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 of 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
  - 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

Low likelihood of grounding, but maintenance required.
DISCREPANCIES

- DAMAGED LANTERN
  - Broken & Loose Wiring
- Missing Dayboard
- Missing Battery & Box
- Damaged Solar Panel
  - Leaking More than 15°
- Structure Damaged
- Roosted at Waterline
- Heavily Barnacled

- Missing Lighting Apparatus
  - Broken Lens & Birdspike
  - Retro-Reflective Material Peeling
  - Birds Nest
  - Loose & Damaged Dayboard
  - Faded Dayboard
  - Obliterated Number
BROKEN LEN\n
BIRD NEST

BROKEN VENT LINE
MISSING VENT VALVE

SINKING

EXTINGUISHED
AFTER SUNDOWN

BROKEN WIRING

MISSING BELL/CLAPPER

SINKING CONDITION

SUNKEN CONDITION

SUNK
BENT PROP MARINA

AUTHORIZED
ESTABLISHMENTS

SPEED LIMIT 5 MPH

MARINA

NO WAKE

THIS WAY
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
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<tr>
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<tbody>
<tr>
<td>REPORTER'S LAST NAME, FIRST NAME</td>
<td>TELEPHONE NUMBER</td>
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<td>DATE ISSUED</td>
<td>TIME OBSERVED</td>
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<th>SECTION 2 - COAST GUARD NOTIFICATION</th>
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<tr>
<td>COAST GUARD UNIT NOTIFIED</td>
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<tr>
<td>AID OWNERSHIP</td>
<td>SELECT ONE:</td>
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<tr>
<td>DATE OBSERVED</td>
<td>OWNER'S STREET ADDRESS</td>
</tr>
<tr>
<td>LOCAL WATERWAY ADMINISTRATOR / HARBORMASTER</td>
<td>CITY</td>
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<tr>
<th>SECTION 4 - HORIZONTAL AND VERTICAL LOCATIONS</th>
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<tr>
<td>LATITUDE [DDMMSS.SSS]</td>
<td>LONGITUDE [DDDMMSS.SSS]</td>
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<td>GPS MANUFACTURER AND MODEL NUMBER</td>
<td>GPS OPERATION</td>
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<tr>
<td>METHOD USED TO TAKE FIX</td>
<td>INSTRUMENT</td>
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<td>METHOD USED TO TAKE DEPTH</td>
<td>MANUFACTURER AND MODEL NUMBER</td>
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<td>GPS OPERATION</td>
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<th>SECTION 5 - DISCREPANCIES OBSERVED ON AID TO NAVIGATION</th>
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<tr>
<td>TYPE OF AID</td>
<td>STRUCTURE TYPE</td>
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<tr>
<td>TYPE OF BUOY</td>
<td>Fixed Structure</td>
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<tr>
<td>TYPE OF LIGHT</td>
<td>Fixed Light</td>
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<td>LIGHTING DISCREPANCIES</td>
<td>DAYBOARD DISCREPANCIES</td>
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<td>DAYBOARD DISCREPANCIES</td>
<td>CHECK OFF EACH DISCREPANCY THAT YOU OBSERVE ON THE AID.</td>
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<tr>
<td>LOCATION DESCRIPTIONS</td>
<td>DAYBOARD DISCREPANCIES</td>
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<tr>
<td>CONDITION DESCRIPTIONS</td>
<td>CHECK OFF EACH DISCREPANCY THAT YOU OBSERVE ON THE AID.</td>
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<td>OWNER'S STREET ADDRESS</td>
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<td>LOCAL WATERWAY ADMINISTRATOR / HARBORMASTER</td>
<td>TELEPHONE NUMBER</td>
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<tr>
<th>SECTION 8 - COMMENTS</th>
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<tbody>
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<td>Always add an accuracy statement with your report for credibility. Use Alt+Enter for additional lines</td>
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