



United States Coast Guard Auxiliary Navigation Systems (NS)

WEB-BASED PRIVATE AID TO NAVIGATION SYSTEM

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1. ACCESSING THE PATON SYSTEM

All system users are required to log on to the Web-Based PATON System. This logon is just the first step. Access to this system is authorized by the Department Prevention Waterways (DPW), Private Aid to Navigation Manager in Boston, MA through your DSO-NS or designate.

HOW TO LOG ON

Using the Internet, log on to **WWW.USCGAAN.COM**. Go to the Navigation Systems home web page and click on the “First District on-line PATON System” in the “Most Popular Links” box to access the PATON System.



Most Popular Links

First Northern Bridge Database

First District on-line PATON System

Vertical and Horizontal Error Calculator

- a. A User Logon Screen will appear. See example below.
- b. **If this screen does not appear**, click on the word “PATON” at the top right-hand end of the tool bar at the top of the screen.
- c. **When you are pre-registered and approved**, enter your “Username” and “Password.” Then, click on “OK.” This system will provide a list of Private Aids to Navigation as follows:
 - *PATON Owners* are able to view only the PATONs that they own.
 - *Harbormasters* are able to view only those PATONs under their jurisdiction.
 - *CG ANTs* and *Auxiliarists* are able to view only those aids assigned to the CG ANT where they are affiliated. Affiliation will be explained in the User Registration section.

User LOGON Screen Example



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2. HOW TO REGISTER

- a. *If you are not pre-registered* on the PATON System, click on the words, “Registration Form” (**Red Arrow**) on the “User Logon Screen” to initiate the PATON Registration process. See example on page 3 above. The PATON Registration screen will appear. A sample PATON Registration screen is shown on page 5.
- b. Fields designated with a **red asterisk*** are required. This means that you must enter information in these fields.
- c. The field names are self explanatory. If you are unsure of what to enter in any field, click on the field’s “Question Mark” for further instructions. The instruction lasts for about six seconds.
- d. Note that the “State” field has a drop-down menu.
- e. **Note to new registrants:** Once you register, you will not be able to use the PATON system until your access code is approved by DPW 1 [Department Prevention Waterways] in Boston. You will receive an e-mail confirming your access codes when the approval process is completed.
- f. **Additional USCG Auxiliary AV-Aid Verifier requirements:** Qualified and current USCG Auxiliary Aid Verifiers should select “USCG Auxiliary” for their “Type of User:” Selection is pointed out with a **red arrow** in the example on page 5.
 - This action causes an additional AV field to be added at the bottom of the PATON Registration screen, designated “DISTRICT/DIVISION/FLOTILLA.”
 - Select your *District/Division/Flotilla* from the drop-down menu.
- g. Once you have completed and submitted your Registration Form, e-mail your DSO-NS.
 - Advise the DSO-NS that you have registered on the PATON System.
 - Also indicate the CG ANT where you will be affiliated as an AV-Aid Verifier.
 - CG ANT S West Harbor
 - CG ANT South Portland
 - CG ANT Woods Hole
 - CG ANT Boston
 - CG ANT Bristol
 - CG ANT New York
 - CG ANT Saugerties
 - CG ANT Long Isl Sound
 - CG ANT Moriches
 - CG ANT Burlington.
 - If you are working for two CG ANT’s, advise the DSO-NS. You will have to submit two registrations. The DSO-NS will guide you through the process.
- h. The DSO-NS checks whether you are AV Qualified and will approve and assign your access to the CG ANT that you selected. You will receive an e-mail confirming your access codes when this has been completed.

Note: You will not be able to log onto the PATON System until your access code has been approved. You will be e-mailed when the approval process has been completed by DPW 1.

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- i. AVs will be assigned to the CG ANT AOR where they do their boating rather than where they live. This is called their affiliation. e.g. you live in New Hampshire but keep your OPFAC in Boston Harbor. Your CG ANT affiliation would be CG ANT Boston.

PATON Registration Screen Example

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: ?

3. IF YOU FORGET YOUR ACCESS CODE?

- a. **Auxiliarists:** E-mail the [DSO-NS](#) at FrankJLarkin@verizon.net.
- b. Other Users: E-Mail the [D1 Private Aid Manager](#) at Steven.R.Pothier@uscg.mil

4. CHANGING YOUR REGISTRATION RECORD

- a. E-Mail the [D1 Private Aid Manager](#) or Auxiliary [DSO-NS](#) in order to correct any fields in your PATON Registration Record.
- b. Be specific as to the field(s) that you want changed and the data that you want changed in each field.

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- c. It is critical that any changes in status, telephone number and/or e-mail address be reported in a timely manner. Once you change your e-mail address without correcting the PATON Registration system, you will lose access to the PATON System.

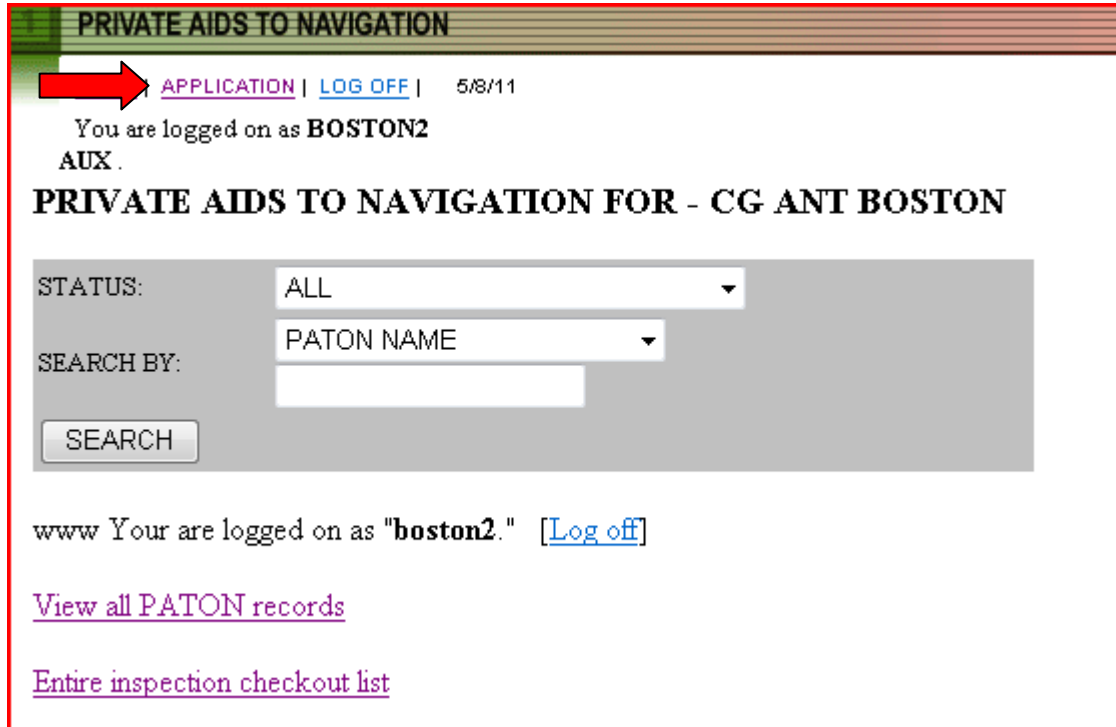
5. PREPARING A PATON APPLICATION – CG 2554

- a. After you log-in, click on the word “Application” at the top of the AV LOGON screen. This button is identified with a red arrow in the example below.
- b. The Private Aid to Navigation CG 2554 – PATON Application Screen will appear. Sections of this form appear starting on page 7 with explanations for its particular use.
- c. The field names should be self explanatory. Click on the field’s “Question Mark” for additional instructions, if needed. There is a six second time limit on viewing instructions.

Header Section for a PATON Application CG 2554 Screen:

- a. Fields designated with a red asterisk * are required. You must enter information in these fields.
- b. Some fields will be pre-populated with data from your Registration Record. You are able to change this data. However, your Registration record will not be changed by this action. It is recommended that you change your Registration Record first.

PATON Logged On Screen Example



PRIVATE AIDS TO NAVIGATION

[APPLICATION](#) | [LOG OFF](#) | 5/8/11

You are logged on as **BOSTON2**
AUX.

PRIVATE AIDS TO NAVIGATION FOR - CG ANT BOSTON

STATUS: ALL

SEARCH BY: PATON NAME

www Your are logged on as "boston2." [\[Log off\]](#)

[View all PATON records](#)

[Entire inspection checkout list](#)

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CG-2554 - Header Field Group Example.

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	CG ANT BOSTON	?

The data in these fields has been retrieved from the AV's Registration Record.

Location, Depth and PATON Identification Section:

- The field names are self explanatory. Some fields have drop-down menus which control the data that can be entered in the field.
- The PATON TYPE field has optional bullets that, when selected, cause additional data field groups to be added to the CG2554 PATON Application.
 - Floating is the alternative to Fixed.
 - Lighted is the alternative to Unlighted.

CG-2554 – Location, Depth and PATON Type Example

Location, Depth and PATON Type.....			
LATITUDE *	Degrees	Minutes	Seconds N ?
LONGITUDE *	Degrees	Minutes	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			?

- Most of the fields in this report are equipped with drop-down or bulleted menus that control the data entered in these fields.

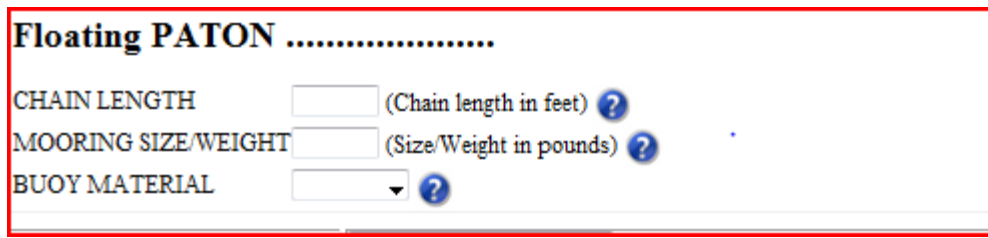
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- b. Explain all “Other” selections in the Permit Application Comments Section. This field is demonstrated below
- c. Report LAT and LONG as Degree, Minutes and Seconds formatted as:
DD-MM-SS.SS.

The Floating PATON Data Field Group

- a. When you designate a PATON TYPE as floating, a field data group of three additional fields appear as is demonstrated in the example below.
- b. Floating is the alternative selection to Fixed.
- c. The three fields in this data group are required when the PATON is designated as a floating aid. The ‘Buoy Material’ field has a drop down menu.

CG 2554 Floating PATON Data Group Example.



The Fixed PATON Data Field Group

- a. When you designate a PATON TYPE as fixed, a field data group of three additional fields appears as is shown in the example below.
- b. Fixed is the alternative selection to Floating.
- c. These three fields in this data group are required when the PATON is designated as a fixed aid. The ‘Aid Structure’ and ‘Structure Material’ fields have drop-down menus.
- d. All fixed PATONs, that are located in the water, must also have a Corps of Engineer’s (USACE) permit reference before the Coast Guard can approve and issue a permit.

CG 2554 Fixed PATON Data Field Group Example



The Lighted PATON Data Field Group

- a. When you designate a PATON TYPE as lighted, a data group of four additional fields appears as is shown in the example below. Lighted is the alternative selection to Unlighted.
- b. The first three fields are required for all PATONs designated as Lighted.

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- c. Fixed lighted PATONS must show the height of the light. Click on the Question Mark for instructions for measuring the height of a light correctly.
- d. Floating lighted PATONS do not require a “Height of Light” entry.
- e. The ‘Light Characteristic’ and ‘Light Color’ fields have drop down menus.

CG 2554 - Lighted PATON Data Field Group

Lighted PATON	
LIGHT CHARACTERISTIC	<input type="text"/> ?
LIGHT PERIOD *	<input type="text"/> (seconds) ?
LIGHT COLOR	<input type="text"/> ?
HEIGHT OF LIGHT	<input type="text"/> (Feet - for FIXED lights only.) ?

The Unlighted PATON Option

- a. Selecting “Unlighted” as a PATON TYPE field removes the “Lighted PATON data field group” from the PATON Application Screen. Unlighted is the alternative selection for lighted.

Establishment – Action Required and Duration

- a. There are four options for ‘Action Required’ – Annual, Seasonal, Temporary and Disestablish. Click on the Question Mark for an explanation of each option.

CG 2554 - Establishment Requested Field Group Section Example

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

- b. Each Establishment option has a different duration requirement. Duration is the time period that an established PATON is deployed during the year.
- c. Annual indicates that the PATON is deployed all year round. Duration dates are not required.
- d. Seasonal indicates that the PATON is deployed at specific times during the year. A Set and Pull date is required with this option.
- e. Temporary indicates that the PATON is deployed for a fixed period of time.
- f. Duration can also represent the date when the aid will be dis-established.
- g. Click on the Question Mark to review the details for each Duration requirement.

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Comments

- a. Enter any comments needed to explain any menu selections of “Other” or any feature that is not included in the standard permit fields.
- b. These comments may become part of the PATON’s permanent permit specification.

CG 2554 Comments Example



Submit Application:









- a. Click on the “Submit Application” button to transmit the PATON Application to DPW 1 for processing and approval.



6. Color Key Tracking System

- a. The PATON Application Approval process can be tracked on line. Each step in the process is indicated by a color code. System Color Codes are described below.

Color Key Tracking System Codes

KEY:	
	Unknown
	Non-permitted/unauthorized
	App submitted. Requires District assignment to an ANT
	Change request
	App pending. Requires ANT action & District final approval
	Approved
	Aid established
	Application Denied

- a. You can track the status of your application through the approval process by referencing the color code assigned to the aid’s record. Color codes appear at the extreme left on the PATON listings.
 - Light Blue – means the PATON application has been received and is pending action by DPW 1.
 - Yellow – means the PATON application is being approved by the CG ANT and/or the Harbormaster.
 - Light Green – means that the PATON application has been approved.

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- Dark Green – means that you have notified DPW 1 that you have established the aid (deployed the aid).

Permit Cancellation Guidelines:

PATON Permits may be cancelled when:

- The aid is not established (set out) within a one-year window,
- The aid is missing for two-consecutive years.

Check the “Permitted Comments” section for special notes regarding these issues.

7. ACCESS TO PATONS

- Once your access code is approved and you log onto to the Web-Based PATON System, a list of the Private Aids to Navigation assigned to your linked affiliation will appear on the “Private Aids to Navigation Screen.”
 - PATON Owners – Will see the PATONs that they own.
 - DPW 1 – Will view all PATONs.
 - CG ANT – Will view all PATONs assigned to their AOR.

8. PRIVATE AID TO NAVIGATION SCREEN

- This is the screen that appears when an AV logs on to the PATON System.
 - The screen shows your “Username.” It appears after the phrase, “You are logged on as:” e.g. **boston1**.
 - The title (in the example presented below) shows the CG OPFAC that you are logged on. e.g. PRIVATE AIDS TO NAVIGATION FOR - CG ANT BOSTON.
- Note:** A **CG OPFAC** is a Coast Guard facility, such as Cg ANT Boston. It is not an Auxiliary vessel.
- To see the entire list of PATONs managed by the CG ANT, click on “View all PATON records.”

Private Aid to Navigation Screen Example

PRIVATE AIDS TO NAVIGATION

HOME | APPLICATION | LOG OFF | 1/14/11

You are logged on as BOSTON1
AUX.

PRIVATE AIDS TO NAVIGATION FOR - CG ANT BOSTON

STATUS: ALL

SEARCH BY: PATON NAME

SEARCH

www You are logged on as "boston1." [Log off]

[View all PATON records](#)

[Entire inspection checkout list](#)

Checked out PATONs:

If your Division or CG ANT does not use the Check Out feature, ignore the next section and skip to “[View all PATON records](#)” on page 12.

9. THE “CHECK OUT PATON LIST” FEATURE:

- a. The System lists all of the PATONs that are identified as “**YES**” in the “Annual Verification” field and have not yet been verified during the current year.
 - A “**YES**” in the “Annual Verification” field puts the PATON on the “**Check Out List**.” The PATON will appear on the “**Check Out List**.” See example below.
 - A “NO” in the “Annual Verification” field removes the “**YES**.” The PATON will not appear on the “**Check Out List**.”
- b. As PATONs are verified during a year, the system removes them from the “**Check Out List**.”

“Check Out List” Example

<input type="button" value="CHECK OUT"/>		<input type="button" value="RESET/CLEAR"/>
#	PATON NAME	DATE LAST INSPECTED
1	<input type="checkbox"/> Duxbury Bay Beach Channel Buoy 14	07/12/10
2	<input type="checkbox"/> Herring River Buoy 1	08/10/10
3	<input type="checkbox"/> OXBOW BUOY 11	06/04/10
4	<input type="checkbox"/> Hampton Inner Harbor South Channel Buoy 10	07/26/10
5	<input type="checkbox"/> Hampton Inner Harbor South Channel Buoy 11	07/25/10
6	<input type="checkbox"/> Hampton Inner Harbor South Channel Buoy 12	07/26/10
7	<input type="checkbox"/> Hampton Inner Harbor South Channel Buoy 13	07/26/10

- c. Items that appear on the “**Check Out List**” can be checked out or reserved by a specific AV.
 - This means that the system will reserve the checked out aid to the AV for a two-week period. The PATON will appear on the “**Checked Out PATON List**” during the two-week time window. It will **not** appear on the “**Check Out List**” during that period.
 - If the checked out PATON is not reported as verified within the two-week time window, the system will return it to the Check Out list.
- d. To change a PATON from using the “Check Out” feature, a “**NO**” must be inserted in the **Annual Verification** field.
- e. Uses for the PATON Check Out feature:
 - It can be used as a scheduling technique to identify PATONs for verification in the current year. e.g. The POC pre-selects one-third of the PATONs for a particular year.
 - It can be used as a reservation technique in areas where there is contention by AVs for the same set of PATONS.

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- It can be simply used as a means to flag a specific PATON for special verification that has not yet been reported during the current year.
- f. **Note:** Once a PATON is verified within a current year, the PATON cannot be returned or re-used with the Check Out feature.
- g. **Caution:** PATONs flagged with a “YES” in the Annual Verification field will continue to be included on the “Check Out List” in each subsequent year until a “NO” is inserted in the Annual Verification field.

How to Check Out a PATON:

- a. Items on the Check Out list are available for verification.

Example of Check Out Box.

#	PATON NAME	DATE LAST INSPECTED
1	<input type="checkbox"/> Cape Wind Meteorological Light Tower MT	
2	<input type="checkbox"/> WHOI Research Light Tower	
3	<input type="checkbox"/> Little River Entrance No Wake Buoy	06/27/10

- b. Click on the box at the left of the PATON that you want to check out for verification. See the **red arrow** above.
- c. Click on the CHECK OUT box to add the PATON to the CHECKED OUT PATON LIST as displayed below.
- d. When you click on the “Entire inspection checkout list,” you will be able to view all of the PATONs that have been checked out for your CG ANT AOR.

Example of “Entire Inspection Check Out PATON List.

PRIVATE AIDS TO NAVIGATION FOR - CG ANT WOODS HOLE

CHECKOUT DATE	AID ID	AID NAME	CHECKED OUT BY
05/06/2011	27202	Cape Wind Meteorological Light Tower MT	FRANK LARKIN [CAPECOD] [REMOVE]
05/06/2011	27242	WHOI Research Light Tower	FRANK LARKIN [CAPECOD] [REMOVE]
05/06/2011	27667	Little River Entrance No Wake Buoy	FRANK LARKIN [CAPECOD] [REMOVE]

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- e. Click on the [\[REMOVE\]](#) box at the far right to return the PATON to the Check Out list.

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10. VIEW ALL PATON RECORDS

- When you click on “[View all PATON Records](#),” all of the PATONs listed for the CG ANT will appear.
- This process may take a long time depending on the number of PATONs on the list. A sample report appears below.
- The initial PATON list should be sorted in alphabetical order.
- You can sort this list by any of the fields by clicking on the header field name.*
- An example of the Standard PATON List is shown below.

Standard PATON List.

PRIVATE AIDS TO NAVIGATION															
HOME APPLICATION LOG OFF 1/14/11															
You are logged on as BOSTON1															
AUX.															
PRIVATE AIDS TO NAVIGATION FOR - CG ANT BOSTON															
STATUS: ALL															
SEARCH BY: AID NAME															
SEARCH RESET															
Click column head to sort in ascending or descending order															
STATUS	INSPECTED	LLNR	AID NUMBER	PATON NAME	LAT	LOD	PATON TYPE	CLASS	ANNUAL VERIFICATION	UNIT	PATROL AREA	OWNER NAME	PHONE	LOCAL AUTH.	DISCREPANCY REPORT
Not Inspected	1/7/2011 Frank Lakin	12122.00	124	ALBERTON HARBOR BUOY 1	42° 13' 52" N	71° 6' 41" W	FL	2	No			KURT BORNHED	781-422-0316	Walt, MA	Submit Discrepancy report
Not Inspected	6/14/2010 SILVESTRI PATROL	12124.00	200100675887	ALBERTON HARBOR BUOY 16	42° 13' 18" N	71° 6' 34" W	FL	2	No			KURT BORNHED	781-422-0316	Walt, MA	Submit Discrepancy report
Not Inspected	6/14/2010 Ouedi S D	12130.00	125	ALBERTON HARBOR BUOY 2	42° 13' 56" N	71° 6' 42" W	FL	2	Yes			KURT BORNHED	781-422-0316	Walt, MA	Submit Discrepancy report
Not Inspected	6/14/2010	12135.00	126	ALBERTON HARBOR BUOY 4	42° 13' 57" N	71° 6' 45" W	FL	2	No			KURT BORNHED	781-422-0316	Walt, MA	Submit Discrepancy report
Not Inspected	6/14/2010 Ouedi S D	12140.00	127	ALBERTON HARBOR BUOY 4	42° 13' 57" N	71° 6' 45" W	FL	2	No			KURT BORNHED	781-422-0316	Walt, MA	Submit Discrepancy report
Not Inspected	6/14/2010	12145.00	128	ALBERTON HARBOR BUOY 4	42° 13' 12" N	71° 6' 43" W	FL	2	No			KURT BORNHED	781-422-0316	Walt, MA	Submit Discrepancy report
Not Inspected	6/14/2010 Ouedi S D	12150.00	129	ALBERTON HARBOR BUOY 4	42° 13' 12" N	71° 6' 44" W	FL	2	No			KURT BORNHED	781-422-0316	Walt, MA	Submit Discrepancy report
Not Inspected	6/14/2010 SILVESTRI PATROL	12151.00	200100675878	Albion Harbor Buoy 7	42° 13' 16" N	71° 6' 37" W	FL	2	No			KURT BORNHED	781-422-0316	Walt, MA	Submit Discrepancy report

11. SEARCH OPTIONS

You can sort for groups of PATONs using the “[STATUS](#)” command. Use the [SEARCH BY](#) drop down menu to sort the list of PATONs. Multiple options are available. The example below shows a sort option by PATON NAME.

PRIVATE AIDS TO NAVIGATION

HOME | APPLICATION | LOG OFF | 1/14/11

You are logged on as BOSTON1

AUX.

PRIVATE AIDS TO NAVIGATION FOR - CG ANT BOSTON

STATUS: ALL

SEARCH BY: PATON NAME

SEARCH

PRIVATE AIDS TO NAVIGATION FOR - CG ANT BOSTON

STATUS: ALL

SEARCH BY: PATON NAME

Dorchester

SEARCH

Since all aids have the name of the area or waterway as the front half of their description, enter this name in the blank field below the [SEARCH BY](#) field. “[Dorchester](#)” was selected in the example below.

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Click on the SEARCH box to view all of the PATONs with the word Dorchester in their description. The example below shows that five records were found.

RESULTS: 5

STATUS	INSPECTED	LLNR	AID #	PATON NAME	LAT	LON	T	C	ANN. VER.	UNIT	PATROL AREA	ANT
Aid Established	5/30/2010 Frank Larkin	11260.00	153	Dorchester Bay Basin Channel Buoy 1	42° 18' 15.000" N	71° 3' 1.000" W	FL	2	No			CG ANT BOSTON
Aid Established	5/30/2010 FRANK LARKIN	11265.00	154	Dorchester Bay Basin Channel Buoy 2	42° 18' 17.000" N	71° 3' 3.000" W	FL	2	No			CG ANT BOSTON
Aid Established	5/30/2010 FRANK LARKIN	11270.00	155	Dorchester Bay Basin Channel Buoy 3	42° 18' 16.000" N	71° 3' 5.000" W	FL	2	No			CG ANT BOSTON
Aid Established	5/30/2010 FRANK LARKIN	11275.00	156	Dorchester Bay Basin Channel Buoy 4	42° 18' 18.000" N	71° 3' 7.000" W	FL	2	No			CG ANT BOSTON
Aid Established	5/30/2010 FRANK LARKIN	11280.00	157	Dorchester Bay Basin Channel Buoy 5	42° 18' 17.000" N	71° 3' 4.700" W	FL	2	No			CG ANT BOSTON

12. THE EXCEL SPREADSHEET FEATURE

- Open a blank EXCEL spread sheet on your computer.
- Place the cursor at the top left hand side of the PATON list and drill down to the lower left hand side of the list that you want to copy.
- Click on the blank EXCEL spreadsheet to generate your spreadsheet. See example below.
- You are now able to manipulate the data on your spreadsheet any way that you want.

STATUS	LLNR	AID #	PATON NAME	LAT	LON	T	C	ANT	OWNER	EMAIL	PHONE	LOCAL AUTH.
Aid Established	11280.00	157 UPDATE	Dorchester Bay Basin Channel Buoy 5 x	42° 18' 17.000" N	71° 3' 4.700" W	FL	2		CG ANT BOSTON	Frank Larkin	frankjlarkin@verizon.net	978-263-3023
Aid Established	11275.00	156 UPDATE	Dorchester Bay Basin Channel Buoy 4 x	42° 18' 18.000" N	71° 3' 7.000" W	FL	2		CG ANT BOSTON	Frank Larkin	frankjlarkin@verizon.net	978-263-3023
Aid Established	11270.00	155 UPDATE	Dorchester Bay Basin Channel Buoy 3 x	42° 18' 16.000" N	71° 3' 5.000" W	FL	2		CG ANT BOSTON	Frank Larkin	frankjlarkin@verizon.net	978-263-3023



Use the "return arrow" usually found at the top left-hand side of the screen to return to the full PATON file listing. This will avoid excessive waiting time while the system regenerates the complete file. Sometimes, you may get logged off the system.

13. THE ONE PAGE PATON VERIFICATION REPORT

- a. It is a good practice to download the 'One-Page PATON Verification Report' by clicking on a **PATON NAME** to view this report. See the example with the red arrow above. This report will contain the Official Image photo for the PATON.
- b. Print out a copy of the One Page PATON Verification Report to use while on-scene when you are verifying the private aid to navigation. Use the print both sides option on your printer to save paper when the aid has an Official Photo.
 - One of the AV's responsibilities when verifying a PATON is to check whether any pertinent permit data is missing and to report the observed data on the 7054 AV Verification Report either by entering the correct data in the field and show it in the AV Observation section.
- c. The One-Page PATON Verification Report shows what information is currently in the PATON's record so you can readily suggest corrections based on your on-scene observations.
 - Use this form for recording your observations while on scene at the PATON.
 - This form also shows the Google location for the aid and the Official Image Photo for the aid, when available.
 - A typical One Page Verification Report is shown below. This example shows the Google location and an Official Image photo for the PATON.

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ONE PAGE PATON VERIFICATION REPORT

Edit Record ?

[Discrepancy report](#)

PATON NAME:	UMass Lighted Research Buoy A-5
LLNR:	0.00
AID NUMBER:	100117387260
CLASS:	2
ANNUAL VERIFICATION:	No
OPFAC ASSIGNMENT:	41949

Location, Depth and PATON Type.....

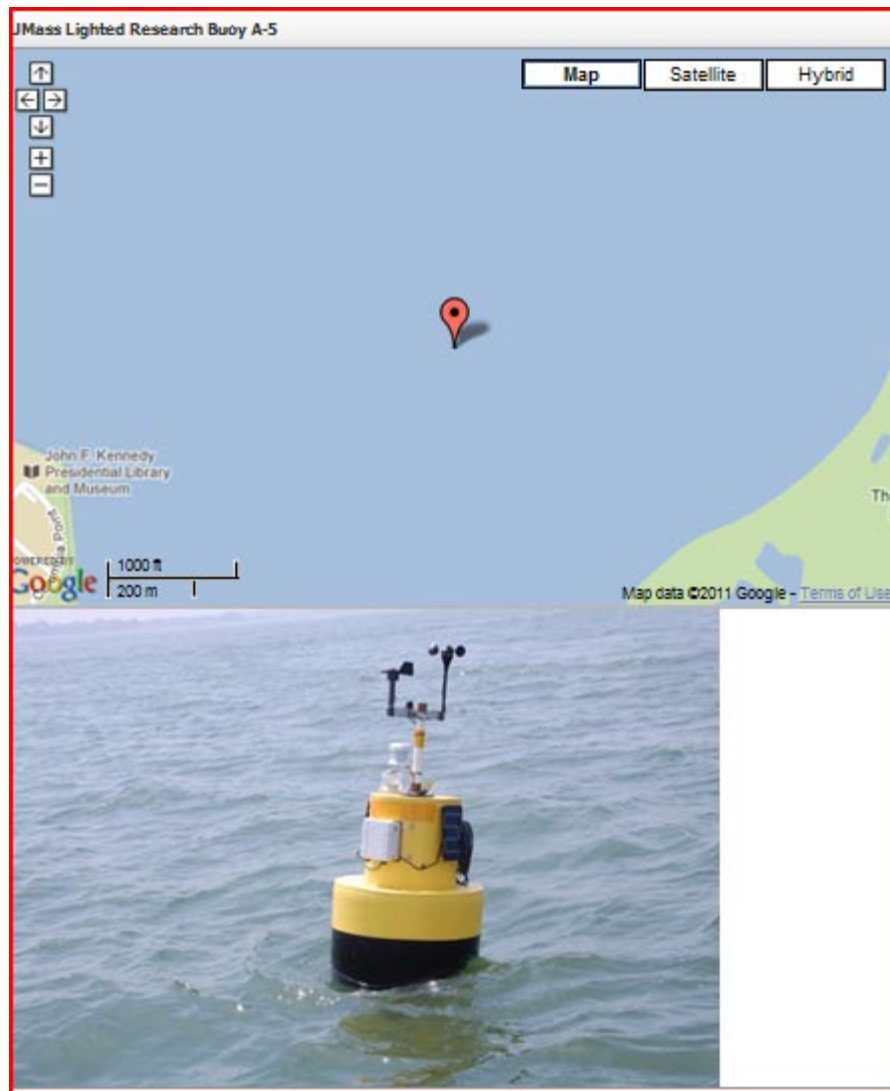
LATITUDE:	42° 19' 7.440" N
LONGITUDE:	71° 1' 19.140" W
GENERAL LOCALITY:	13270
PATON TYPE:	Floating ,Unlighted
PATON PURPOSE:	Research
PATON CATEGORY:	Lighted Buoy
AID COLOR:	YELLOW
DEPTH AT DATUM:	15 MLLW

Floating PATON.....

BUOY MATERIAL:	FOAM
SOUND SIGNAL TYPE:	
ACTION REQUESTED:	Seasonal
AID DURATION:	Set: Pull:
DATE LAST VERIFIED:	6/30/2011
DISTRICT/DIVISION/FLOTILLA:	013/05/00
PATROL AREA:	BOS-2
PERMITTED COMMENTS:	Official Photo added

Use this Google feature to help find the aid, to check whether it is actually in the water in areas where map features are outdated, and as a sanity check on the aid's location.

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The Official Image photo can assist you to identify the aid.

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14. PREPARING YOUR 7054 AV VERIFICATION REPORT FOR SUBMISSION TO THE COAST GUARD UNIT.

- Click on the “Submit Discrepancy Report” field that is located at the far right end of a PATON listing. A sample portion of the screen is shown below.
- The principal activity for the 7054 AV PATON Report is for notating any observed changes to the permitted specifications for the PATON and to list all observed discrepancies.
- NOTE:** Only enter data in a PATON specification field when your on-scene observation differs from the data shown in the left-hand column labeled “Permitted.” Otherwise, leave the field blank.
- A blank field is indication that you agree with the permitted data shown on the report.
- Click on the Question Mark after the field to review the instructions for entering data in the field. The instruction appears for six seconds.

SECTION I - PATON SPECIFICATION and OBSERVER'S INFORMATION			
DORCHESTER BAY BASIN CHANNEL BUOY 4			
PATON SYSTEM CONTROL NUMBER: 23640			
GENERAL LOCALITY:	Dorchester Bay Basin		?
..... Permitted.....			
OPFAC NUMBER	01-41949 - ANT		
	Boston		
LLNR:	11275.00		
AID NUMBER:	156		
CLASS:	2		
	PERMITTED	OBSERVED	
PATON PURPOSE:	LATERAL STARBOARD HAND MARK	... select one ...	?
PATON CATEGORY:	MARKS CHANNEL TO YC	... select one ...s	?
PATON TYPE:	FL	<input checked="" type="radio"/> Floating <input type="radio"/> Fixed <input type="radio"/> Lighted	?
LATITUDE	42° 18' 18" N		Latitude <input checked="" type="radio"/> N <input type="radio"/> S ?
LONGITUDE	71° 3' 6" W		Longitude <input checked="" type="radio"/> W <input type="radio"/> E ?
FIX VERIFIED BY:		... select one ...	?
DEPTH AT DATUM:	16 FT.		ft. ?
HEIGHT OF TIDE:			ft. ?

Criteria for reporting PATONs off station.

Determining whether a PATON is considered to be off its permitted station has been a problem for many AVs. To resolve this issue, the following guide has been prepared to assist the AV in this determination. Criteria and actions have been established for three types of PATONs – Fixed PATONs, Floating Lateral PATONS and Floating Non-lateral PATONS. Each requires a difference course of action.

1. **Fixed PATONs** are permanently affixed to the earth. Determine whether an aid is off-station by using the following criteria.

a. Criteria:

- *The observed fix does not match the permitted Lat/Long exactly.*
- When the aid is published in the Light List, the observed fix should also match both the permitted Lat/Long and the Lat/Long in the Light List.
 - There also can be discrepancies between the permit record, the Light List and or the NOAA chart. Report these as documentation errors to DPW1.
- Additionally, when the aid is charted on a NOAA chart, the observed fix should match the permitted Lat/Long, the Lat/Long in the Light List and the Lat/Long for the aid on the NOAA chart.
- Be specific as to where the error is occurring – Permit, Light List or Chart or all three.

b. Action to take:

- No action will be taken to correct a Lat/Long unless a valid Standard Accuracy Statement is submitted on the on-line 7054 AV Verification Report. A Standard Accuracy Statement provides the needed evidence to support the accuracy and credibility of an AV's observation.
- Upon review of the 7054 AV Verification, the observed LAT/LONG is forwarded by the CG ANT or ANT AV from the controlling CG ANT to DPW1 for correction.

c. Follow up activity:

- The assigned PAC should follow up with the ANT Auxiliary Liaison if update action is not observed within two weeks through the CG ANT Auxiliary Liaison.
 - If the PATON is listed in the Light List, correction should be published in the LNM.
 - Note that NOAA uses the LNM in order to make the appropriate chart updates. The *NOAA On-Line Chart Viewer* will be digitally corrected within a week to 10 day period. This NOAA product is available on-line at www.uscgaaan.com – click on “*Helpful Links*.”
- **I-ATONIS** should be corrected by **DPW**.
- ***NOTE:** This procedure applies to all fixed private aids.*

d. Improve your LAT/LONG Accuracy on a fixed aid by:

1. Take into account the distance that the GPS receiver is from the fixed aid. Take the fix with the GPS off the side of the OPFAC closest to the aid, if possible.
2. It is often difficult to get close to the aid due to riprap, shoaling or current. Estimate and record the distance from the GPS to the fixed aid. The Horizontal and Vertical Error Calculator has a field for using this distance in your off station calculation.
3. Remember, the Lat/Long that the GPS is producing is originating from the location of the GPS' antenna or, when the antenna is self contained in the GPS set, from the position where the GPS is mounted on the OPFAC. Take the fix with the antenna closest to the fixed aid or estimate and record the distance from the antenna to the fixed aid.
4. Also consider the EPE error that is being recorded at the time when the fix was taken. It is a good practice to use a hand held GPS positioned as close to the fixed aid as possible.
5. ***NOTE:** Use these positioning techniques for fixed aids only.*

- 2. Floating "Lateral" PATONS** are the aids that mark the edges of a navigable channel or fairway. Determine whether a lateral aid is considered off station by applying the following criteria.

a. Criteria:

- When the aid is charted, an aid plotting outside the charted circle symbol for the Aid on the NOAA chart is reportable as off station. Indicate this condition in the AV Observation section on your report.
- When the aid not charted but is published in the Light List, the Aid should be within 50 feet of the aid's Permitted LAT/LONG. This is termed the PTE or Position Tolerance Estimate for a lateral aid.

b. Action to take:

- The actual position of a floating aid to navigation is the location of its anchor or mooring. The aid itself floats around the anchor in what is termed its "**watch circle**" when it is affected by wind and/or current.
- AV observers should take every precaution to adjust the location where the fix is taken at the aid for the local affects of wind and/or current on the aid's watch circle and, therefore, provide more accurate observations. This natural offset can be compensated by heading the vessel toward or into the wind and/or current a short distance from the aid to be closer to the aid's anchor. This activity should be noted on the Standard Accuracy Statement on the AV's report.

Warning: In low water areas, do not perform this offset because of the danger of fouling your prop or striking the aid's anchor. The prudent AV will only take fixes and depths at times of high water. Determine the possibility of shoaling by calculating the Depth at charted datum calculation. If the answer is negative, you have determines that the aid will strand or shoal at times of low tides.

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- No corrective action can be taken unless there is a valid Standard Accuracy Statement included on your 7054 AV Verification Report.
- Upon review of the 7054 AV Verification, the observed LAT/LONG should be forwarded by the CG ANT or ANT AV from the controlling CG ANT to DPW for correction
- The *NS-CU07 Vertical and Horizontal Error Calculator* can also be used. This tool is available on the *Chart Updating Web Page* at www.uscgaan.com. An example is shown on page 23.

c. Follow up activity:

- The assigned PAC should follow up with the ANT Auxiliary Liaison if update action is not observed within two weeks through the CG ANT Auxiliary Liaison.
 - DPW should publish corrections in the LNM for PATONs that are listed in the Light List.
 - For aids that are charted, NOAA references the LNM to make the appropriate chart updates. The *NOAA On-Line Chart Viewer* will be digitally corrected within a week to 10 day period. This NOAA product is available on-line at www.uscgaan.com – click on “*Helpful Links*.”
- I-ATONIS is corrected by DPW.

d. Improve your LAT/LONG Accuracy on a floating “lateral” aid by:

1. To compensate for any effect of wind or current, take the fix on the side of the aid into the wind or current. Take the fix on the side of the OPFAC furthest from the floating aid.
2. If it is difficult to get close to the aid due to riprap or shoaling, estimate and record the distance from away from the floating aid. The Horizontal and Vertical Error Calculator has a field for using this distance in your off station calculation.
3. Remember, the Lat/Long that the GPS is producing is originating from the location of the GPS’ antenna or, when the antenna is self contained, from the position where the GPS is mounted on the OPFAC.
4. Also be sure that the GPS is operating in 3D Differential and that the EPE error is recorded at the time when the fix was taken
5. **NOTE:** Use these positioning techniques for lateral aids only.

3. **Floating Non-lateral PATONS** should be reported as off station based on the PTE – Position Tolerance Estimation System which is a combination of a risk factor and the area type.

The **Position Tolerance Estimation System** evaluates three factors:

A. **The Risk Factor** – Regulatory private aids is always assigned a **LOW** Risk Factor.

B. **The Area Type** – Three Area Types are applied:

Type 1 - Restrictive Area – channels and canals. (75 feet) (Regulatory aids should never be located in a navigable channel.)

Type 2 - Less Restrictive – harbors and coves. (100 feet)

Type 3 - Little Restrictions – coastal and large harbors. (150 feet)

a. **Criteria:**

- **In a Type 1 situation**, AV would report an aid off station when the fix is **76** feet or more from the aid's permitted position.
- **In a Type 2 situation**, AV would report an aid off station when the fix is **101** feet or more from the aid's permitted position.
- **In a Type 3 situation**, AVs would report an aid off station when the fix is **151** feet or more from the aid's permitted position.

b. **Action to Take:**


- *No update action can be taken unless there is a valid Standard Accuracy Statement included on the 7054 AV Verification Report.*
- Upon review of the 7054 AV Verification, the observed LAT/LONG should be forwarded by the CG ANT or ANT AV from the controlling CG ANT to DPW for correction.
- Indicate the PTE type number calculated on your report in the AV Observation section on your 7054 AV Verification report.

c. **Follow up Activity:**

- PATON permitted data should be corrected by DPW to match the observed Lat/Long.
- I-ATONIS is corrected by DPW.
- *This procedure applies to all regulatory and special purpose PATONs.*

The example below shows a Type 3 (least restrictive) situation where an aid would not be reported as off station. This form is available on the CU Web Page at www.uscgaaan.com. An EPE of 8.9 feet dropped the off station PTE under the 150 foot criteria for this non-lateral aid.

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 NS-CU07 VERTICAL AND HORIZONTAL CALCULATOR.									
RISK FACTOR LOV		0.988 3		PTE(Feet) 150		POSITION TOLERANCE ESTIMATE Aid is ON STATION		DATE	
Rev E - Prepared by the First M									
Seconds to Minutes convert		LATITUDE		00.000		LONGITUDE		00.000	
ASSIGNED SECONDS (From)		Enter seconds:		55.500		Enter seconds:		53.100	
OBSERVED SECONDS (To)		Enter seconds:		54.000		Enter seconds:		52.920	
Do not use this calculator in an unprotected mode. You can ea									
ASSIGNED FIX (From)		Conversion to decimal minutes:		0.925		Conversion to decimal minutes:		0.885	
OBSERVED FIX (To)		Conversion to decimal minutes:		0.900		Conversion to decimal minutes:		0.882	
1. DISTANCE CALCULATOR		Latitude		Longitude		EPE (ft)		Distance off object	
		dd-mm.mmm		dd-mm.mmm		8.9		0.0	
ASSIGNED FIX (From)		41-15.925		71-00.885		This is not the correction for wind or current.			
OBSERVED FIX (To)		41-15.900		71-00.882					
Estimated Total Nautical Miles from the ASSIGNED FIX:				0.025 nm		Other corrections:			
Estimated Total Feet from the ASSIGNED FIX:				152.6 Feet		8.9 CALCULATE? NOTE:			
				143.7 Feet OFF STATION		0 NO (e.) Chart			
						at 175 Degrees True from the Assigned Fix			

Or, you can use the Distance Standards below to estimate the distance off.

DISTANCE STANDARDS		
One degree of Latitude	[01-00-00-00]	60.8 nm
One Nautical mile or 1 minute of Latitude	[00-01-00-00]	6,076 ft
One Second of Latitude	[00-00-01.00]	101.3 ft
One-tenth of a second of Latitude	[00-00-00.10]	10.1 ft.
One-thousand of a second of Latitude	[00-00-00.01]	1.0 ft.

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Section II - Documentation Discrepancies

SECTION II - DESCRIPTION OF DEFICIENCY DOCUMENTATION OF DISCREPANCIES ?	
The observations of this PATON match the entry in the light list, the PATON's permitted record, and the entry for this PATON on its nautical chart.*	<input type="radio"/> YES <input type="radio"/> NO ?
PATON with the IALA-B ATON System?*	<input type="radio"/> COMPLIES <input type="radio"/> DOES NOT COMPLY <input type="radio"/> NOT A LATERAL AID ?
This PATON is watching properly?*	<input type="radio"/> YES <input type="radio"/> NO ?

You must respond to these three required questions regarding the condition of the PATON that you are observing.

- a. The first question deals with the documentation of the aid compared to the on-scene observation of the aid. This is a required question.

- Compare your on scene observation to the data on the permitted record.
- If listed in the Light List, compare the on-scene observation to the permitted record and also to the data printed in the Light List for the aid.
- If charted, compare the on-scene observation to the permitted record, the data printed in the Light List and also the charted lat/long and the symbols and abbreviations for the aid printed for the aid on the NOAA chart.

NOTE: Only respond with a “Yes” when all these factors are in sync.

IMPORTANT: Matching the IALA-B System involves the **shape, color, marking and retro-reflective** material observed on the aid.

- b. The second question deals with whether the aid corresponds to the IALA-B Aid to Navigation System. The IALA-B system only deals with lateral aids – aids that mark navigational channels or fairways. This also is a required question.

NOTE: Lighthouses are not considered lateral aids.

- When the aid is not a lateral aid, just check off, “Not a Lateral Aid” and move to the third question.
 - When the aid is a lateral aid and it matches the IALA-B system, check off, “Complies.”
 - When the aid is a lateral aid and it does not match the I-ALA B system, check off, “Does not comply.” Attach a discrepancy photo to your report to demonstrate how the aid is not in compliance and explain the discrepancy in the AV Observation section on the 7054 AV Verification Report.
- c. The third question deals with whether the aid is watching properly. This also is a required question.
- **Note** that the standard lists of discrepancies do not appear on the 7054 AV Verification Report until you respond with a “NO” to this question.

- Be sure to read the “Watching Properly” criteria below to be positive that you understand the ramifications for answering this question correctly.

Read this before reporting an aid as “Watching Properly”

Answering YES or NO to the question, “AID IS WATCHING PROPERLY,” on a PATON Report has very important ramifications to the person reviewing your report. When you respond with a “YES,” you are, in effect, certifying that everything about this Private Aid is absolutely perfect.

Note: The 7054 AV Verification Report will not show the standard list of discrepancies unless you respond with a ‘NO’ to the question, “This PATON is watching properly?”

Here are some important criteria that are being assumed by the CG ANT and DPW1 when you report an aid as watching properly:

- 1. You are certifying that there are no permit specification errors on the aid.**
In other words, the permit specifications on the “One Page Verification Report” match the on-scene observation about the PATON. The most current permit specifications appear at the left-hand side of the 7054 PATON Verification Report screen, under the heading, “Permitted.”
- 2. You are certifying that you have not observed any physical discrepancies on the aid.** In other words, the aid has all of its numbers or letters, the shape is right and if lighted, the light color is correct, the light is operating to its specified characteristic and light period, and the aid is not off station and is marking the best water.
- 3. When a PATON is listed in the Light List, you are certifying that the data in the Light List describes this aid perfectly as you viewed it while on-scene.**
- 4. When an aid is charted, you are certifying that the charted position is exact on the chart.** See the guidelines for reporting a PATON off station. You are also certifying that the symbols and abbreviation on the chart are correct and reflect your on-scene observation and the entry for the aid in the Light List.
- 5. When the PATON is a lateral aid, you are certifying that the aid conforms to the IALA-B Aid to Navigation System** - correct color, shape, numbering and retro-reflective material.
- 6. When the PATON is a regulatory buoy, you are certifying that it conforms to the standard marking specified for a Regulatory Buoy** – a white aid with two orange bands and black lettering and symbols. This is reported even when the PATON record specification has a different specification. Commonly, these aids are used for marking swim areas, no wake and speed zones, hazards, exclusion areas, etc.
- 7. When the aid is used for a special purpose, you are certifying that it is yellow with black letters.** These aids typically mark mooring area boundaries, aquaculture facilities and aids, sail race marks, etc.

Check the aid out on the **NOAA on-line Chart Viewer** which you can access from the “**Helpful Links**” page on the **Navigation Systems web site** at www.uscgaan.com.

NOAA updates these on-line charts within a week to ten days from when the aid correction appeared in the **LNM-Local Notice to Mariners**.

- Reference the LNM viewing feature that is shown at the top right-hand corner of this chart screen for the latest LNM update information.
- NOAA updates their on-line charts digitally whenever corrections are published in the Coast Guards LNM-Local Notice to Mariners while paper NOAA charts are corrected only when they are re-released and re-printed.
- Using the NOAA on-line Chart Viewer as a reference will save you a lot of time keeping your paper charts corrected.

8. When the aid is charted, you need to plot your observed fix and check whether the aid is positioned on or off station on a NOAA chart.

- This is an important part of a **lateral** aid check but is not required for a regulatory aid check. Regulatory aids are only problematic when they are deployed within a navigable channel. Most regulatory aids are not charted nor listed in the Light List.
- When the charted position differs from the Light List and the PATON is charted, your 7054 PATON Verification Report that initiates a LNM will correct the NOAA chart.
- Use the **NS-CU07 Vertical and Horizontal Error Calculator** which is available on the Chart Updating Web Page on the D1NR Navigation Systems Web Site at www.uscgaan.com. This tool will calculate and report the number of feet an aid is off station and the True direction from the permitted Lat/Long. If you enter a complete set of depth data, it will compute a watch circle radius for the PATON. You also can enter your distance off the PATON and your EPE which will be used in the PATON's off station calculation.

9. If you are not sure whether a problem exists or not, contact your POC, your ADSO-NS or the [DSO-NS](#).

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DESCRIPTION OF DEFICIENCY

- Check off each discrepancy that you observe on the aid. The discrepancy name should be self explanatory once you read the Training Guides. Discrepancy fields do not appear until you respond with a “NO” to the question, “Aid is Watching Properly?” on the 7054 AV Verification Report.

Check off discrepancy list:

Location discrepancies 

☐ PATON is off station.

☐ PATON is adrift.

☒ PATON is missing.

☐ PATON is not marking the best water.

Condition discrepancies 

☐ PATON is sinking. (Photo)

☐ PATON is stranded (Photo)

- Each discrepancy that you check is reported to the CG ANT when you submit your report.

NOTE Some discrepancies may be confusing or contain multiple meanings. In these cases, always explain your exact meaning in the “AV Observations” section on your report.

PERMITTED COMMENTS

Permitted comments are reserved for explanations about fields in the PATON application only. Data cannot be entered in this field from the 7054 AV Verification Report. It is reference only.

SECTION III -COMMENTS

PERMITTED COMMENTS (Description information about specific PATON): 

AV OBSERVATIONS


- Always include any explanations that improve the clarity and credibility of your evidence about any problem(s) reported about a PATON.

IMPORTANT: If you have previously reported discrepancies about a PATON and it appears that no action has been taken to correct the situation, indicate the details of the problem in the AV Observation section. Also indicate how long this problem has existed and when you previously reported it. This is very important when reporting missing aids. PATON permits may be cancelled for aids missing over two years. Always quote credible and official sources.

As an AV or PAC, take the condition of the PATONs in your assigned Patrol Area seriously. Insist that corrective action be taken and that you get a response as to the reason why not, especially when the problem has persisted for many years.

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In some situations, the CG ANT may need assistance to keep up with the backload of reported problems. Volunteer to assist the ANT with this backload. We are all on the same team.

AV OBSERVATIONS (For AV Special remarks or observations): 


STANDARDIZED ACCURACY STATEMENT

This standardized accuracy statement shows that you have checked and identified that all electronic equipment that you are using is working correctly before you got underway and shows the quality of the fixes and depths while on-scene at the PATON. This statement is a reflection of the accuracy and professionalism of the AV's report.

This Standardized Accuracy Statement provides the following:

Data about the GPS(s) used to take the reported fix:

- The *manufacturer's name* and *model number* of the GPS used to take the fix.
- EPE-Estimated Position Error or HDOP-Horizontal Dilution of Position reading on your GPS when the fix was taken.
- How you pre-calibrated your GPS before getting underway.
- Whether your GPS was operating in 3D or 3D Differential when the fix was taken.

ACCURACY STATEMENT (For AV to support accuracy of electronic equipment): 

Accuracy Statement:

1. A Garmin GPS 76 GPS with WAAS enabled, operating in 3D Differential was used to fix the aid. On-scene EPE was 9.2 feet. Pre-underway accuracy was checked at the dock against a known location.
2. A Hummingbird Wide 100 echo sounder was used to take the depth. Pre-underway accuracy was checked at the dock with a hand-held echo sounder. Correction for the transducer is 0.8 feet. The on-scene Substation was Neponset River on Boston.
3. The reported fix and depth were taken approximately 12 feet up wind and upstream from the PATON to offset the effect of the aid's watch circle.

This Standard Accuracy Statement provides the following:

Data about the GPS(s) used to take the reported fix:

- The *manufacturer's name* and *model number* of the GPS used to take the fix.
- EPE-Estimated Position Error or HDOP-Horizontal Dilution of Position reading on your GPS when the fix was taken.
- How you pre-calibrated your GPS before getting underway.
- Whether your GPS was operating in 3D or 3D Differential when the fix was taken.

Data for the echo-sounder used to record the depth:

- The *model number* and *manufacturer's name* of the echo sounder.
- How you calibrated the echo sounder to ensure that it was operating correctly.
- Indicate the date and time when the depth was taken. The "Time When Reported" is assumed to be the time when the depth was taken unless you show a different date in your "Accuracy Statement" or in the "AV Observations."

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USING THE STANDARDIZED ACCURACY STATEMENT

- An Accuracy Statement similar to the example provided below enhances the professionalism and credibility of your verification report. You will be recognized as a professional by the Coast Guard. It is quick and easy to prepare this statement when you follow the example shown below.
- Prepare a “copy and paste” statement entry on your desktop for the standard statements below. It can be copied from this guide or can be downloaded from the Navigation Systems web site at www.uscgaan.com.
- The fields highlighted in **yellow** have to be set only once for your OPFAC or whenever you use a different OPFAC for a patrol.
- The fields highlighted in **green** have to change for each PATON.
- Leave the highlights in your desktop report as a reminder. The PATON System removes these highlights when the statement is pasted into the Accuracy Statement field on the on-line 7054 PATON Verification Report.

STANDARDIZED ACCURACY STATEMENTS

Standardized Statement for a Floating Aid:

ACCURACY STATEMENT for Auxiliary OPFAC 253340:

1. A **Garmin GPS 76** GPS with **WAAS enabled**, operating in **3D Differential** was used to fix the aid. On-scene **EPE** was **9.2** feet. Pre-underway accuracy was **checked at the dock against a known location**.
2. A **Hummingbird Wide 100** echo sounder was used to take the depth. Pre-underway accuracy was checked **at the dock with a hand-held echo sounder**. Correction for the transducer is **0.8 feet**. The on-scene Substation was **Neponset River** on **Boston**.
3. The reported fix and depth were taken approximately **12** feet up wind and upstream from the PATON to offset the effect of the aid's watch circle.

Standardized Statement for a Fixed Aid:

ACCURACY STATEMENT for Auxiliary OPFAC 253340:

1. A **Garmin GPS 76** GPS with **WAAS enabled**, operating in **3D Differential** was used to fix the aid. On-scene **EPE** was **9.2** feet. Pre-underway accuracy was checked **at the dock against a known location**.
2. A **Hummingbird Wide 100 echo sounder** was used to take the depth. Correction for the transducer is **0.8** feet. Pre-underway accuracy was checked **at the dock with a hand-held echo sounder**. The on-scene Substation was **Neponset River** on **Boston**.
3. **Fix was taken 15 feet off the aid due to riprap in the area**.

In the upper example, the 12 foot difference would not be used to correct an off station calculation
In the lower example, the 15 foot difference would be used to correct an off station calculation.

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PHOTOS OF PATONS.

Two types of digital photos can be reported on the PATON System – the *Official Image* photo of the PATON and photos of discrepancies observed on the PATON.

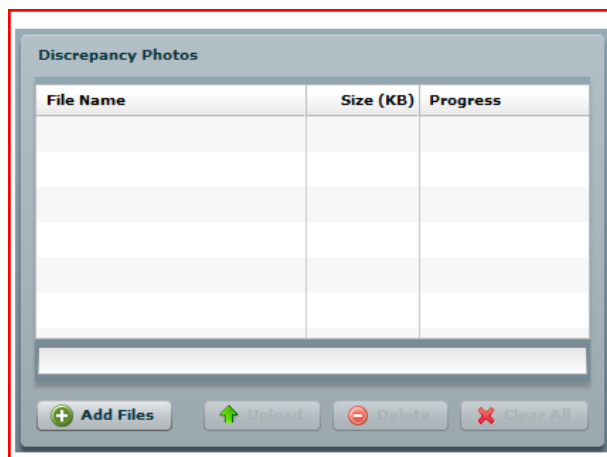
OFFICIAL IMAGE PHOTO of the PATON.

- a. This is a photo of the aid as watching properly. [There should be no discrepancies appearing on the OFFICIAL IMAGE digital photo for a PATON.](#)
- b. Submit your Official Image photos with your verification report.
 - The photo will be picked off your report and updated to the PATON record.
 - When attached to your verification report, there is no need for special labeling.
- c. You can also submit an Official Image photo directly to your DSO-NS by e-mail.
 - Label the photo with your Division Number, the LLNR or Aid Number and a brief description of the PATON. Do not use special characters or blank spaces which cause photos to reject. Underline is OK.
 - E.g. **06_12345-Back_Riv_3** would represent the #3 on the Back River in Division 6. The LLNR was used.
- d. Be sure to include all of the PATON's markings in your photo – number, retro, etc.
- e. An example of an Official Image photo can be observed on the 'One Page Verification Report' back on page 16 of this guide.

PATON PHOTO submission

- a. The PATON System allows for the inclusion of multiple photos of a PATON on the on-line 7054 PATON Verification Report.
- b. The browser will appear as demonstrated below.

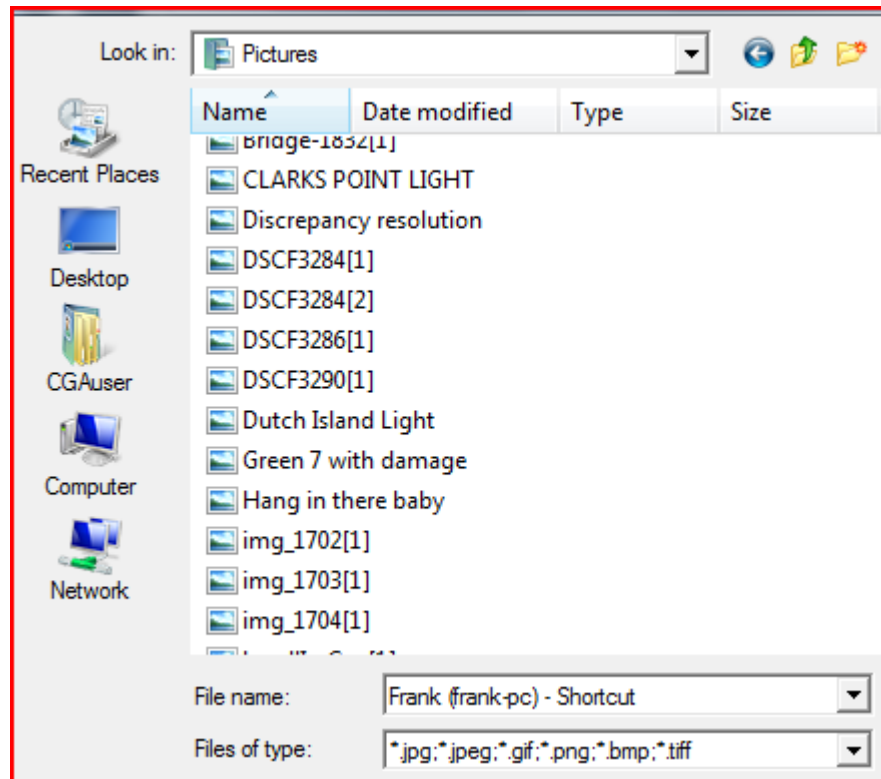
The PATON Photo Browser.



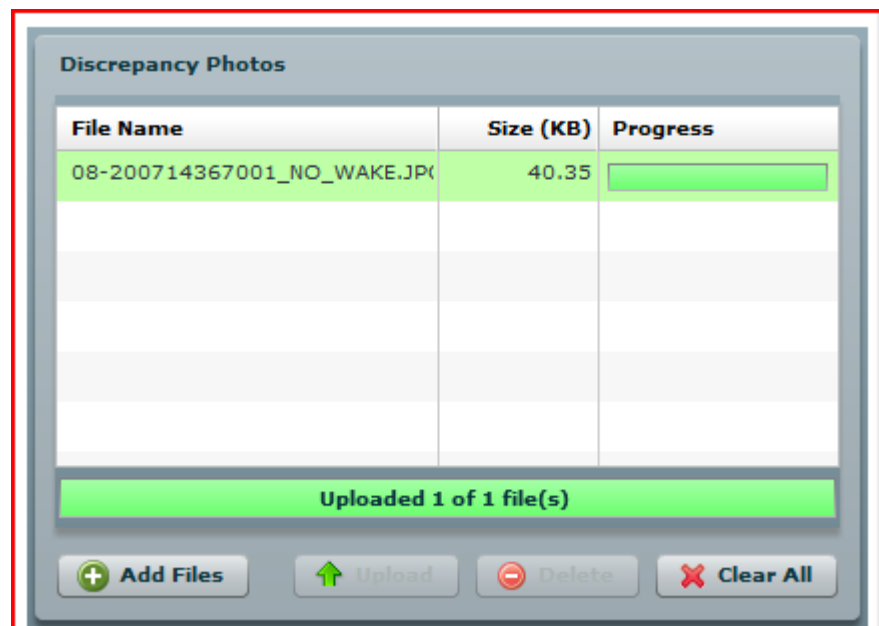
- c. Click on "**ADD FILES**" to browse your computer and select discrepancy photo(s). See sample below.
- d. You must use a Microsoft browser.

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- e. You must be logged on to the system using www.usharbormaster.com.
- f. You can use any special characters in your photo reference number. Dashes and underlines are OK.



- g. Select the location where your PATON photos are stored. At one time, click on all the photos that you want to download and upload them together to your verification report.
- h. The file names of the photo(s) will appear in the Discrepancy Photo section as is demonstrated below. In the example, only one photo was selected.



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- i. Click on the **Green Arrow** to upload the photos to your report.
- j. When you submit your Verification Report, a copy of the discrepancy photo will be sent to the CG ANT as part of your report.
- k. You will be able to view the photos on the AV confirmation report entitled – “Thanks for your Submission.”




- l. Note the discrepancies showing on this photo. The CG ANT may opt to send a copy of your photo to the owner as evidence of the discrepancy.

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SECTION IV – AV Reporting

The following three fields are part of the AV 7030 report section. ‘Submitted by’ and ‘E-mail address’ is retrieved from your Registration Record. Enter you Division and Flotilla number in DD-FF format.

AV Section Data Group

SECTION IV - AV SECTION	
Submitted by *	FRANK LARKIN
Division - Flotilla *	10-17
Email Address *	FRANKJLARKIN@VERIZON.NET
PREPARE A 7030 AUXDATA ACTIVITY REPORT  <input type="checkbox"/>	

- To make a 7030 AUXDATA Activity Report as part of your 7054 Verification Report, check off the YES button on the line, “Prepare a 7030 AUXDATA Activity Report.”
- The following fields will appear. See below.

TO	-	 
Start Time	00:01	
End Time	00:07	
PATON DISCREPANCIES		
PATONS WATCHING PROPERLY		
ID		
REMARKS:		
LOG NUMBER		

- Follow the instructions (Question Marks) to complete the report.
 - Enter the e-Mail address of your SO-IS in the “TO” field.
 - If your activity was part of an authorized Auxiliary patrol, do not change the Start Time or End Time. Otherwise take full credit for your time expended.
- When a group of AVs perform a number of PATON verifications as a team, each member of the team may only report a portion of the total PATONs verified. The total number of PATONs verified by the team must always equal the total number of PATONs reported to AUXDATA. The name of the AV reported as LEAD is the only member that receives AUXDATA credit.

Important: Our Navigation Systems Programs get their recognition and support from your activity reports to AUXDATA. Help us stay funded by submitting these reports after each PATON Patrol.

17. REPORTING YOUR ACTIVITY TO THE COAST GUARD AND AUXDATA

- a. The “7054 AV Verification Report” transmits your PATON observations to your affiliated CG Unit when you click the ‘SUBMIT PATON REPORT’ button.
 - Copies are sent to Sector, CG ANT, DPW-1, DSO-NS, local ADSO-NS, and any AV-ANT working for the CG ANT.
- b. When selected, it will also submit a “7030 – Activity Report – Mission – Individual” via the Internet to your SO-IS in order to report your PATON activity to AUXDATA.
 - You will receive a confirming e-mail copy of the 7030 report.

Handling Verification Reports submitted in error

Enter the statement “PLEASE IGNORE PREVIOUS REPORT” in the AV Observation section and resubmit a complete and corrected 7054 AV Verification Report immediately.

The CG ANT / Sector / AV PATON Report.

A copy of a typical report as it is received at the CG ANT is shown on page 33. A specification error was reported. The buoy material was ‘plastic’ instead of ‘foam.’ A depth error was also reported as a discrepancy. The standard Accuracy Statement was also reported in the ‘Accuracy Statement’ section.

Corrections to Permitted Specifications are performed by DPW1.

Review of the AV Comments is performed by the CG ANT AV Staff. When determined necessary, first notice e-mails can be transmitted to the PATON Owners. This notification also becomes part of the PATONs digital record.

A sample report to the Coast Guard is shown on page 35.

Note: In the example below, the AV has entered only the permitted data that was observed as changed. The depth was the only observed change. The AV entered the method used to take the fix and the HOT-Height of Tide for the time when the depth was observed. These entries enhance the credibility of the data in the AV’s report.

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USCG AUXILIARY AV PATON REPORT 7054

SECTION I - PATON SPECIFICATION and OBSERVER'S INFORMATION

TEST CHANNEL BUOY 7

PATON SYSTEM CONTROL NUMBER:	30320	
GENERAL LOCALITY:	13270 - DORCHESTER BAY	
.....Permitted.....		
OPFAC NUMBER	01-41949 -	
LLNR:	0.00	
AID NUMBER:	0.0	
CLASS:	3	
	PERMITTED	OBSERVED
PATON PURPOSE:	MARKS A CHANNEL	
PATON CATEGORY:	Unlighted Buoy	
AID COLOR	GREEN	
PATON TYPE:	Floating Un-lighted	
LATITUDE	42° 22' 12" N	° ' " N
LONGITUDE	71° 25' 12" W	° ' " W
FIX VERIFIED BY:		WAAS
DEPTH AT DATUM:	16.0 FT.	21 ft.
HEIGHT OF TIDE:		4.6 ft.
Floating PATON		
BUOY MATERIAL	PLASTIC	
ESTABLISHMENT		
ACTION REQUESTED	Seasonal	
AID DURATION:	Set: 05/01 Pull: 11/15	

Dates and Times.....

DATE LAST REPORTED:	23-Feb-2011	
DATE OBSERVED:		5/17/2011 *
DATE REPORTED:		5/18/2011 *
TIME WHEN VERIFIED: (HHMM)		1532

Auxiliary Unit Assignment.....

DISTRICT/DIVISION/FLOTILLA: 013/10/07	PATROL AREA: TEST
---------------------------------------	-------------------

In the example above, the AV changed the Date Observed to reflect when the verification actually occurred. The aid was pre-assigned to a specific Flotilla and a Patrol Area.

SECTION II - DESCRIPTION OF DEFICIENCY DOCUMENTATION OF DISCREPANCIES

The observations of this PATON match the entry in the light list, the PATON's permitted record, and the entry for this PATON on its nautical chart:*	YES
PATON with the IALA-B ATON System?*	COMPLIES
This PATON is watching properly?*	NO
1. PATON is damaged by vessel collision	

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In the example above, these three fields are required by the AV and are explained above, The discrepancy(s) that was checked by the AV appears in this section of this report.

SECTION III - COMMENTS
Permitted Comments (Description information about specific PATON): Aid marks the entrance to UMASS Boston channel. Aid is marked with the letters UMASS and SHYC.
AV Observations (For AV Special remarks or observations): Aid appears to have been struck by a vessel. Depth was 21 feet versus 16 feet.
Accuracy Statement (For AV to support accuracy of electronic equipment): ACCURACY STATEMENT: 1. A Garmin GPS 76 GPS with WAAS enabled, operating in 3D Differential was used to fix the aid. On-scene EPE was 9.2 feet. Pre-underway accuracy was checked at the dock against a known location. 2. A Hummingbird Wide 100 echo sounder was used to take the depth. Pre-underway accuracy was checked at the dock with a hand-held echo sounder. Correction for the transducer is 0.8 feet. The on-scene Substation was Neponset River on Boston. 3. The reported fix and depth were taken approximately 12 feet up wind and upstream from the PATON to offset the effect of the aid's watch circle.

There are three distinct fields that make up the Comments Section.



Permitted Comments are generated from the Owner's Permit Application and are for reference only on this report.

AV Observations are entered by the AV on the 7054 PATON Verification Report. This is the area where the report reviewer in the CG ANT and HQ focuses their attention for information about the verification report. This section is segregated from the others so that it will be easier to read the information provided by the AV regarding problems associated with the aid.

Accuracy Statement is submitted by the AV as evidence of the accuracy of the GPS and Echo Sounder used to gather electronic-generated data. This data is important for the credibility of the data submitted. Data submitted without this statement is considered suspect.

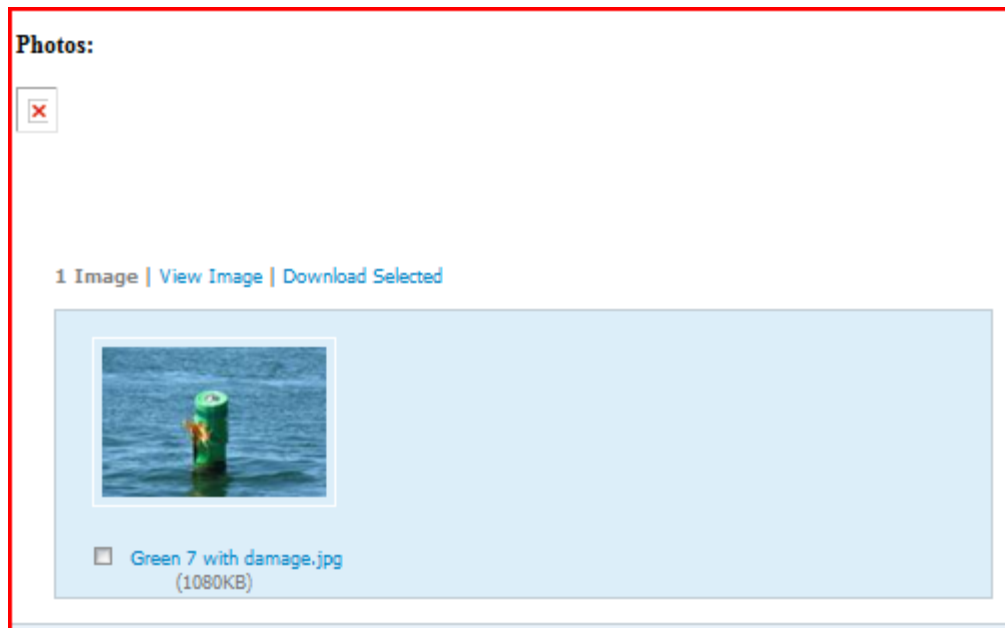
Discrepancy Photos are encouraged since they provide direct evidence of the discrepancy and can be e-mailed directly to the owner. Photos leave little doubt as to the nature and extent of the discrepancy. A sample photo is shown on the following page.

Discrepancy photos appear in the e-mail heading as an attachment and in the clear at the end of the report.

7054 Submission
From: "FrankJ.Larkin@verizon.net" <FrankJ.Larkin@verizon.net>  View Contact To: shawn.g.brule@uscg.mil; frankj.larkin@verizon.net; chris.s.sparkman@uscg.mil; Phillip.M.Gonzalez@uscg.mil; sinbadtoo@verizon.net; Steven.R.Pothier@uscg.mil Cc: FrankJ.Larkin@verizon.net; mjo@mgn.com  Green 7 with damage.jpg (1090KB) View Image

The example above shows the entry for the photo(s) as attached in the e-mail heading

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The example above shows the actual photo image as it appears at the bottom of the report.

First Notice Communication to the PATON Owner

Advising the aid owner of the existence of a problem is one the keys for the overall success of the PATON Program. The idea is to notify the owner in a timely manner, on-line, with as much information as possible about the discrepancy. The method also provides a digital record in the PATON's history record.

1. Click on the Owner's name on the PATON list to initiate a standard First Notice Communication e-mail. See the exhibit below.

TEST Daymark 15	42° 39' 25.440" N	72° 37' 12.040" W	FX	3	CG ANT BOSTON	Frank Larkin	erizon.net	978-26
---------------------------------	-------------------	-------------------	----	---	---------------	------------------------------	----------------------------	--------

2. The standard formatted e-mail will appear as is shown below.
3. It is a simple matter to prepare a standard message on your desktop and to copy and past it into this e-mail.

An example of the E-mail format is shown on the following page.

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The screenshot shows a web browser window with the URL <http://www.uscg-d1-paton.org/secure/message.cfm?id=30320>. The form is titled "Email To: Frank Larkin(FrankJLarkin@verizon.net)". It contains the following fields:

- Your Full Name: FRANK LARKIN
- Your e-mail here: FrankJLarkin@verizon.net
- Subject: Regarding PATON: TEST CHANNEL BUOY 7

The message body is as follows:

Message:

A discrepancy was observed on the Private Aid - Test Channel Buoy 7 located in Dorchester Bay.

Aid was apparently struck by a vessel and is severely damaged and unreadable.

Please advise by return e-mail when this aid will be repaired or be removed.

Frank Larkin
CG ANT Boston
United States Coast Guard Auxiliary
978-263-3023
FrankJLarkin@verizon.net

At the bottom of the form is a "Send >>" button and a note: "A copy of this message will be sent to your email address."

Click on the **SEND>>** button to transmit your message to the owner. This e-mail becomes part of the permanent digital history for the aid. An example is presented below.

Here is an example of the e-mail as it is received by the owner.

The screenshot shows an email interface with the following details:

- Subject:** 30320: TEST CHANNEL BUOY 7
- Date:** Wed, May 18, 2011 9:23:21 PM
- From:** "FrankJLarkin@verizon.net" <FrankJLarkin@verizon.net> [View Contact](#)
- To:** FrankJLarkin@verizon.net

The email body contains the following text:

A discrepancy was observed on the Private Aid - Test Channel Buoy 7 located in [Dorchester Bay](#).

Aid was apparently struck by a vessel and is severely damaged and unreadable.

Please advise by return e-mail when this aid will be repaired or be removed.

Frank Larkin
[CG ANT Boston](#)
[United States Coast Guard Auxiliary](#)
[978-263-3023](#)
FrankJLarkin@verizon.net

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Below is a sample of the PATON's history record that recorded the e-mail to the owner as a permanent record.

This is an example of the e-mail recorded in the PATON History.

Notes:
*** BOSTON2 *** May 18, 2011 at 9:23 PM
30320: TEST CHANNEL BUOY 7
A discrepancy was observed on the Private Aid - Test Channel Buoy 7 located in
Dorchester Bay.

Aid was apparently struck by a vessel and is severely damaged and unreadable.

Please advise by return e-mail when this aid will be repaired or be removed.

Frank Larkin
CG ANT Boston
United States Coast Guard Auxiliary
978-263-3023
FrankJLarkin@verizon.net

Once a relationship is established with the Aid owner, they usually respond and correct discrepancies upon receipt of this First Notice Communication. If not, the CG ANT has a digital record of the notification to the owner. Registered letters can be forwarded when the aid owner fails to comply with this notification.

AVs and/or PACs can be trained to produce the First Notification E-Mail saving considerable man-hours for the CG ANTs and Sectors.

Transmission of the First Communication e-mail to the owner completes the PATON System on-line cycle that started with the PATON Application, through the approval process, to the AV verification observations and report and finally to the notification of discrepancies to the owner.

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How to effectively use the NS CU07 Vertical and Horizontal Error Calculator to determine distance off station from permitted to observed location of an aid.

1. Setting up the PTE – Position Tolerance Estimate feature.

RISK FACTOR	AREATYPE	PTE (Feet)	POSITION TOLERANCE ESTIMATE
LOW	3	150	Aid is ON STATION

- Risk Factor – PATONs are normally considered a low risk factor. Field has been pre-entered as “Low.”
- Area Type – Four alternatives are available. Each alternative determines a different PTE value in feet. A pop-up instruction on the document explains this field. Select and enter an Area Type that is appropriate for the fix that you are evaluating.
 - 1 – Restrictive area – channels and canals.
 - 2 – Less Restrictive area – harbors and coves.
 - 3 – Little Restrictions – coastal and large harbors.
 - 4 – Lateral Aid.
- PTE – Position Tolerance Estimate. The system uses the following table to assign a PTE value to each Area Type selection.
 - Area Type 1 – 75 feet.
 - Area Type 2 – 100 feet.
 - Area Type 3 – 150 feet.
 - Area Type 4 – 50 feet.
- Position Tolerance Estimate Message. Based on the value computed for the feet off station, the system will indicate whether an aid is on or off station.

2. Seconds to Minutes Converter.

The original Latitude and Longitudes that are being used to demonstrate the process are:

Assigned or permitted fix: 41-25-55.500 N / 071-00-53.100 W.

Observed fix: 41-25-54.000 N / 071-00-52.920 W.

- Start the process by entering the seconds into the “Seconds to Minutes Converter as is demonstrated below.
- The system will convert each entry into decimal minutes below.

Seconds to Minutes convert		LATITUDE	00.000	LONGITUDE	00.000
ASSIGNED SECONDS (From)	Enter seconds:	55.500		Enter seconds:	53.100
OBSERVED SECONDS (To)	Enter seconds:	54.000		Enter seconds:	52.920
ASSIGNED FIX (From)	Conversion to decimal minutes:	0.925		Conversion to decimal minutes:	0.885
OBSERVED FIX (To)	Conversion to decimal minutes:	0.900		Conversion to decimal minutes:	0.882

- Enter the full latitude and longitude in DD-MM.MMM format as is demonstrated below.

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ASSIGNED FIX (From)	Conversion to decimal minutes:	0.925	Conversion to decimal minutes:	0.885
OBSERVED FIX (To)	Conversion to decimal minutes:	0.900	Conversion to decimal minutes:	0.882
1. DISTANCE CALCULATOR		Latitude	Longitude	EPE (ft)
		dd-mm.mmm	dd-mm.mmm	8.9
ASSIGNED FIX (From)		41-15.925	71-00.885	
OBSERVED FIX (To)		41-15.900	71-00.882	
				Distance off object
				0.0

- d. Also enter the EPE reading for the fix and any distance used off the object. This is not the distance maneuvered upstream or up wind to counteract current and/or wind. In this example, 8.9 feet was used for EPE.
- e. Using this data, the system will calculate the distance that the aid was observed from its permitted position. The system determined that this aid was 0.025 nm or 152.6 feet off station. Compensated for EPE of 8.9, the system determined this aid was 143.7 feet from its permitted station at 175 degrees True.

0.025 nm	Other corrections:	8.9	CALCULATE?	NOTE: Watch Circle calculation uses the (c.) Depth Reading, the
152.6 Feet		0	NO	(c.) Charted Depth and the (s.) MHW - Mean High Water readings.
143.7 Feet OFF STATION	at	175	Degrees True from the Assigned Fix	

- f. The PTE – Position Tolerance Message indicates the aid is on station because it is less than the PTE numerical estimate of 150 feet.