



U.S. Coast Guard Auxiliary

District 11 Northern Region
Serving Northern California, Nevada, Utah

District Navigation Systems

Covering Aids to Navigation, Bridges, & Chart Updating Activities

Accuracy - Credibility - Professionalism - Service to the Coast Guard & NOAA-NOS

DSO-NS Northern Region Report No. 2017-08

Date: September 4, 2017
From: DSO-NS 11(NR)
To: DCAPT- P & All D11 Auxiliary Members for Immediate Action
Info: EXCOM, Board & Staff, SO-NS, FSO-NS & Aid Verifiers, D11 (dpw) & D11 (dpa-n)
Subject: DSO-NS July Report/Bulletin

SO-NS please contact each FSO-NS to see that they receive a copy of this bulletin.

Additional copies can be downloaded at:

<http://wow.uscgaux.info/content.php?unit=113&category=navigation-systems-1>

CONTENTS OF THIS REPORT

1. Verifying Private Aids Season Is Over in 26 days	Page 1
2. 2017 D11NR Navigation System Activity Report as of 9/4/2017:	Page 2
3. 2017 D11NR Navigation System AUXINFO Report as Of 8/27/2017:	Page 3
4. What is a GPS Compass?	Page 3
5. House Passes Legislation That Includes Backup To GPS:	Page 4
6. Are You Using OPENCNP? You may want to check it out!	Page 5
7. Have You Check Chart Dates Lately? Dates of Chart Latest Editions Table – Dated 9/4/2017:	Page 6

1. VERIFYING PRIVATE AIDS SEASON ONLY HAS 26 DAYS LEFT:

WE ONLY HAVE UNTIL SEPTEMBER 30th TO COMPLETE OUR 2017 SEASON!

How is your Division doing so far? Well, that’s what this report/bulletin is all about. Each year, we have only until September 30th to perform our Coast Guard assigned field work and August is now over. As of the end of August we completed **78%** of meeting our 2017 Annual assignments. Our annual challenge & goal is 100%.

Each year the Auxiliary commits to verifying 100% of the total assigned private aids in Eleventh District. While this is called an objective, in actuality, it is much more than that. Mainly because, if we don’t complete this assignments, the D11 (dpw) are held responsible to complete them for us. So far, we have not failed the Coast Guard.

It is important to understand that Navigation Systems provides a multi-faceted program each year that breaks down into four main categories.

1. Annual Bridge Survey Plan. Bridges may be surveyed all year with focus on the spring months. 2017 is 100% Completed.
2. Annual Private Aid Verifications Plan. This program has a basic five month window for completion 100%. To date we have verified 570 out of 734 or **78%** in 2017. Just 164 to go.
3. The “Unauthorized Aid” Program Plan. It is important to identify these aids and report them to the Coast Guard. Many of the unauthorized private aids have been identified or converted to a permitted PATONs. To date we have reported 56 non-permitted private aids in 2017.
4. Chart Updating Program. It is upon us to make sure that our charts & coast pilot is accurate for the safety of the boating public. It’s important and our obligation when we see or find errors to our charts or coast pilot to report them to NOAA.

Check Item number 4 on page 5 for what AUXDATA has recorded for your Navigation Systems activity.

2. 2017 NAVIGATION SYSTEMS ACTIVITY REPORT:

This summary report activity table covers all ATON, PATON, Bridge, & Chart Updating activities & reports received by D11 (dpw), NOAA-NOS & AUXINFO through **September 3, 2017**.

2017 DIVISIONAL, BRIDGE, ATON, & CHART UPDATING ACTIVITY SUMMARY REPORT

Div.	AIDS TO NAVIGATION ACTIVITY							Bridges Assigned				PATON's Assigned				2017 AVPQ in Train- ing	A V - P Q S
	Bridge	Bridge AUX Data Lead only	ATON	ATON AUX DATA Lead only	PATON	PATON NO Permit	PATON AUX DATA Lead only	AOR	Check	% Done	Still to Do	AOR	Check	% Done	Still to Do		
1	4		1		77		8	4	4	100%	0	104	76	73%	28	2	7
3	19	11	4	1	24	10	14	15	15	100%	0	41	24	59%	17	0	4
4	2				6			2	2	100%	0	68	6	9%	62	1	2
5	12	8	1	10	108		63	11	11	100%	0	104	104	100%	0	1	4
6	2	2	1	1	38	4	19	2	2	100%	0	67	38	57%	29	0	2
8	1	1		9	6		1	1	1	100%	0	5	5	100%	0	0	0
10	9				58		29	9	9	100%	0	58	58	100%	0	3	3
11					112	29	15	0	0	100%	0	140	112	72%	28	0	3
12	8	8			151	13	97	8	8	100%	0	147	147	100%	0	0	6
Total	57	30	7	21	580	56	246	52	52	100%	0	734	570	78%	164	7	31

Div.	2017 D11NR Chart Updating Year Jan 1, 2017 to Mar 31, 2017			2017 D11NR Chart Updating Year April 1, 2017 to Dec 31, 2017			2017-2018 NOAA-NOS Chart Updating Year Apr 1, 2017 to Mar 31, 2018		
	CU Reports	2nd Ob	CUC (26)	CU Reports	2nd Ob	CUC (26)	CU Reports	2nd Ob	CUC (26)
1									
3	6		156	6		156	6		
4									
5									
6									
8									
10									
11									
12									
Total	6	0	156	6	0	156	6		

Total D11 CU Reports 1/1/17 through 12/31/17 → **6** Total D11-NOAA CU & CUC 4/1/17 through 3/31/18 → **6** **0**

Total Aids to Navigation Reports **700** Total Members Submitting ATON & CU Reports in 2017 → **31**

Total Aids to Navigation in AUXDATA* 297 **297 out of 700 ATON reports showing up in AUXDATA → 42%**

Total NOAA Chart Updating Reports 6

Total ATON & Chart Updating 706

A= ATON, P= PATON, B= Bridges, U= Unauthorized, CU=Chart Updates
CUC = Chart Update Points (Stop Gap) = 26 CUP awarded by D11NR DSO-NS for each confirmation of a Report you recently submitted via NOAA's Nautical Discrepancy Report System.

➤ **Note: *Red numbers above is the information from AUXINFO as of September 3, 2017 update.**

➤ **NOAA-NOS Chart Updating Year is from - April 1 through March 31 each year????**

➤ **D11NR Chart Updating Year is from - January 1 through December 31 each year.**

➤ **Note: The Green number under "2nd Ob" indicates secondary Chart Updating Observers.**

✓ **Note: "ALWAYS submit a 7030 for all ATON, PATON, Bridge, & Chart Updating Activity. Your work is not completed until your 7030 is in your FSO-IS hands."**

✓ **"Always check AUXINFO for your ATON, Bridge, & Chart Updating activity. If you don't find your activity recorded and you have submitted the proper ANSC 7030, check with your FSO-IS or SO-IS for help." If you are not satisfied always contact the DSO-NS for help.**

3. 2017 NAVIGATION SYSTEMS AUXINFO REPORT AS OF SEPTEMBER 4th:

Check below to see if your activity is in AUXDATA? IF Not Why Not? Did you submit a 7030?

Cube last refreshed on Sunday, August 27, 2017

ATON –Aids to Navigation (30, 31, 32)	11NR – Eleventh Northern	All Facilities	All Unit Locations	All Activities	CY 2017	All Statuses	LEAD ONLY	All Operations
		BRIDGE – Bridge Administration (32)		FEDERAL – (30) Aton/chart updating		PRIVATE-Private-Aids to Navigation (31)		
		ATON Bridge Verified	ATON Bridge Discrepancies Reported	ATON Aids Verified	ATON Aid Discrepancies Reported	ATON Aids Verified	ATON Aid Discrepancies Reported	
113-01-09 COYOTE POINT	VETTER, LINDA L	0	0	0	0	8	0	
	113-01-09 COYOTE POINT	0	0	0	0	8	0	
11NR – Div. 01		0	0	0	0	8	0	
113-03-05 SACRAMENTO	DUNCAN, JAMES B	0	10	0	1	0	4	
	MACPHERSON, DOUGLAS W	0	1	0	0	0	10	
	113-03-05 SACRAMENTO	0	11	0	1	0	14	
11NR – Div. 03		0	11	0	1	0	14	
113-05-03 NORTH SOLANO COUNTY	HUNT, GORDON E	2	0	0	0	20	19	
	113-05-03 NORTH SOLANO COUNTY	2	0	1	1	20	19	
113-05-05 SONOMA COUNTY	SUMNER II, WILFRED A	4	2	9	1	17	7	
	113-05-05 SONOMA COUNTY	4	2	9	1	17	7	
11NR – Div. 05		6	2	9	1	37	26	
113-06-10 CAPITOLA FLOTILLA	SIMPSON, BRUCE	0	2	0	0	11	4	
	SMITH JR, WALLACE A	0	0	1	0	0	4	
	113-06-10 CAPITOLA FLOTILLA	0	2	1	0	11	8	
11NR – Div. 06		0	2	1	0	11	8	
113-08-11 CRESCENT CITY FLOTILLA	STEWART, GREGORY M	0	1	9	0	1	0	
	113-08-11 CRESCENT CITY FLOTILLA	0	1	9	0	1	0	
11NR – Div. 06		0	1	9	0	1	0	
113-10-06 KAWEAH	MYERS, RICHARD S	0	0	0	0	15	14	
	113-10-06 KAWEAH	0	0	0	0	15	14	
11NR – Div. 10		0	0	0	0	15	14	
113-11-01 NORTH LAKE TAHOE	THEE, BRUCE W	0	0	0	0	4	11	
	113-11-01 NORTH LAKE TAHOE	0	0	0	0	4	11	
11NR – Div. 11		0	0	0	0	4	11	
113-12-01 EAST BAY	SCHIMMELMAN, NANCY R	0	0	0	0	11	14	
	113-12-01 EAST BAY	0	0	0	0	11	14	
113-12-91 SAN RAMON VALLEY	BOGERT, JOHN M	2	0	0	0	0	2	
	DOUGLAS, STANLEY C	6	0	0	0	0	0	
	LOSI, JAMES G	0	0	0	0	1	9	
	LUCHETTI, VIRGINIA	0	0	0	0	28	32	
	113-12-91 SAN RAMON VALLEY	8	0	0	0	29	43	
11NR – Div. 12		8	0	0	0	40	57	
DISTRICT 113 TOTALS		14	16	19	2	116	130	

4. WHAT IS A GPS COMPASS?

By: Vic Beelik

Just when you thought that we have seen every compass there is, namely the magnetic, gyro, flux gate, a new compass, the GPS COMPASS, shows up in our marine stores.

Why do we need another compass?

The *magnetic compass* is the most reliable navigation instrument available. It continues to work even if the boat's electrical system fails since it is powered by the earth's magnetic field. By careful calibration we know the errors of the compass (deviation chart), and by knowing the magnetic variation we can calculate the TRUE heading. We have to be careful not to place or install any magnetic materials near the compass, which could and would make the magnetic compass useless.

The motion of the boat (heavy seas), large masses of metallic items (moored ship or a bridge) and the direction of the magnetic lines of force with respect to the earth's surface (magnetic dip) affect the accuracy of a magnetic compass. This problem makes the use of a magnetic compass, conventional or electronic flux gate, and marginal when used as a guidance input to an auto pilot. It becomes almost useless at high latitude sailing.

The *gyrocompass* gives an accurate true heading, even at high latitudes. It is a common compass on large ships and naval vessels. The problem with the gyrocompass for small vessels is, that it is expensive (\$5,000-\$10,000) and it takes a lot of maintenance and electrical power, to operate. The gyrocompass has to be running for an hour or so before it becomes fully operational.

GPS; This navigational instrument gives continuous position of your boat. The Course- Over-Ground (COG) information derived from a moving vessel gives a true or magnetic heading. This information becomes indeterminate when the vessel stops or is moving very slowly.

So what is a **GPS COMPASS?**

The *GPS Compass* works by measuring the time difference between the arrival of carrier wave signals from four, preferably five, GPS satellites. The signals are received by two on-board antennas. The system only utilizes the carrier wave from the satellites, it has no need for the navigation information transmitted. From the comparison of the time of arrival of the carrier signals at the antennas, the computer of the GPS COMPASS calculates the true direction.

The GPS COMPASS system guards against short duration of signal interruption, such as the loss of signal in a shadow of a bridge, by incorporating a small solid-state gyro-scope that ensures accurate heading information. This compass is reliable and accurate, providing digital data that can interface with various navigation instruments such as an autopilot, wind instruments that calculate true wind direction and speed. The accuracy of the GPS COMPASS is 0.8 degrees!

The two GPS antennas required for this system have to be separated by at least one wavelength of the operating carrier wave. Luckily the carrier frequency 1,572.42 MHz yields a short wavelength 190mm (7.5 inches) making the antenna installation feasible for small vessels.

Please Note: As a backup, one should always have a calibrated old fashioned, fluid damped, magnetic compass installed. You know "Murphy's Law":

"If something can go wrong, it will!"

5. HOUSE PASSES LEGISLATION THAT INCLUDES BACKUP TO GPS: The House of Representatives recently passed H.R.2825, the Department of Homeland Security Authorization Act. This legislation incorporates H.R. 2518, the Coast Guard Authorization Act of 2017 and its provision titled "Backup Global Positioning System", which proposes that:

- (a) eLORAN.—Subject to the availability of appropriations, the Secretary ('Secretary' means the Secretary of Transportation, acting through the Commandant of the Coast Guard) shall provide for the establishment, sustainment, and operation of a reliable land-based enhanced LORAN, or eLORAN, positioning, navigation, and timing system.
- (b) Purpose.—The purpose of the system established under subsection (a) is to provide a complement to, and backup for, the Global Positioning System (in

this section referred to as 'GPS') to ensure the availability of uncorrupted and nondegraded positioning, navigation, and timing signals for military and civilian users in the event that GPS signals are corrupted, degraded, unreliable, or otherwise unavailable.

The bill goes on to prescribe the requirements of the system and how it is to be implemented. The legislation also establishes reporting requirements. The House report also proposes \$200 million in "Capital Spending for PNT System" in FY 2018-2022 and provides an extensive discussion of the estimated costs and potential revenue sharing.

From: Mike Quinn, D1 SO-NS 5

6. ARE YOU USING OPENCNP? You may want to check it out!

Open Source Chart Plotter Navigation Software The software is available for use on PC's and MAC OSX computers (note: cannot be used with IPAD's). You can download the software and charts for **FREE** and use them locally as a chart viewer.

With the addition of a GPS dongle (listed below) your laptop can become a fully operational chart plotter and with weekly updated chart databases available from NOAA/NOS you will have one of the most powerful tools for assisting the Coast Guard and NOAA in our ATON/PATON verifications and Chart Updating programs.

Learn all about it and uses by going to the U.S. Coast Guard Auxiliary District 1 website at <http://www.uscgaan.com/opencpn.htm> You can log in on their WebEx training class from 2017.

District 1NR Navigation Systems 2018 training class will be starting the around the first of February. All class are held on Tuesday at 1700 EST or 1500 PST. Yes, it is early for our district. You can now log in on their 2017 WebEx presentation at D1 web site at <http://www.uscgaan.com>. Clicking on the **blue** bar mark "WebEx Training"

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<http://wow.uscgaux.info/content.php?unit=113&category=navigation-systems-1>

"All auxiliary vessels when underway should be checking all [Aids to Navigations](#) for any type of **Discrepancy** and also should be checking the [Charts, Coast Pilot & Shoreline](#) for any type of **Charting Errors** as well as providing update reports on [Charts, & Coast Pilot](#) in your AOR"

DATES OF CHART LATEST EDITION TABLE
In D11 Northern Region September 3, 2017

Chart No.	Chart Scale	Edition No.	Traditional Paper Chart Edition Date	Last Correction Date from LNM Update from NOAA On-Line-Viewer & RNC & ENC Navigational Charts	
18600	196,948	15	Mar 2011	LNM 35/17	08/29/2017
18020	1,444,000	39	Jan 2012	LNM 35/17	08/29/2017
18010	811,980	22	Sep, 2012	LNM 35/17	08/29/2017
18022	868,003	36	Jun 2012	LNM 35/17	08/29/2017
18601	40,000	14	Feb 2007	LNM 35/17	08/29/2017
18602	40,000	13	Feb 2012	LNM 35/17	08/29/2017
18603	40,000	17	Mar 2012	LNM 35/17	08/29/2017
18605	15,000	13	Dec 2010	LNM 35/17	08/29/2017
18620	200,000	24	Feb 2012	LNM 35/17	08/29/2017
18622	25,000	56	APR 2016	LNM 35/17	08/29/2017
18623	40,000	12	Jan 2012	LNM 35/17	08/29/2017
18626	40,000	16	Dec 2012	LNM 35/17	08/29/2017
18628	10,000	9	Oct 2012	LNM 35/17	08/29/2017
18640	207,840	27	Oct 2015	LNM 35/17	08/29/2017
18643	30,000	18	Dec 2009	LNM 35/17	08/29/2017
18645	100,000	28	May 2013	LNM 35/17	08/29/2017
18647	40,000	16	Mar 2009	LNM 35/17	08/29/2017
18649	40,000	68	Jun 2013	LNM 35/17	08/29/2017
18650	20,000	58	Jan 2017	LNM 35/17	08/29/2017
18651	40,000	45	Dec 2013	LNM 35/17	08/29/2017
18652 SC	40,000:80,000	36	CANCELLED	LNM 35/17	08/29/2017
18653	20,000	12	Oct 2012	LNM 35/17	08/29/2017
18654	40,000	45	Jan 2012	LNM 35/17	08/29/2017
18655	10,000	59	Oct 2006	LNM 35/17	08/29/2017
18656	40,000	56	Aug 2010	LNM 35/17	08/29/2017
18657	10,000	19	Nov 2005	LNM 35/17	08/29/2017
18658	10,000	31	Sep 2007	LNM 35/17	08/29/2017
18659	10,000	16	Jan 2012	LNM 35/17	08/29/2017
18660	20,000	3	Sep 2005	LNM 35/17	08/29/2017
18661 SC	40,000	30	Mar 2009	LNM 35/17	08/29/2017
18662 SC	40,000	22	May 2009	LNM 35/17	08/29/2017
18663	20,000	6	Apr 2006	LNM 35/17	08/29/2017
18664	20,000	12	Aug 26, 2000	LNM 35/17	08/29/2017
18665	40,000	11	Aug 2004	LNM 35/17	08/29/2017
18666	10,000	1	Nov 24, 2001	LNM 35/17	08/29/2017
18667	20,000	12	Aug 26, 2000	LNM 35/17	08/29/2017
18680	210,668	32	May 2013	LNM 35/17	08/29/2017
18682	20,000	15	APR 2016	LNM 35/17	08/29/2017
18685	50,000	34	Sep 2012	LNM 35/17	08/29/2017
18686	40,000	13	Jul 17, 1999	LNM 35/17	08/29/2017
18700	216,116	22	Jul 2003	LNM 35/17	08/29/2017
Coast Pilot	Volume 7	49	2017 New Edition	Last Corrected through 08/27/2017	
D11 CG Light List Weekly Updates	Volume 6	2017	Updated weekly	Last Corrected though LNM 35/17 – Dated 8/29/2017	