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. 2017-06

Date: July 5, 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 May 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. *FLASH!!!* TO ALL AUXILIARY OPERATIONAL FACILITIES IN THE SAN FRANCISCO BAY AREAS - NOAA Has Cancelled CHART 18652 Small Craft Chart for SAN FRANCISCO BAY TO ANTIOCH:

D11 (dpw) was notified on June 14, 2017 by Coast Guard HQ that NOAA has cancelled Chart 18652. When I was notified I checked the NOAA's Office of Coast Survey at https://www.nauticalcharts.noaa.gov/ and found that Chart 18652 had already been alimented from all their sites. It is now no more gone.

This could cause some bad ramification to all Operational Facilities, Aid Verifiers & Members using Chart 18652 as your primary chart for San Francisco Bay, San Pablo Bay, Carquinez Strait, and Suisun Bay to Antioch areas. Chart 18652 covered all of the following charts, 18651, 18650, 18653, 18664, 18655, 18656, 18657, 18658, & 18659 that you will need.

2. IS YOUR GPS PERFORMING PROPERLY? By: Vic Beelik:

Signal quality received by GPS can impact the performance of this critical navigation instrument. Even though the GPS unit is working properly, its performance may be impacted by interference from onboard electrical appliances or instruments or onshore industrial equipment creating unwanted electromagnetic radiation, called EMI, or Electro Magnetic Interference. EMI can and will prevent the GPS unit from giving a satisfactory position when using satellites closer to the horizon with weak signals.

First of all, the location of the onboard GPS antenna is critical. Its location should be chosen carefully and tested before permanently installing the antenna. The graphical signal strength of

various satellites in view can be checked on the opening page of the GPS. *How does one know if there is an EMI problem or which onboard instrument is causing the problem*?

With all electrical equipment including lights switched off all signals received (signal to noise ratios) as indicated by the graphical representation on the GPS unit should be high.

Once the engine is started a drop of signal quality should be expected. If more than 10% loss is noticed it should be considered serious.

With the engine off, one can track any offending source by a process of elimination. While monitoring the GPS satellite signal strength, switch on each piece of equipment, or light one at a time. A significant change in signal strength will pin point the offending piece of equipment.

Common sources are: fluorescent lights, television sets, television antenna signal amplifiers, computers and CRT displays, running electric motors (windshield wipers), fluxgate compasses, depth sounders speed and tachometers. Operation of an onboard radio transmitter or especially radar can impact GPS reception while transmitting. Since EMI can be radiated or introduced through the power lines, a separate battery dedicated to power the GPS should be considered.

Corrective measures include proper grounding, shielding, and installation of filters or turning off specific equipment when the operation of GPS is required.

While underway, external sources of EMI located close to shipping channels such as microwave towers, shore based radar and other industrial equipment can impact the performance of GPS.

The author experienced such an incident, when the strong EMI radiation was encountered while sailing near Point Conception. All computer related operations on board were blacked out for more than a few hours. The source of EMI was the radiation came from the nearby Vandenberg Air Force Base.

It should be noted that the signal strength can be affected by passing near to large objects such as bridges or building and even large vessels moored in proximity of your moving vessel.

This becomes an important factor when the GPS or Fluxgate compass is hooked up to the vessel's autopilot.

PLEASE CHECK YOUR GPAPS!

2A. WHEN IS YOUR GPS OPERATING AT ITS OPTIMUM ACCURACY? By Dist. 1N

Marine-grade GPS Sets with WAAS (Wide Angle Augmentation System) enabled, operating in 3D (viewing 4 or more satellites) with a EPE (Estimated Probable Error) of 20 feet or less are providing (at the location of their antenna) their most accurate position information. These data are readily available from a marine-grade GPS. Inability to provide this support evidence will make your position questionable and unusable for updating a Federal document such as a PATON Record, the Light List or a NOAA Chart.

Also note that the supporting evidence from your GPS' accuracy when you took the FIX is reported in your "Accuracy Statement" which is a required data field on a CG-7054 report form.

2B. A SAMPLE - "STANDARD ACCURACY STATEMENT: By Dist. 1N

This standard "***Accuracy Statement***" is required on every CG-7054 ATON Report. The Color Coding being used reflects the frequency when the color-coded data is required to be updated on the Accuracy Statement. Use of the Standard format provides uniformity of reporting and makes it easier for the PATON Screener, D11 (dpw) and the Owner to quickly review and evaluate the evidence of your accuracy.

YELLOW – Indicates a **one-time listing** of the electronic equipment used to take the fixes and depths. These entries list the measuring equipment that you used for taking measurements on your patrol or mission.

GREEN – Indicates a **one-time entry** per patrol or mission of the checks taken that showed how your electronic instruments were operating before getting underway. These entries provide evidence as to how your checked the measuring equipment for operation accuracy before getting underway. This SOP is required on all Coast Guard vessels.

BLUE – Indicates the quality control readings, recorded while on-scene at the aid, as evidence of the operating accuracy of your measuring instruments when the data was observed.

SAMPLE - STANDARD ACCURACY REPORT

1. **GPS** – A GARMIN 76cx GPS with WAAS enabled, operating in 3D was used. Pre-underway accuracy was checked at the dock against another GPS set.

2. **ECHOSOUNDER** – A Garmin 441S echo sounder was used to take the depth. Pre-underway accuracy was checked at the dock by calculating depth at datum. Substation was Yerba Buena Island.

3. **DISTANCE OFF** – The fix and depth were taken approximately 10.0 feet from the GPS antenna. Chart referenced was NAD83.

If you standardize your pre-underway and on-scene operational process when using your GPS when taking a FIX, you will have minimal changes to make between fixes. Paste this Standard Accuracy Statement to your Desktop and simply cut and paste to the CG-7054 PATON Report as needed.

3. 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 **July 3, 2017.**

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

Div.	AIDS TO NAVIGATION ACTIVATY							Bridges Assigned				PATON's Assigned				2017 AVPQ in Train-ing	AV-PQS
	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		42		8	4	4	100%	0	104	42	40%	62	2	7
3	19	11	2	1	2			15	15	100%	0	41	2	5%	39	0	4
4	2				6			2	2	100%	0	68	6	9%	62	1	2
5	13	7	1	1	88		38	11	11	100%	0	103	88	85%	15	1	4
6	2	2	1	1	35	4	16	2	2	100%	0	67	35	52%	32	0	2
8					3			1		0%	1	5	2	40%	3	0	0
10	9							9	9	100%	0	58		0%	58	3	3
11					44	8		0	0	100%	0	140	44	31%	96	0	3
12	8	2			93		86	8	8	100%	0	150	93	62%	57	0	6
Total	57	28	5	3	313	12	148	52	51	98%	1	736	312	42%	424	7	31

	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		
Div.	CU Reports	2nd Ob	CUC (26)	CU Reports	2nd Ob	CUC (26)	CU Reports	2nd Ob	CUC (26)
3									
4									
5									
6									
8									
10									
11									
12									
Total	0	0	0	0	0	0			

Total D11 CU Reports 1/1/17 through 12/31/17 →	0	Total D11-NOAA CU & CUC 4/1/17 through 3/31/18 →	0
Total Aids to Navigation Reports	387	Total Members Submitting ATON & CU Reports in 2017 →	26
*Total Aids to Navigation in AUXDATA**	*179*	*179 out of 387 ATON & CU reports showing up in AUXDATA →*	46%
Total NOAA Chart Updating Reports	0	A= ATON, P= PATON, B= Bridges, U= Unauthorized, CU=Chart Updates	
Total ATON & Chart Updating	387	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 JULY 2, 2017 update.***
- **NOAA-NOS Chart Updating Year is from - *April 1 through Mach 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.

4. 2017 NAVIGATION SYSTEMS AUXINFO REPORT AS OF JULY 2ND:

hed on Sunday, July 2, 2017.

All Facilities | All Unit Locations | All Activities | CY 2017 | All Statuses | LEAD | All Operations

		BRIDGE - Bridge Administration (32)			FEDERAL - (30) Aton/Chart Updating		PRIVATE - Private - Aids To Navigation (31)	
		ATON Aids Verified	ATON Bridges 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	0	8	0
	113-01-09 COYOTE POINT	**0**	**0**	**0**	**0**	**0**	**8**	**0**
11NR - Div 01		**0**	**0**	**0**	**0**	**0**	**8**	**0**
113-03-05 SACRAMENTO	DUNCAN, JAMES B	0	0	10	0	1	0	0
	MACPHERSON, DOUGLAS W	0	0	1	0	0	0	0
	113-03-05 SACRAMENTO	**0**	**0**	**11**	**0**	**1**	**0**	**0**
11NR - Div 03		**0**	**0**	**11**	**0**	**1**	**0**	**0**
113-05-03 NORTH SOLANO COUNTY	HUNT, GORDON E	1	1	0	0	0	10	4
	113-05-03 NORTH SOLANO COUNTY	**1**	**1**	**0**	**0**	**0**	**10**	**4**
113-05-05 SONOMA COUNTY	SUMNER II, WILFRED A	0	4	2	9	1	17	7
	113-05-05 SONOMA COUNTY	**0**	**4**	**2**	**9**	**1**	**17**	**7**
11NR - Div 05		**1**	**5**	**2**	**9**	**1**	**27**	**11**
113-06-10 CAPITOLA FLOTILLA	SIMPSON, BRUCE	0	0	2	0	0	9	3
	SMITH JR, WALLACE A	0	0	0	1	0	0	4
	113-06-10 CAPITOLA FLOTILLA	**0**	**0**	**2**	**1**	**0**	**9**	**7**
11NR - Div 06		**0**	**0**	**2**	**1**	**0**	**9**	**7**
113-12-01 EAST BAY	SCHIMMELMAN, NANCY R	0	0	0	0	0	11	14
	113-12-01 EAST BAY	**0**	**0**	**0**	**0**	**0**	**11**	**14**
113-12-91 SAN RAMON VALLEY	BOGERT, JOHN M	0	2	0	0	0	0	2
	DOUGLAS, STANLEY C	0	6	0	0	0	0	0
	LOSI, JAMES G	0	0	0	0	0	1	9
	LUCHETTI, VIRGINIA	0	0	0	0	0	20	29
	113-12-91 SAN RAMON VALLEY	**0**	**8**	**0**	**0**	**0**	**21**	**40**
11NR - Div 12		**0**	**8**	**0**	**0**	**0**	**32**	**54**
		1	**13**	**15**	**10**	**2**	**76**	**72**
- ...	- ...	**1**	**13**	**15**	**10**	**2**	**76**	**72**

James B. Duncan, **DSO-NS 11(NR)** dvc.on@comcast.net

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 July 3, 2017

Chart No.	Chart Scale	Edition No.	Traditional Paper Chart Edition Date	Last Correction Date from LNM Update for NOAA On-Line-Viewer & RNC & ENC Navigational Charts	
18600	196,948	15	Mar 2011	LNM 26/17	06/28/2017
18020	1,444,000	39	Jan 2012	LNM 26/17	06/28/2017
18010	811,980	22	Sep, 2012	LNM 26/17	06/28/2017
18022	868,003	36	Jun 2012	LNM 26/17	06/28/2017
18601	40,000	14	Feb 2007	LNM 26/17	06/28/2017
18602	40,000	13	Feb 2012	LNM 26/17	06/28/2017
18603	40,000	17	Mar 2012	LNM 26/17	06/28/2017
18605	15,000	13	Dec 2010	LNM 26/17	06/28/2017
18620	200,000	24	Feb 2012	LNM 26/17	06/28/2017
18622	25,000	56	APR 2016	LNM 26/17	06/28/2017
18623	40,000	12	Jan 2012	LNM 26/17	06/28/2017
18626	40,000	16	Dec 2012	LNM 26/17	06/28/2017
18628	10,000	9	Oct 2012	LNM 26/17	06/28/2017
18640	207,840	27	Oct 2015	LNM 26/17	06/28/2017
18643	30,000	18	Dec 2009	LNM 26/17	06/28/2017
18645	100,000	28	May 2013	LNM 26/17	06/28/2017
18647	40,000	16	Mar 2009	LNM 26/17	06/28/2017
18649	40,000	68	Jun 2013	LNM 26/17	06/28/2017
18650	**20,000**	**58**	**Jan 2017**	LNM 26/17	06/28/2017
18651	40,000	45	Dec 2013	LNM 26/17	06/28/2017
18652 SC	**40,000:80,000**	**36**	**CANCELLED**	**LNM 24/17**	**06/14/2017**
18653	20,000	12	Oct 2012	LNM 26/17	06/28/2017
18654	40,000	45	Jan 2012	LNM 26/17	06/28/2017
18655	10,000	59	Oct 2006	LNM 26/17	06/28/2017
18656	40,000	56	Aug 2010	LNM 26/17	06/28/2017
18657	10,000	19	Nov 2005	LNM 26/17	06/28/2017
18658	10,000	31	Sep 2007	LNM 26/17	06/28/2017
18659	10,000	16	Jan 2012	LNM 26/17	06/28/2017
18660	20,000	3	Sep 2005	LNM 26/17	06/28/2017
18661 SC	40,000	30	Mar 2009	LNM 26/17	06/28/2017
18662 SC	40,000	22	May 2009	LNM 26/17	06/28/2017
18663	20,000	6	Apr 2006	LNM 26/17	06/28/2017
18664	20,000	12	Aug 26, 2000	LNM 26/17	06/28/2017
18665	40,000	11	Aug 2004	LNM 26/17	06/28/2017
18666	10,000	1	Nov 24, 2001	LNM 26/17	06/28/2017
18667	20,000	12	Aug 26, 2000	LNM 26/17	06/28/2017
18680	210,668	32	May 2013	LNM 26/17	06/28/2017
18682	20,000	15	APR 2016	LNM 26/17	06/28/2017
18685	50,000	34	Sep 2012	LNM 26/17	06/28/2017
18686	40,000	13	Jul 17, 1999	LNM 26/17	06/28/2017
18700	216,116	22	Jul 2003	LNM 26/17	06/28/2017
Coast Pilot	**Volume 7**	**49**	2017 New Edition	Last Corrected through 06/25/2017	
D11 CG Light List Weekly Updates	**Volume 6**	**2017**	**Updated weekly**	Last Corrected though LNM 26/17 – Dated 6/28/2017	