

# Report on NAVSAC Meeting May 4 and 5, 2011

Arlington, VA - The meeting of the USCG Navigational Safety Advisory Council (NAVSAC) was held at the Navy League Building and attended by the undersigned on May 4 and 5, 2011.

Major Issues discussed were as follows:

## **Coastal Marine Spatial Planning**

Executive Order 13547 directed Federal Agencies to take a new approach to stewardship of the oceans, coasts and Great Lakes. CMSP is one facet of that initiative. The USCG intends to implement CMSP over the next 2 years. The Interagency Ocean Policy Task Force created in 2009 by Pres. Obama. Was participated in by Admiral Allen. Stewardship, Safety, and Security are the key words here, and this is an ecosystem based process. There are many industries wanting access, not just navigational, but aqua cultural, oil extraction, renewable energy, etc. The idea is to promote more efficient use of ocean resources and space. The Task force intends to work with the states and federally recognized tribes, through the Sec. of the Interior, USCG, NOAA, and other Federal Agencies. An example of this is the Stellwagon Bank in Boston, where it was realized the whales were not eating in some places, and whales only go places to eat. So, the Traffic Separation Scheme for that area was adjusted to allow vessel traffic to proceed through those areas where the whales don't feed. It is the intent to govern the area from 3 miles, outside coastal waters, to the outer continental shelf. NAVSAC will stay involved in this, and is assured that marine transportation is paramount, with the goal to safely accommodate all users of the Oceans, lakes and rivers.

## **Update on NAV Rules Changes**

Lieutenant Scott Madeiros gave this update, stating that a Notice of Proposed rulemaking will be out soon will details on all the changes. One issue addressed by this will be of particular interest to NBF members, as an issue we are involved with is affected. That is, the State of FL recently changed its anchoring regulations, to provide that recreational boaters can only anchor in certain controlled areas for extended periods of time. Problem was, it turned out that there weren't any of these areas from Key West North on the east coast, so boaters had to end up at Long Key. This will change that rule, and help establish those zones. Also, the Colregs are being modified to comport with the International Rules, mostly by definition

changes. Another change, where COLREGS used to state “use radar for assessing risks of collision,” it will now say “use radar and all other electronic equipment for assessing risks of collision.” Sound signals for 20 meters or less are changed slightly, and Lt. Madeiros explained that many of the changes give more options to meet requirements, in some cases a boater can use a simple torch to comply with light rules, etc.

## **E-Navigation Strategy**

Mike Solosi of the USCG spoke on the latest E-Nav strategy. The US is participating actively in the IMO meetings, with a major undertaking, 2012 or 2013, whereby a comprehensive, deliberate strategy tools for vessel navel and shore based installations will be all brought together. Before, there were scattered efforts toward this, but now Norway is spearheading the efforts, and the navigational subcommittee of the IMO will incorporate ASI vessel traffic services, and more, by utilizing a cost benefit analysis. They hope to have a draft of this plan by the end of the summer. The USCG, USACOE, NTSB and Navy are all cooperating in this effort, along with various IMO members. They will then ask NAVSAC for evaluation. This will not result in regulations, but will bring various regulations together. It is important to realize that the USCG attends IMO meetings, but represents the US Govt., not necessarily the USCG. There is an IMO meeting May 24.

## **Electronic Chart Display and Information System (ECDIS)**

There is a carriage requirement coming for compatible ECDIS systems, this will be implemented 2012-2018. ECS will be required by the USCG on the larger population of vessels. Charting ranges physically used to be off a little, but, using ECS, can be dead accurate, so accurate that they can use the filament of the lamp used as their reference point. There are 299 range pairs in the US that need to be resurveyed. One third of 900 are off station. Often current electronic charts don't show the lights in the right place. Also, not all are the same datum, so this must be standardized. The regs say a vessel must have backup to ECDIS, but, important to note that that can be another ECDIS system on the same vessel. Current 12 hour data retention will be increased to 48 hours. There isn't yet USCG recommended EDIS equipment, but there will be. Smaller vessels will use less than official ECDIS. Problems they see are exemplified by a recent accident in FL, where a sport fishing vessel cut a diver in half with people yelling at the vessel, etc., but they were all staring down at their chart plotter in bad visibility. There still needs to be a proper lookout. One issue they are working on is how to update the ECS charts? Over the internet, etc? Not all vessels always have internet. And, it was pointed out that these are AIDS to navigation, one must

use all available means of proper navigation.

### **Virtual Aids to Navigation**

There are many interesting issues in this topic. Literally, this will project an image of a buoy on the chart plotter rather than have an actual buoy there. Cheaper, easier to maintain, more accurate, etc. It was pointed out though that most recreational boaters don't have this system, and would be running aground, or flocking to center of channel, etc., if there was no real Aid to Nav on station. Problems dealt with are scale issues, sometimes the picture of the vessel obscures nav aids, etc. 95% of the charts made are not updated to WGS 84 standards. It will take decades yet to get the world's charts up to GPS standards, using satellite data, etc. Entire shorelines are off by large distances, and many charts are still based on data from the 1800s. ATONS identify themselves just like a ship would, and have been around since the beginning of AIS systems. They can also give real time data, like wave height, etc. UK has already converted all aids to AIS ATONS, and they can be "piggybacked", 200 miles, all the way to shore. So, they all retrieve and txmt data from the last one, adding to the chain of information. Now, Sault St. Marie has AIS port data, and applications for Iphone, Android, and chart plotters systems are coming. MRPAC lost its charter, but will be revived, just like BSAC, etc.

### **NAVSAC Task 11-02 Proximity of Offshore Energy Installations to Established Ships Routing Measures**

Here, an excellent paper written by the Brits was used, MGN 371 and 372. Had many factors to consider, etc., proximity to traffic separation scheme, available UTS service in area, maneuverability of vessels, emergency conditions, safe stop distance X 200%, assist tug availability, proximity to RNA's, areas where pollution would have greater environmental impact, etc. They are not concerned with small vessels getting close; in fact one can climb up their ladders in emergency, etc. Uniform lighting and painting schemes are used. Noted that only one US agency says yes/no to energy installations, but many agencies have interests in this issue.

### **NAVSAC Task 08-07 Autonomous Unmanned Vessels**

Eric Hansen of the NAVY spoke on this. There will be robotic boats used regularly within 2 years from now. They are already testing them. There are several classes of these, different sizes, etc., some submersible, some semi-submersible, etc. Mostly military now, but

shipping is soon to come. Coming soon will be energy harvesting autonomous vessels, can travel around to get the best harvest. Also, fish cages that move, etc. And NOAA will be testing a hydrographic unmanned prototype this summer. Some of these vessels are amazing, have artificial intelligence, completely autonomous, no one driving them, anywhere. (So are not drones.) They have programmed into them the COLREGS, always follow them properly. That's a given, if they can't do that, then won't be allowed. And, they can distinguish ship's whistles, lighthouse foghorns, even human voices. So far, they will always have humans controlling it for weapons, (unlike drones.) Tactical behaviors combined with COLREGS is the standard for programming these. In testing, the problem isn't that they are missing things, they have too many "false alerts." Most important is robust testing methodologies. They are considering amendments to COLREGS on lights and emissions, and other issues, related to unmanned vessels. By robot standards, the whole world is virtual. Will morph into positive control known pathways, "water trolleys", with a million dollar control head. Pres. Obama has asked that they break water space down like air space. NAVSAC recommendations is that they all be equipped with AIS, amend COLREGS rule 23 to change lighting requirements for these. And, different lights for manned vs. unmanned, drone or otherwise and for submarine vs. surface. If manned remotely, is still a manned vessel, and submarines are vessels. If malfunctions, is considered a vessel not under command by the COLREGS. Should never be a case where autonomous cannot be subject to human intervention. (Kill Switch.) Any time a submarine is on surface, shall be lit by a strobe. Day shapes are really archaic, so do away with them and go to all lights, instead. Modern lights can be seen in daylight.

## **IMO**

There are proposed changes to the COLREGS. Singapore, wants a crossing vessel scheme, 3 greens. SOLAS 22 changes are in order, they want to make sure the navigator can see. Difficult to use English language in writing these, etc. full of vague expressions, etc. Trying to write regs on stacking containers on ships, etc. Are trying to regulate how many windows, what "clear view" is, conning stations, radar stations, etc. Inclinator is important, one ship accident, they were able to calculate cause by video of chandelier in dining room to determine heel angle.

Submitted by Thomas Dogan, attendee of 2011 Spring NAVSAC meeting.

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