LOCAL NOTICE TO MARINERS (LNM) APP USER GUIDE

Disclaimer: This guide is produced to assist users in effectively navigating and utilizing NAVCEN's Local Notice to Mariners (LNM) Application, a dynamic tool that sources up-to-date data related to the Light List, discrepant federal aids, discrepant private aids, temporary changes, and marine events. The spatial reference for this application is WGS 1984. LNM data will be refreshed near the top of every hour and every fifteen minutes after. The Light List data will be refreshed every twenty-four hours at approximately 0520 EST. The updated data will provide constant accurate data to mariners, ensuring alignment with the U.S. Coast Guard's responsibility to protect the Marine Transportation System (MTS) and marine environment as outlined in 46 USC Chapter 700. This guide will help you in understanding the application's functionality promoting optimal and efficient use.

Understanding the Application's Functionality

Layer Button (Upper Right Corner)

- **Description:** Toggle various data layers on the chart to display different types of information.
- **Use:** Select or deselect layers to tailor the information on the chart to your needs.

Layers:

Physical Map (Source: OpenStreetMap)

- **Description:** Shows natural and human-made geographical features, providing a comprehensive view of the terrain.

Satellite Map (Source: US Geological Survey)

- **Description:** Offers a realistic depiction of the Earth's surface, useful for analyzing environmental conditions.

Electronic Navigational Chart (ENC) (Source: NOAA)

- **Description:** Visualizes nautical information including depth contours and navigational aids.

Inland Electronic Navigational Chart (IENC) (Source: Army Corps of Engineers)

- **Description:** Visualizes nautical information including depth contours and navigational aids for inland waterways including rivers, lakes, and canals.

Light List (Source: USCG)

- **Description:** Visualizes lights and other aids to navigation (ATON).

Discrepant Federal Aids

- **Description:** Visualizes discrepant federal ATON that could pose a hazard to navigation.

Discrepant Federal Aids Corrected

- **Description:** Visualizes corrective action on discrepant federal ATON. Corrections will be visualized for two weeks after the date the correction occurred.

Discrepant Private Aids

- **Description:** Visualizes discrepant private ATON that could potentially pose a hazard to navigation.

Discrepant Private Aids Corrected

- **Description:** Visualizes corrective action on discrepant private ATON. Corrections will be visualized for two weeks after the date the correction occurred.

Temporary Changes

- **Description:** Displays temporary changes to the Light List, informing mariners of altered traffic environments.

Temporary Changes Corrected

- **Description:** Displays the conclusion of temporary changes to the light list. Corrections will be visualized for two weeks after the date the correction occurred.

Marine Events

- **Description:** Visualizes events that could impact marine traffic within navigable waterways.

Miscellaneous

- **Description:** Displays any category of navigational information that does not fit into one of the existing categories.

Bridges

- **Description:** Displays any structure built over a navigable waterway.

Changes

- **Description:** Visualizes updates or modifications to ATON within a navigable area.

Advanced Notice of Change

- **Description:** Displays an advanced announcement of an update or modification to ATON within a navigable area that has been officially finalized.

Proposed Notice of Change

- **Description:** Displays any potential changes to ATON and other marine features within a navigable waterway that have not been officially finalized.

Hazards to Navigation

- **Description:** Visualizes an obstruction or danger that can pose a significant risk to the safe navigation of vessels.

TESS Advisory

- **Description:** Displays a Technology, Engineering, Science, and Skills advisory that alerts stakeholders about vulnerabilities that may impact maritime infrastructure.

Marine Construction

- **Description:** Displays any ongoing building or modification activities occurring in a waterway that may impact navigation.

MSIB

- **Description:** Displays a Marine Safety Information Bulletin that includes information pertaining to the LNM.

Naval Activity

- **Description:** Lays out an area in which any planned military operations will occur.
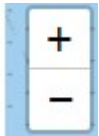
Safety Zone

- **Description:** Displays an area where access is restricted for safety or environmental reasons.

Additional Features on the Chart

North Arrow (Above Zoom Controls)

- **Description:** Indicates geographic north
- **Use:** Allows user to understand program's orientation in relation to geographic North.

Zoom Controls ("+" and "- ")

- **Description:** Transition smoothly between a detailed and a general overview of the chart. ATON clusters will appear until zoom level 10 where individual aids can be viewed in an area.
- **Use:** Adjust the chart's scale to either zoom in for detail or out for a broader view.

Full-Screen Mode (Below Zoom Controls)

- **Description:** Expand the chart to full screen for an unobstructed view.
- **Use:** Enhances visibility and interaction with chart features.
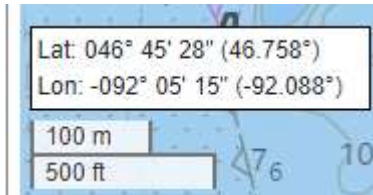
Measurement Tool (|----->)

- **Description:** Measure distances directly on the chart, useful for planning and analysis.
- **Use:** Click to set start and end points; the tool calculates the distance.

Note: When you use the measurement tool, a single click activates it and turns the indicator green. Once activated, it will continuously draw measurement lines until you click it again. On the second click, the tool deactivates, and the indicator turns white. If you want to remove any drawn lines, simply click the 'x' button.

Clear Measurements (X)

- **Description:** Erase measured distances on the chart.
- **Use:** Click once to clear any measured distances.

Scale Indicator (Lower Left-Hand Corner)

- **Description:** Shows distances in miles and kilometers, adjusting with zoom level.
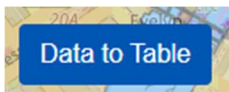- **Use:** Essential for assessing distances and chart areas accurately.

Change Measurements ("nm", "km", and "mi")

- **Description:** Shows distances in nautical miles, kilometers, and miles when measuring distances, click to rotate through measurements.
- **Use:** Essential for assessing distances and chart areas accurately based on measurement needs.

Locate (Under Change Measurements)

- **Description:** Allows user to zero-in on their location at the time of using the application.
- **Use:** Ensures viewable information is in range and pertinent to the user's current location.

Data to Table (Under Location)

- **Description:** Creates a table comprised of all ATON in the selected area, providing location, Light List, physical information, and discrepancy data.
- **Use:** Essential for assessing all ATON in the selected area for navigational purposes.

Print Table (Under Generate Table)

- **Description:** Creates a printable table with all information displayed from a generated table.
- **Use:** Useful for establishing a reference and for physical planning.

Screenshot

- **Description:** Allows the user to take a snapshot of a selected area to paste onto a document. On windows click "Windows-Shift-S" to open the screenshot panel then drag box to desired area on map.
- **Use:** Useful for planning and noting marked data in locations of interest.

How to Print an LNM

To print an LNM,

1. Click on the layer button and select the desired categories. For example, a user may choose the "Light List layer" and the "ATON Discrepancies layer".
2. Pan to the area relevant to the chosen data layers.
3. Click the "Data to Table" button located on the left side of the screen.
4. Click the "Print Table"
5. Save or print the document to their device.

Note: The document will be formatted as shown by the image below.

<div align="center">

Light List

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LLNR	Name and Waterway	Position	Characteristic	Height	Range	Structure	Remarks
10909	Logan Airport Security Zone Lighted Buoy 24 Logan Airport Security Zone	42-20-45.060N 071-00-28.860W	Fl W 4s			White and orange .	Marked RESTRICTED AREA.
10910	Boston Main Channel Lighted Buoy 10 President Roads	42-20-39.801N 071-00-37.869W	Fl R 6s		3	Red.	Replaced by nun when endangered by ice. AIS: MMSI 993672067
10912	Logan Airport Security Zone Buoy 25 Logan Airport Security Zone	42-20-49.200N 071-00-35.400W				White and orange.	Marked RESTRICTED AREA.
10919	Logan Airport Security Zone Buoy 26 Logan Airport Security Zone	42-21-02.880N 071-00-56.880W				White and orange.	Marked RESTRICTED AREA.
10920	Boston Main Channel Lighted Buoy 12 President Roads	42-20-57.934N 071-01-08.012W	Fl R 2.5s		3	Red.	Replaced by nun when endangered by ice.
10921	Logan Airport Security Zone Buoy 27	42-21-06.960N				White and orange	Marked RESTRICTED AREA