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**MAY, 2015**

**NEWSLETTER**

**NAVIGATION SYSTEMS**

**U.S. Coast Guard Auxiliary, First District, Northern Region**

**Navigation Systems Road Shows for 2015**

**Saturday Afternoon, May 16th at D-TRAIN**

**at the Sheraton in Wakefield, MA**

This year’s ***Navigation Systems D-Train event*** is a review of the critical aspects of what is expected of each AV this year. The focus is on the required on-scene observations and 7054 reporting from the field. A new ***Patrol Run Sheet*** tool will be available for AVs this year. The majority of the required documentation checks are already completed and shown on this new run sheet to help simplify the AV’s verifying and checking job. All of the essential procedures that are required by an AV in the field will be explained and demonstrated during the ***Navigation Systems Road Show*** training sessions. Standard activity from the pre-underway checks of the GPS and Echo Sounder through the preparation of the required Accuracy Statement, the use of a marine-grade GPS for taking the fix for a lateral, taking and calculating the depth at datum, observing the aid, reporting discrepancies to the CG ANT, and preparing a highly accurate 7054 PATON Report will be presented. Updates to the PATON (Harbormaster) System will be demonstrated including the new 7054 Report rejection procedure. The new 7054 Report suspension and screening functions will also be explained.

***Here is the outline of this year’s training.***

All active AVs and AVCs (Aid Verifier Candidates) need to attend this important training to be ready for the 2015 season.

Other regional ***Navigation Systems Road Show*** events are being planned for Cape Cod, Boston, South Portland and Southwest Harbor.

**The PATON Training Agenda**

1. ***Importance of accuracy*** when verifying lateral aids and regarding the legal implications of a ***7054 PATON Report.***
2. ***Understanding the Annual Navigation Systems Plan for 2015***

**Verification of one-third of the PATONs in an AOR.**

* + - Impact on ANT’s workload.
    - Aid must be reported on line – 7054 PATON Report.
    - Aids are identified on each Patrol Run Sheet.
    - Are shown on the AV’s logon screen as the official status report in the “Available PATONs” list.

**Photographing the PATONs with no photos in their PATON specification.**

* + - Aids that need photos are identified on the ***Patrol Run Sheets.***

**Checking of the rest of the PATONs.**

* + - AV must understand the significant difference between verifying and checking an aid.
    - Use of the ***Patrol Run Sheet*** is urged since the aids are presented in the sequence that they are normally encountered saving lots of time and potential re-dos.
    - Recording of the results on the ***Patrol Run Sheet***.

**Checking for and listing all unauthorized Private Aids**.

* + - Forward data to the ADSO-NS for update to the Patrol Run Sheet and for notification of the CG ANT. Need owner information.

**Surveying all the bridges in each Patrol Area.**

* + - Bridge worksheets can be printed from the Bridge System.
    - System has capability of printing an excel spreadsheet.

**Checking all of the Federal Aids in each Patrol Area.**

* + - This is a simple and easy process to do.

1. ***Use of the Patrol Worksheet.***

**The Navigation Systems Team Concept.**

* + - Everyone on board should be assigned a job.
      1. ***Navigator*** using the Open/CPN charts on a PC with a GPS dongle.
      2. ***Date, Time and HOT reader***.
      3. ***GPS operator*** for taking the fix and reporting EPE and 3D.
      4. ***Echo Sounder Operator*** for taking and reporting the Depth at DATUM and the substation.
      5. ***Aid observer*** for discrepancies and IALA-B checks on lateral Aids.
      6. ***Distance off***  the Aid estimator and reporter.
      7. ***Documentation reviewer***.
      8. ***Aid photographer*** for discrepancies and the Aid Photo for its record.

1. **Preparation of the Accuracy Statement.**
   * + Pre-underway equipment checks:
       1. Checking the accuracy of the GPS.
       2. Checking the accuracy of the Echo-sounder.
2. **The Documentation Section.**
   * + Reviewing any entries listed on the LNM and correcting the ***Patrol Run Sheet***.
       1. Need a copy of the latest LNM on board.
     + Compare the observed position to the Permitted position.
     + Referencing the ***Corrected Light List***.
       1. Understanding its impact on report accuracy.
       2. Demonstrate the easy and quick search feature.
       3. Printed pages or computer on board that reflects the aids in the ***Patrol Run Area.***
     + Review of the ***Local Notice to Mariners***.
       1. Demonstrate the easy and quick search feature.
       2. Copy of pages that reflect the aids in the patrol area.
     + Review of the ***Coast Pilot***.
       1. Understanding its importance on report accuracy.
       2. Demonstrate a local area listing.
       3. Printed pages on board that reflect the Patrol Run Area.
3. **The Positioning Section**.
   * + The importance of recording ***date and time*** on accuracy and credibility.
       1. Legal aspects of currency and qualification.
       2. Use for verifying the ***HOT*** – Height of Tide.
     + Understanding that our ***instrument readings*** are actually producing best estimates.
       1. We need to apply techniques that minimize our estimated error.
4. ***Quality control*** on scene readings from a GPS in support of GPS accuracy and credibility.
   * + 1. ***EPE***-Reading. (Estimated Position Error)
       2. Checking for ***3D*** or better operation. (GPS watching and reading 4 or more GPS satellites.
       3. How to ***handle a hand-held GPS*** and the impact it can have on the accuracy of its readings..
     + Understanding the impact that the ***location of the GPS antenna*** has on position accuracy.
     + Capturing the Lat/Long on your GPS.
       1. Proper maneuvering the vessel into the ***wind or current*** and hold it momentarily on station.
     + Use of the Vertical / Horizontal Calculator for Lateral Aids.
       1. Review of the Off Station Criteria.
       2. Determining the distance off station.
       3. Using the Open/CPN Chart to determine the distance off.
     + Review of special positioning techniques for non-lateral aids.
       1. Use of the GPS screen size for determining whether a non-lateral aid is on station.
       2. Take an actual position if the aid was outside of the 500 foot off station circle on a previous report on with this current observation.
5. **The Depth Calculation.**
   * + Importance of the depth of water relating to safety.
     + The reasoning behind checking the depth.
     + The impact of knowing the location of the transducer on the vessel.
       1. Know the potential effect on the accuracy of the depth reading.
       2. Potential impact on the maneuvering of the vessel.
     + On-scene sanity check of the accuracy of the echo-sounder.
     + Correction for the position of the transducer on the vessel.
     + Techniques for reading the depth of water.
     + Knowing the position of the transducer on the vessel.
       1. Possible need to change the direction of the vessel in the channel.
     + Determining the estimated **HOT** – **H**eight **O**f **T**ide.
       1. From the GPS.
       2. From the Open/CPN charts.
     + Calculating the estimated Depth at Datum.
       1. Patrol Worksheet does it automatically.
       2. Formula: Echo Sounder reading plus the correction for transducer minus the Height of Tide.
6. ***Inspection of the Aid.***
   1. Lateral aids must meet IALA-B standards.
      * Red, Right Returning from the sea.
   2. Regulatory Buoys are usually white buoys with orange bands and black symbols and lettering.
   3. Special Purpose aids are yellow with black lettering.
   4. Photograph any obvious discrepancies for inclusion with your report.
   5. Phone critical discrepancies to the CG ANT on Lateral Aids and aids marking obstructions.
      * Keep a copy of the protocol for your CG ANT on board your vessel.
7. ***Preparation of the on-line 7054 PATON Report***.
   1. Contact the DSO-NS if you forget your PATON System access code.
   2. Review of the AV LOGON Screen.
   3. Review of the 7054 PATON Report.
      * AV should enter data in only those fields that have errors or discrepancies.
8. **Explanation of the System Reporting Cycle:**
   * + Submission of the 7054 PATON Report.
       1. Report is sent to a Suspended File.
     + ***Screening*** of the submitted 7054 PATON Report.
       1. Screener can correct or change all fields.
9. ***Reporting AV activity to AUXDATA***
   1. Each participating AV should submit their own ***7030 Activity Report Individual*** to AUXDATA.
      * Too many AVs are being flagged for REYR because the person assigned to make the entry failed to do so.
   2. Many NS Teams are not splitting up the PATON, Bridge, and PHOTO activity among the team members.
      * Individual aid verifications or checks can only be assigned to a single team member.
      * Only team members who are AV qualified can receive credit for PATON, ATON and Bridge activity.
      * Unqualified AVs may receive credit for the photos that are taken.
   3. In order to retain their currency, AVs must submit a minimum of two PATON, ATON or Bridge reports each year.

***Every AV and AVC who plans to perform PATON Verification and Checks this season needs to attend a Navigation Systems Road Show.***

**More Navigation System Training Opportunities**

**May 25 Using Open/CPN On-Line Charts**

On WebEX – 07:30 to 10:00 PM - Mike Quinn.

**June 6 Navigation Systems Road Show**

At South Portland CG ANT – F. Larkin.

**June 15 Navigation Systems Road Show – Part 1**

On WebEX – 0730 to 10.00 PM – Frank Larkin / Mike Quinn.

**June 29 Navigation Systems Road Show – Part 2**

On WebEX – 07:30 to 10:00 PM – Frank Larkin / Mike Quinn

**July 13 Chart Updating for Beginners - TBA**

**IMPORTANT!**

**Please forward this newsletter to your members at the Flotilla and Division levels. Discuss this Newsletter’s content in your Flotilla and Division reports.**

**Navigation Systems has important Coast Guard business to complete each year and we need every AV’s and NS Staff Officer’s support from skilled and trained Auxiliarists in every Division of First Northern in order to meet our annual Coast Guard goals.**

**Please consider joining the dedicated Auxiliarists on the Navigation Systems Team in D1NR and encourage other members to be AV/PQS qualified.**

*Under the Privacy Act of 1974, all information in this newsletter may only be used for official purposes. Any other use is a violation of law. This newsletter was prepared and published by the First Northern Navigation Systems Team. Contact the editor at* ***FrankJLarkin@verizon.net.***

