficient way to get the Harbormaster on-line system, the LNM, the Light List and the NOAA chart corrected. Continued on Page 3

HELP WANTED!

Navigation Systems will be training and developing special AVs in 2017 for participation in the HMRAP program. This program needs AVs with the desire to take over a HMRAP project and manage it in a highly professional manner. They will work directly with the Harbormaster, the CG ANT and DPW1 in Boston to resolve any private aid to navigation issue that arises. Training starts in early February. These special AVs will ride with the Harbor Master in the field using special Run Sheets for data collection. They will advise and train HMs on the use of the Harbormaster System. They will also prepare CG7054 PATON Reports and follow up on documentation and corrective action issues. **Contact the DSO-NS if you are interested.**

THE UPDATED PATON PATROL RUN SHEET FOR 2017

TOTAL		4		VER	1		CHK	0		PHO	1		0		SWH-POC NORTHERN MAINE			
PROCESSED TO DATE		0		0.0%		0	0.0%		0	0.0%		UNA						
SWH-POC NORTHERN MAINE							TRANS. CORR. (ft)	0.0		DATE					RUN SWH-POC			
	PATON NAME	TYPE	LATITUDE	LONGITUDE	TIME	EPE (ft)	DEPTH	HOT	DATUM	CRITERIA	LAST	ACTION	DURATION	LAST KNOWN STATUS				
PERMITTED 4052.00 200100218463 1 VERIFY	University of Maine Oceanographic Lighted Buoy F	PMT	44 03 18.600 N	68 59 48.600			361.0	0.0	361.0	500 FEET	2014	VERIFY	ANNUAL	YELLOW "F"				
		LL	44 03 18.600 N	68 59 48.600														
			LATITUDE	LONGITUDE	DATE	WP No.	DIST OFF	LIGHT	PHOTO	POSN OFF	2014 REPORT - WP							
			CHT	44 03 18.600 N	68 59 48.600				FI Y 4s	Has Photo	FI Y 4s							
			OBS															
PERMITTED 6.00 200100646565 2 NOT SCHED	University of Maine Jordan Basin Lighted Buoy M	PMT	43 29 26.400 N	67 52 47.400			935.0	0.0	935.0	500 FEET	2016	NOT SCHED	ANNUAL	YELLOW "M"				
		LL	43 29 26.400 N	67 52 47.400														
			LATITUDE	LONGITUDE	DATE	WP No.	DIST OFF	LIGHT	PHOTO	POSN OFF	2016 REPORT BY OWNER - WP							
			CHT	43 29 26.400 N	67 52 47.400				FI Y 4s	Has Photo	WP							
			OBS															
PERMITTED 113.20 200100648199 3 NOT SCHED	University of Maine Research Lighted Buoy I	PMT	44 06 21.000 N	68 06 33.000			354.0	0.0	354.0	500 FEET	2015	NOT SCHED	ANNUAL	YELLOW "I"				
		LL	44 06 21.000 N	68 06 33.000														
			LATITUDE	LONGITUDE	DATE	WP No.	DIST OFF	LIGHT	PHOTO	POSN OFF	2015 REPORT BY OWNER - WP							
			CHT	44 06 21.000 N	68 06 33.000				FI Y 4s	Has Photo	WP							
			OBS															

This is an advanced peek at the updated RUN Sheet format that will be used in 2017. Take a minute to look at the some of the great features that are provided by this tool. This tool is prepared in advance for participating AVs by senior District NS Staff.

1. Basically, it is an EXCEL spreadsheet that the AV will use to collect all the required observations while on scene at the PATON in the field. Note that in this example only one aid (Item 1) is scheduled for verification in 2017.
2. As a further benefit, the aids are listed in the sequence that an AV would normally encounter them in the field. This will save the AV time finding the aids and help the AV distinguish similarly looking aids that are often deployed in tight groups, such as Regulatory aids deployed at the mouth of harbors.
3. The latest documentation in the PATON's Permit, in the Light List and on the NOAA chart will be pre-checked for the AV prior to a patrol. AVs are encouraged to use this position data to enter waypoints into their GPS sets. The Run sheet also indicates that the aids are listed in the Harbormaster System, and whether they are listed in the Light List or are charted. Previously identified "unauthorized" private aids will be included on the Run sheet. Many private aids are not listed in the Light List and, many of those listed in the light list may not be charted. Entering uncharted aids in a GPS improves the accuracy potential of the AV.
4. PATONs scheduled for verification or recheck are highlighted. For example, Item 1 on the above sample Run Sheet is scheduled for verification in 2017. This information is provided on two places on the aid's entry.
5. Extra blank spaces are provided for documenting "unauthorized" private aids that are discovered while on patrols.
6. Data collection fields, provided on a RUN sheet, list all of data observations needed to prepare a professional grade CG-7054 PATON Report by an AV. They include:

- Correction data for the echo sounder's transducer.
 - The time and date when the field work is performed.
 - Estimated Position Error (EPE) which is a required entry on your CG -7054 PATON Report. This is a simple read out from the GPS.
 - Latitude and Longitude.
 - Waypoint Number - Some AVs use the waypoint generation feature on their GPS when positioning a private aid which will be explained in the scheduled AV Training classes. This technique saves much time when on-scene at an aid and, when used with a recorded track line, provides visual evidence of the AV's position observations. These waypoints can easily be downloaded to an Open/GPS NOAA Charts.
 - Distance from the GPS' antenna to the aid. The data can be used on the NS Calculator to minimize the off station criteria for a lateral aid.
 - Depth reading from the echo sounder. This data is used with the correction for the transducer and the estimated height of tide to calculate the estimated depth at datum.
 - HOT - Estimated Height of Tide. This data can be retrieved later using the Date and Time data that was previously recorded. The RUN sheet is programmed to automatically calculate the Depth at Charted Datum for the AV.
7. The Run sheet also shows when the last activity occurred on an aid and indicates the condition of the aid at that time. This data alerts the AV to review and report any unresolved discrepancies on an aid.
8. Participating AVs are trained to complete the fields for each aid that they verify or check. As an added benefit, if the AV is unable to prepare the required CG7054 PATON Reports in a timely manner, they may forward the Patrol Run Sheet to the DSO-NS who will enter the data for them using their access codes. Manually prepared Run Sheets can be mailed or computer-updated run sheets can be e-mailed.
9. Classes will be available on Webex this spring where the benefits of using this tool will be explained in detail and how it can positively impact our accuracy goals. Training schedule dates will be published in January. Navigation Systems Webex classes are normally held on Monday evenings from 8:00 to 10:00 pm.

Point of Information - The above Run Sheet exhibit reflects the off-shore aids that are verified by e-mail or phone with the owner because Auxiliary OPFACs are not permitted to travel off shore to reach these aids.



A great Navigation System Team/Partnership

Anatomy of a Typical Harbormaster Run Project

In order to get a clearer view of how a typical HMRAP project should be handled by an AV assigned to the project, here is a brief review of some of the activity required by such an assignment.

EARLY SEASONAL CORRECTIONS BY DISTRICT STAFF

Each Harbormaster, who participates in the HMRAP program, will be asked to submit their latest position data for their aids when they redeploy their seasonal aids each spring. The latest Patrol Run sheets should be used to record this data and submit to the DSO-NS. This data will be compared to the PATON's Permit, the Light List and the NOAA Chart. Positions recorded that plot beyond the off-station criteria for the aids permitted position will be submitted the DPW-1 for correction to the aid's Permit which will key off corrections to the Light List and the NOAA Chart. Standard Off-Station criteria will be used. Some skilled AVs or ADSOs may opt to assume this responsibility for this analysis. This activity will occur in the April / May time window each year so that corrected RUN Sheets will be available for scheduled HMRAP activity.

AV PREP FOR THE RUN

Assigned AVs will order the appropriate Run Sheets on line from the DSO-NS. They will print out copies of the Run Sheets for use on the HMRAP patrol. The AV will enter waypoints into their GPS so that they can distinguish the various aids when underway to improve the overall accuracy of their project. AVs must use a marine grade hand-held GPS set that is equivalent to the GARMINmaps78s set. AVs will check out the echo sounder on the Harbormaster's boat for accuracy and record the distance from the transducer to the waterline on the RUN Sheet. This data is necessary for calculating the depth at datum on the CG7054 PATON report.

AV PRE-UNDERWAY CHECK

Check the operational accuracy of the GPS and echo sounder with the Harbormaster prior to getting underway. Record the results for inclusion in your required Accuracy Statement. If you plan to use the Harbormaster's GPS, be sure to note the position of its antenna on the boat. This is the point from where the GPS is determining the position that it is showing on the GPS' screen.

AV ON SCENE ACTIVITY

The AV must supervise the gathering the required data when on scene at each aid. On a HMRAP Run, every aid listed on the Run Sheet must receive a full verification. It is the assigned AV's responsibility to ensure the accuracy of the data observed and to record it correctly on the Run Sheet. Full Runs are scheduled every three years. Accurate CG 7054 PATON Reports need high quality data observed in the field. AV must also be able to discuss issues and problems face-to-face with the Harbormaster while on scene. Resolving problems in this manner saves considerable time and paperwork. Getting commitments for aid positions at this time expedites the time for getting solutions resolved and for updating the supporting Federal documents and almanacs corrected.

AV FOLLOW-UP ACTIVITY

Once the patrol is completed, the AV will thank the Harbormaster for his assistance and will advise them that they will get copies of the updated Run Sheet(s) and that the Tri-Annual PATON Reports will be prepared on-line so that a permanent digital record of the verifications is established. The AV will also act as a liaison with the Coast Guard to resolve questions from and to the Coast Guard until the project is completed. It is hoped that the AV will develop an on-going relationship with the Harbormaster. Often, assigned AVs will assist the Harbormaster with any needed registration and any PATON Applications by computer on the Harbormaster System.

Hopefully, this explanation will provide a good idea of how the HMRAP program will work. If this program interests you, please notify your ADSO-NS or the DSO-NS. We have HMRAP opportunities in many diverse locations throughout the District. Remember that on-line Webex training starts in February this year.

AV Currency and REYR Problems

AV currency and REYR status review is currently underway and the results are very disappointing. There is a good chance that we will lose about 50% of the AVs in First Northern. Besides losing access to Auxiliary facilities, we are also losing AVs to inactivity. Current results are showing this large drop of our AVs. There are different categories of inactivity with different levels of required requalification activity. **If you want to work in the Navigation System program, we will try our best to get you requalified.** The main reason why these currency conditions are imposed is that the work we do is directed by the Coast Guard who is primarily responsible for its quality and accuracy and its impact with the general public. Legally, the Coast Guard must provide proof of training whenever an incident occurs that involves a private aid to navigation. Here are some events that are happening as the AV analysis progresses.

Condition 1 - AVs found in REYR (that is, with no activity reports for the past five years) **will lose their AV Qualification as off 12/31/ 2016.** To become active again, an AV must requalify under the AV/PQS training checklist and the District Specific Task checklist. These documents are available in the First Northern Navigation Systems Web Site at www.uscgaan.com on the AV Training web page. Training programs will start in February, 2017. Transmit your intentions to the DSO-NS by e-mail so that you will not be deleted from the Navigation Systems E-mail address list.

Condition 2 - AV who have been inactive for less than five years are not current. In this condition, an AV will or already has lost access to the PATON System. They can be reactivated by verifying two private aids or surveying two bridges for every year that they were not current. This activity would have to be conducted in conjunction with a current and qualified AV. Supporting reports need to be submitted on-line with advance notice provided to the DSO-NS who is responsible for screening all PATON and Bridge reports for the District. In order to avoid losing their access code, AV, who are currently not current and want to become current, need to

notify the DSO-NS by January 31, 2017 of their intentions. All access to the Harbormaster System by unqualified and not current AVs will be removed during February.

Condition 3 - AVs who have been active and productive in the PATON and Bridge programs will be raised to AV/PQS qualification in 2017. AV who shows a pattern of just submitting two reports each year will be excluded in this award.

NOTA BENE AVs must be current and qualified in order to submit official CG7054 PATON Reports to the Coast Guard and Owners using the on-line Harbormaster System. The D1 PATON Screener will reject all reports that are submitted by AV who are not AV Qualified or who are not current. Normally, AVs in this condition will not have valid access to the Harbormaster System. Special provision is provided to AVCs for submitting their qualification reports and for AVs who have declared their intentions to restore their AV currency to the DSO-NS.

2016 PATON RESULTS

ANT	TOTAL	PLANNED	%	CHECKED	TOTAL	%
SWH	283	89	32%	79	168	59.3%
SPORT	255	107	42%	34	141	55.2%
BURL	85	39	46%	0	39	46.0%
BOS	468	88	20%	159	247	52.8%
WH	1085	472	43%	196	668	61.5%
BRIS	549	222	40%	14	236	53.0%
TOTAL	2640	1027	39%	482	1509	57%

We all did a fantastic job again this year for the Coast Guard. Realize that only about 10 percent of the AVs did about 90 percent of the field work this year. That is dedication. I am so proud to be part of this great team. If you want to be really challenged, we invite you to join the NS team.



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