

# Task 3.0 Private Aids to Navigation (PATON)

- What are private aids
- How does the Coast Guard treat them
- What does the Auxiliary do with them

# What is a PATON

- Any ATON not established by the Coast Guard
  - Other Federal agencies
    - DoD
  - States
  - Institutions
    - Schools
  - Industry
  - Marinas

# Authority and Penalty

- CG and Auxiliary obtain the authority for Private Aids to Navigation from *33 CFR 66*, *and 33 CFR 114-118*
- CG 2554 application
- The penalty for failure to comply with PATON regulations is \$100/day/offense (14USC 83)
- USCG does NOT maintain or verify PATONs
- That duty falls to the Auxiliary

# Classes

- CLASS I Aids to navigation on marine structures, to include bridges or other works that the owners are legally obligated to establish, maintain and operate as prescribed by the Coast Guard.
- CLASS II Aids to navigation exclusive of Class I, located in waters used by general navigation.
- CLASS III Aids to navigation exclusive of Class I and Class II, located in waters not ordinarily used by general navigation.

# Inspections and Light List

- Inspections
  - When initially installed
  - When modified
  - Class I: Annually
  - Class II: Every three years
  - Class III: Every five years
- Light List
  - All Class I and Class II
  - Some Class III

# Height of Tide at Any Time

- What is the state of tide at this very minute
  - In the old days: tide tables
  - Now: look at your phone
- Read a charted depth – look at the number on the chart
- Depth gauge correction – where on your boat is it mounted

# GPS

- Configure to datum
  - Depends on your unit
  - Most GPS units are set to WGS84
  - Make sure your unit datum agrees with the chart datum
    - WGS84 is very close to NAD83
    - If your GPS is set to Hu-Tzu-Shan, all bets may be off
- WAAS
  - More accuracy (50' down to 9')
- True head
  - GPS are generally set to point to true north
  - Can Dead Men Vote Twice at Elections
    - Variation is printed on chart compass rose

# Task 4.0 ATON Discrepancies

- State the definition of an aid discrepancy
- Using the Light List, identify the advertised characteristics of aids
- Define the appropriate terms to describe discrepant aids
- Explain the procedure for reporting discrepant aids
- Demonstrate the ability to check an Aid



# Definition of a Discrepancy

- **THE OBSERVED STRUCTURE DOES NOT MATCH THE CHART OR THE LIGHT LIST DESCRIPTION**
- Any member can and should report a discrepancy

# Define

- Missing: Not at assigned location
- Adrift: Afloat and unattached in any way to shore or seabed
- Extinguished: A lighted aid that fails to show a light characteristic
- Burning dim: Not visible at prescribed distance
- Improper color: Not showing the correct color
- Improper shape: Not showing the correct shape
- Improper characteristic: Wrong audible or visual character
- Off station: A floating aid not in its assigned location
- Damaged: Repairable
- Destroyed: Not repairable – note: do NOT report an aid destroyed
- Left Descending Bank: Left side going downstream – GpFl 2 R/W
- Right Descending Bank: Right side going downstream – Fl G/W
- Center Span Light: Marks center of channel
- Margin Light: Marks edges of channel

# Unauthorized Aid

- Non-permitted aid
  - Generally PATON
  - Class I or II not on chart or in Light List
  - Get as much info as possible
    - Location (Lat/Long)
    - Color, Shape, Markings
    - Pictures
  - Make PATON report to CCGD5

# Additional Federal Aids

- Documentation
  - Area
  - Existing ATON
  - Reason for additional ATON
- Forward recommendation to CCGD5

# Discrepancy Reporting

- When reporting Discrepancies, give as much information as possible and suggest what is needed to correct
- PICTURES!!!
- Discrepancy reports can be made by any member and consists of reporting any discrepancy of an ATON or PATON, including bridge lighting and conditions hazardous to mariners in bridge channels.
- All Discrepancies should be reported to nearest CG unit by VHF radio, or Cell Phone immediately, or fax or any other expedient means as soon as possible.
- All reports, must be followed up with a written report on the CCGD5 7054 Form
- For ATON in Pa State Waters use ATON-1, Pennsylvania ATON Report Available 5 NR Web Site, (downloads) or 5NR Policy Manual

# Where Your Reports Go

- **Send Original to: – Frank Williamsn, DSO-NS**
  - [oceano75@msn.com](mailto:oceano75@msn.com)
  - 983 Liberty Ln. Warrington, PA 18976
  - 215 206-3884
- **DSO-NS will copy your report to ANT having Jurisdiction**
- **Aton-1, Pennsylvania Reports - send to ADSO-NS(W) (copy DSO-NS), ADSO-NS(W) will forward to Administrative Officer, Penna. Fish and Boat Commission**
- **Let your FSO-NS know each month how many reports made, so he can report to SO-NS for report at Div. Mtg.**

# Critical Discrepancies

- **Could cause possible loss of life or damage to vessel**
  - Light signal – Improper characteristics
  - Lights signal – Extinguished or obscured for any reason
  - Buoy off station, adrift, sinking, missing, capsized, or stranded
  - Sound signal inoperative
  - Radio beacon not transmitting or timing sequence incorrect
  - Damaged by vessel collision/allision or vandalism
  - Missing day marks
  - Leaning structure more than 15 degrees
  - Aid obscured by foliage / object that should be removed
  - Bridge light outages
  - Collapsed bridge structures, fender system, and obstruction to channel

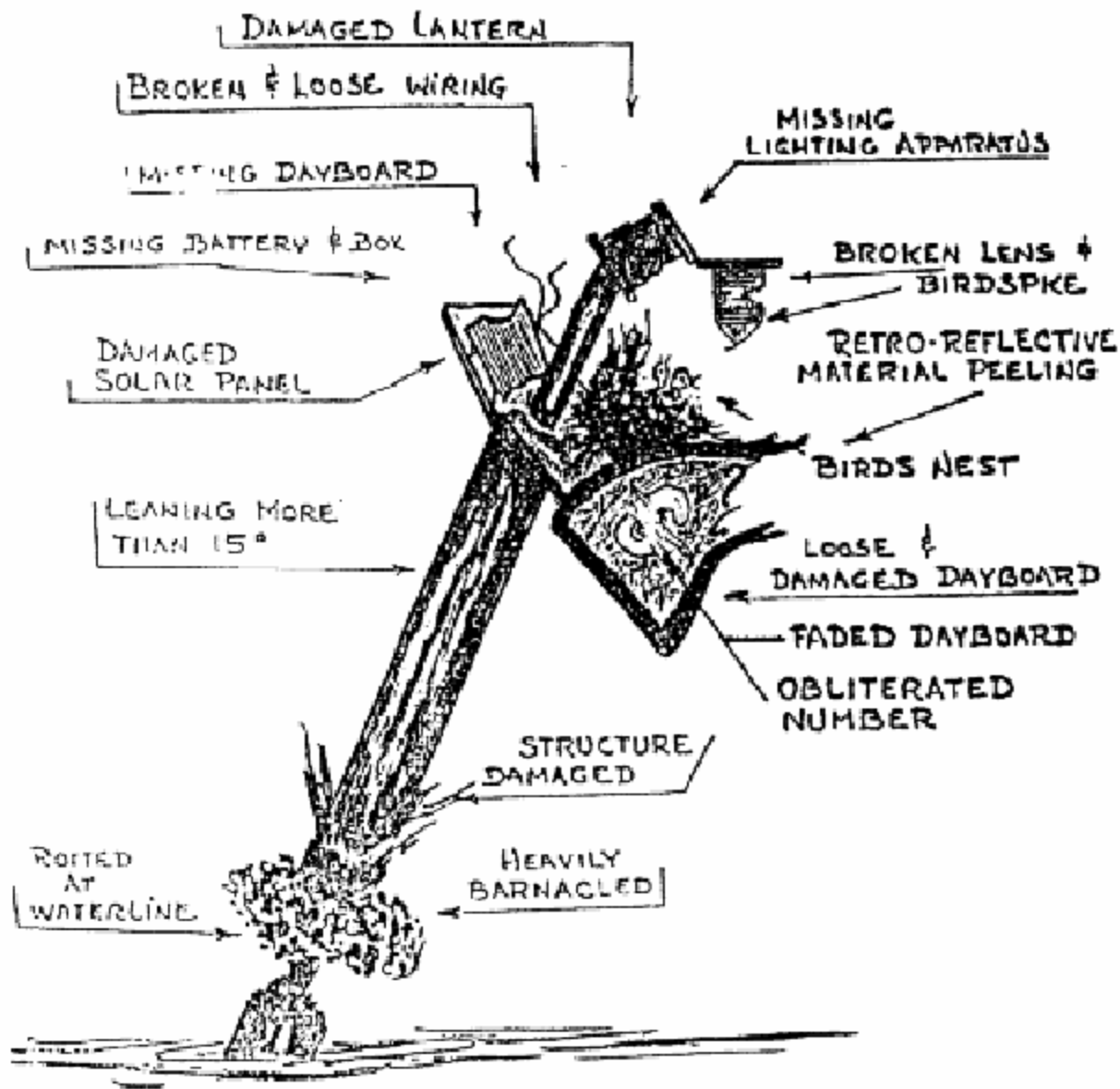
# Urgent Discrepancies

- Will result in no loss of life, but may result in grounding
  - Day marks damaged
  - Light burning dim or reduced intensity
  - Light obscured by dayboard
  - Sound signal failure
  - Bridge light outages

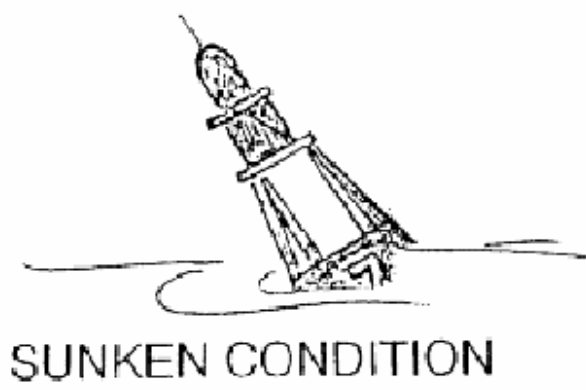
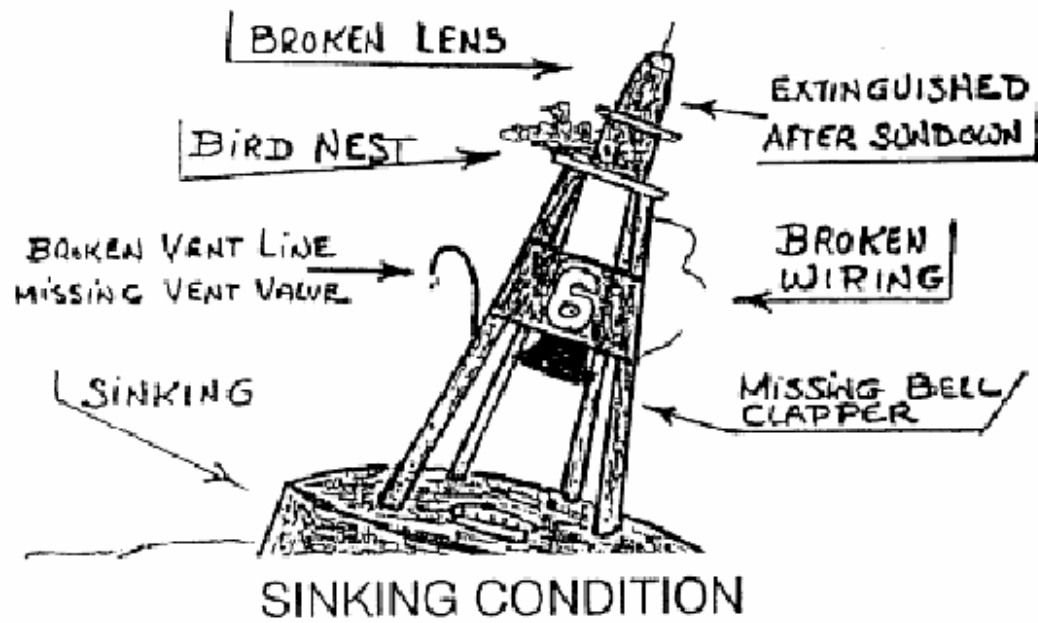


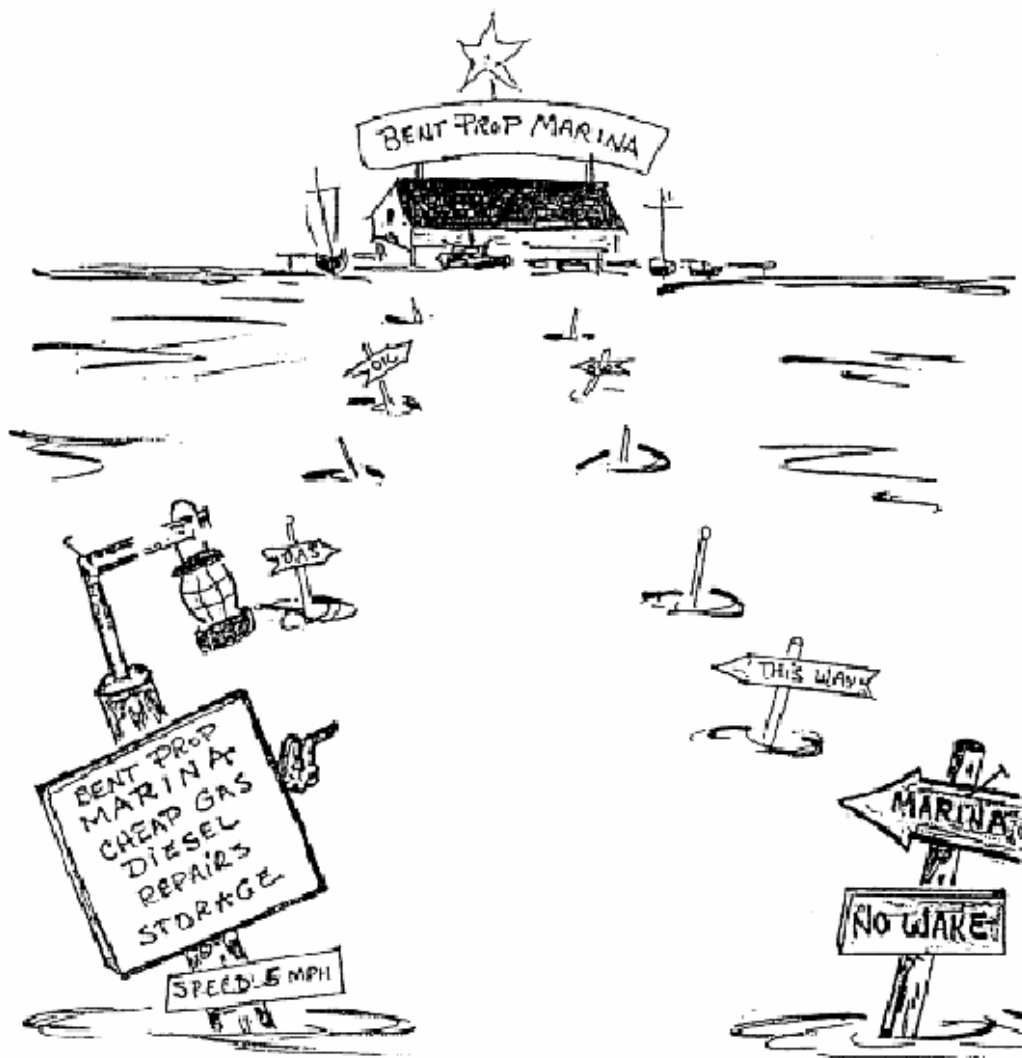
# Routine Discrepancies

- **Low likelihood of grounding, but maintenance required**
  - **Faded day marks**
  - **De-lamination of dayboards**
  - **Retro-reflective material peeling, missing or inadequate**
  - **Numbers obliterated**
  - **Extensive bird fouling**
  - **Deterioration of structure**
  - **Missing or damaged radar reflectors**
  - **Missing vent valve on lighted buoys**
  - **Unauthorized PATONs**



DISCREPANCIES





UNAUTHORIZED  
ESTABLISHMENTS



# Task 5.0 PATON Documentation

- Objectives
  - Verify a PATON
    - Methods to accomplish the program objectives
  - Document a verification of a PATON
    - Reporting requirements
  - Staff Officer duties, assignments, and expectations

# DSO-NS Responsibility

- Maintain dialog with CCGD5 and ANTs
- Maintain master list of PATON in 5NR
  - Where they are
  - What has to be verified this season
- Provide list to SO-NS

# Subsequent Staff Officer Responsibility

- SO-NS
  - Provide list to FSO-NS
  - Provide excerpts from LNM regarding known discrepancies in the AOR
- FSO-NS
  - Provide list to AVs
  - Provide excerpts from LNM regarding known discrepancies in the AOR



# AV Responsibility

- Consult light list for description of aid
- Verify or update the aids
  - Time of day (lighted aids must be verified at night)
  - Transportation
  - What to verify
- Report discrepancies immediately
- Submit 7054
- Claim hours on 7030

# Verify Aids – Transportation

- Mom Patrol
  - If aids are in normal patrol areas
  - Coordinate with a coxswain in your AOR
    - Uniform as per coxswain orders
    - PPE can be provided if coxswain does not have
- Dedicated PATON Patrol
  - If aids require long transit times
- Personal Vessels
  - We are authorized to verify aids using our own vessels
    - The liability issue is under debate
- Personal Vehicle
  - Many of our PATON can be verified from shore

# Verifying Aids – Buoys

- Must be done afloat
- Position: put facility/vessel GPS antenna next to the aid and take a picture of the screen
- Color
- Shape
- Characteristic
- Watching Properly or Discrepant
- PICTURES!!!

# Verifying Aids – Beacons

- May be done from land
- Position: If a beacon is off station we have bigger issues
- Color
- Shape
- Characteristics
- Watching Properly or Discrepant
- PICTURES!!!

# Reporting Hours

- All AV hours are reported on the 7030 form
  - 7031: Federal discrepancies
  - 7032: Private discrepancies and verifications
- What are AV hours
  - Time researching PATON in light list and NTM
  - Time in transit to and from the aid in private conveyance
  - Time actually verifying the aid on site
  - Time filling out and submitting the 7054
- What are NOT AV hours
  - Time underway under orders in an Auxiliary facility

# CG 7054

COAST GUARD AUXILIARY PREVENTION DEPT Form NS-7054		U. S. COAST GUARD AUXILIARY 7054 - Aid to Navigation Report		Check the report type: <input type="checkbox"/> Discrepancy Report <input type="checkbox"/> Aids Checked <input type="checkbox"/> Verification Report Report as a Mission 30 or 31 to AUNDATA	
<b>SECTION 1 - MEMBER INFORMATION</b>					
REPORTER'S LAST NAME, FIRST NAME, MIDDLE INITIAL		AV QUAL	TELEPHONE NUMBER		UNIT (DIST-DIV-FLOT)
DATE OBSERVED	TIME OBSERVED	OPCON NUMBER OR CG UNIT NAME	E-MAIL ADDRESS		
<b>SECTION 2 - COAST GUARD NOTIFICATION</b>					
COAST GUARD UNIT NOTIFIED			TIME REPORTED	DATE REPORTED	
COMMUNICATION METHOD USED FOR REPORTING TO CG UNIT					
<b>SECTION 3 - AID IDENTIFICATION</b>					
AID OWNERSHIP - select one:					
LLNR	PILOTON'S NAME (Aid Name in the Light List or ATONIS)		AID NUMBER	MLE M	CHART NO., ED, LNM DATE
<b>SECTION 4 - HORIZONTAL AND VERTICAL LOCATIONS</b>					
LATITUDE [DDMMSS.SSS]	N/S	LONGITUDE [DDMMSS.SSS]	E/W	GPS DATUM	METHOD USED TO TAKE FIX
OFFICIAL NAME OF LOCATION		GPS MANUFACTURER AND MODEL NUMBER		GPS OPERATION	CH DEPTH
METHOD USED FOR DEPTH		MANUFACTURER AND MODEL NUMBER	OBSERVED DEPTH	TRNSDCR. CORR.	HEIGHT OF TIDE
			Fl.	Fl.	Fl.
			0.0	Fl.	TIME OF OBSERVATION
<b>SECTION 5 - AID TO NAVIGATION CHARACTERISTICS</b>					
CHECK OFF EACH CHARACTERISTIC THAT DESCRIBES THE AID.					
TYPE OF AID		TYPE OF BUOY			
<input type="checkbox"/> Busy <input type="checkbox"/> Fixed Structure <input type="checkbox"/> Lighted		<input type="checkbox"/> Sound capability <input type="checkbox"/> Electronic devices <input type="checkbox"/> Radar reflector			
<input type="checkbox"/> Wood <input type="checkbox"/> Metal <input type="checkbox"/> Foam		<input type="checkbox"/> Plastic <input type="checkbox"/> Other, explain in Comments.			
STRUCTURE TYPE		COLOR OF AID			
<input type="checkbox"/> Wood <input type="checkbox"/> Metal <input type="checkbox"/> Single Pile <input type="checkbox"/> Multiple Pile <input type="checkbox"/> Dolphin		<input type="checkbox"/> Red <input type="checkbox"/> Green <input type="checkbox"/> White <input type="checkbox"/> Yellow <input type="checkbox"/> Other, explain in Comments.			
SOUNDING DEVICE		ELECTRONIC DEVI			
<input type="checkbox"/> Bell <input type="checkbox"/> Gong <input type="checkbox"/> Horn <input type="checkbox"/> Whistle <input type="checkbox"/> Electronic <input type="checkbox"/> Other (Explain)		<input type="checkbox"/> RACON <input type="checkbox"/> Fog Detector <input type="checkbox"/> Wind Generator <input type="checkbox"/> Transformer Station <input type="checkbox"/> Meteorological Station <input type="checkbox"/> Wind Measuring Mast			
<b>SECTION 6 - DISCREPANCIES OBSERVED ON AID TO NAVIGATION</b>					
LOCATION DISCREPANCIES		LIGHTING DISCREPANCIES	DAYBOARD DISCREPANCIES		
1 <input type="checkbox"/> Aid is off station. (Explain)		1 <input type="checkbox"/> Improper light characteristics on a lighted aid. (Explain)		1 <input type="checkbox"/> Dayboard(s) is missing. (Photo)	
2 <input type="checkbox"/> Aid is adrift. (Explain action taken.)		2 <input type="checkbox"/> Light is obscured or extinguished.		2 <input type="checkbox"/> Dayboard(s) is damaged (Photo)	
3 <input type="checkbox"/> Aid is missing. (Explain method used.)		3 <input type="checkbox"/> Light is burning dim.		3 <input type="checkbox"/> Dayboard(s) is faded so color is compromised. (Photo)	
4 <input type="checkbox"/> Aid is not marking the best water.		4 <input type="checkbox"/> Light is obscured by a dayboard. (Photo)		4 <input type="checkbox"/> Dayboard is delaminating. (Photo)	
		5 <input type="checkbox"/> Lantern is damaged. (Photo)		5 <input type="checkbox"/> Dayboard is obscured by foliage or brush.	
<b>CONDITION DISCREPANCIES</b>		6 <input type="checkbox"/> Battery pack is missing or damaged. (Photo)		6 <input type="checkbox"/> Improper dayboard displayed per aid specification.	
1 <input type="checkbox"/> Aid is sinking. (Photo)		7 <input type="checkbox"/> Solar Panel is damaged. (Photo)		<b>OTHER DISCREPANCIES</b>	
2 <input type="checkbox"/> Aid is stranded. (Photo)		8 <input type="checkbox"/> Solar Panel is oriented incorrectly. (Explain)		1 <input type="checkbox"/> Sound signal discrepancies.	
3 <input type="checkbox"/> Aid is capsized. (Photo)		9 <input type="checkbox"/> Missing or damaged vent valve. (Photo)		2 <input type="checkbox"/> RACON is not operating.	
4 <input type="checkbox"/> Aid is damaged by vessel collision.		10 <input type="checkbox"/> Lamp is the wrong color. (Explain)			
5 <input type="checkbox"/> Extensive bird fouling on aid. (Photo)		11 <input type="checkbox"/> Lantern is missing. (Photo and Explanation)			
6 <input type="checkbox"/> Peeling or rust is obscuring color.		<b>DOCUMENTATION AND SPECIFICATION CHECKS</b>			
7 <input type="checkbox"/> Numbers are missing on a lateral aid.		Check your observations against the Light List and, if charted, against the abbreviations and symbols on the NOAA chart.			
8 <input type="checkbox"/> Number or letters damaged on aid.		1 <input type="checkbox"/> Observed aid does not match the entry for this aid in the Light List. (Explain)			
9 <input type="checkbox"/> Retro-reflective material problem.		2 <input type="checkbox"/> Observed aid does not match the symbols and abbreviations for this aid appearing on the NOAA chart. (Explain)			
10 <input type="checkbox"/> Fixed aid is leaning more than 15°.		3 <input type="checkbox"/> Observed lateral aid does not comply with the IALA Aid to Navigation System for region. (Photo and Explanation)			
11 <input type="checkbox"/> Extensive deterioration/rotting. (Photo)		4 <input type="checkbox"/> Observed aid does not comply with data shown in the Coast Pilot. (Explain)			
<b>SECTION 7 - NON-PERMITTED AIDS TO NAVIGATION DATA</b>					
Enter the following information for Non-permitted Aids to Navigation Reports.					
OWNER'S NAME		OWNER'S TELEPHONE NUMBER		OWNER'S E-MAIL ADDRESS	
OWNER'S STREET ADDRESS		CITY	ST	ZIP CODE	
LOCAL WATERWAY ADMINISTRATOR / HARBORMASTER		TELEPHONE NUMBER		WATERWAY ADMINISTRATOR'S E-MAIL ADDRESS	
<b>SECTION 8 - COMMENTS</b>					
Always add an accuracy statement with your report for credibility. Use Alt+Enter for additional lines					