IMO’s MPEC approves Draft Polar Code
On track to be in force by 2017

IFSMA condemns SEWOL sentencing
Alaska Ocean Observations
NWS marine forecasting
OPA 90

Mission Statement
The Council of American Master Mariners is dedicated to supporting and strengthening the United States Merchant Marine and the position of the Master by fostering the exchange of maritime information and sharing our experience. We are committed to the promotion of nautical education, the improvement of training standards, and the support of the publication of professional literature. The Council monitors, comments, and takes positions on local, state, federal and international legislation and regulation that affect the Master.

www.mastermariner.org
MANY PERSPECTIVES WITH ONE COMMON MISSION:
KEEPING OUR WATERS SAFE AND SECURE

Join your counterparts from ports, marine law enforcement and federal agencies in discussions and collaboration to secure our maritime domain.

Educational sessions, technology exhibitions, on-water demonstrations and networking are just the start.

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USE DISCOUNT CODE "SIDELIGHTSREADER" WHEN REGISTERING AND SAVE!
ON THE COVER
On July 6, 2011, the U.S. Coast Guard Cutter Healy parked in an ice floe for the 2011 ICESCAPE mission’s third ice station in the Chukchi Sea. Photo by NASA/Kathryn Hansen.

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TO SUBMIT MATERIAL
We welcome your articles, comments, illustrations and photographs. Please email or send your submissions to Sidelights Chair Capt. Tom Bradley at the above address. All submissions will be reviewed, but are not guaranteed to be published.

2015 PUBLICATION DEADLINES

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NOTICE The articles in this magazine are entirely those of the writer, and do not necessarily reflect the views of CAMM nor its Board of Governors. CAMM is an independent professional organization and is not affiliated with nor endorses any union or political party.

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View From the Bridge
CAMM President Captain R.J. Klein urges U.S. ports to modernize container berths to accommodate post- New Panamax ships and become a leader in the total infrastructure needed to move goods by sea.

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Notice
**Hilton Riverside**
Two Poydras St.
New Orleans, La.

**Monday, March 30**

**Welcome Reception**
Complimentary, 1600-1800 hrs
Hilton Riverside Hospitality Suite

**Tuesday, March 31**

**Professional Development Conference***
$75 per person, at National WWII Museum
“**The Changing Face of the Maritime Industry**”
Presentations and Discussions

**Confirmed Speakers:**
- James McCall Baldwin, Jr. – Manager/Owner of Southern Sails of Louisiana
- Captain George Quick – VP of IOMM&P, Pilot Membership Group
- Captain Dr. John A.C. Cartner – Maritime Lawyer, Author of The International Law of the Shipmaster, CAMM member

**Paddlewheeler CREOLE QUEEN**

**Cruise on the Mississippi**
$70 per person; Boarding @ 1900 hrs
at dock behind Hilton Riverside
Mississippi River Cruise
Dinner Buffet
Cash Bar

**Wednesday, April 1**

**General Business Meeting**
$75 per person, at Hilton New Orleans Riverside
Council Business
Views & Positions

**Closing Dinner**
$70 per person, at Hilton Riverside, cash bar

**Keynote Speaker:** Mr. Gary LaGrange
President & CEO, Port of New Orleans
Lalonde ‘Spirit of the Seas’ Award
Raffle Drawing
Recognitions

*Possible coverage by

**Register Online:** www.mastermariner.org/2015pdc-agm
The Sunday New York Times (10/5/14) featured the new Maersk Line’s Triple-E Class container ships. It was a good overview of these huge ships, but the line that caught my attention was, “but they can sail only between Europe and Asia, as their nearly 194-foot wide hull is too large to fit into American ports or to slip through the Panama Canal.”

The United States is second only to China when it comes to importing and exporting goods. Being able to accommodate the new Panamax and post new Panamax size ships poses a problem for major U.S. ports. This is especially true for the container ship trade. Tankers and bulk carriers are primarily dependent upon depth of water to accommodate their draft. The shoreside infrastructure is not as demanding as the infrastructure needed to handle loading and discharging of large containerships.

The following table shows ships’ size for Panamax, New Panamax and Post New Panamax. A 2012 report by the U.S. Army Corp of Engineers, U.S. Port and Inland Waterways Modernization: Preparing for Post-Panamax Vessels, indicates that almost all U.S. deepwater ports can accommodate Post Panamax ships (see map, figure 1). Three North Atlantic ports can accommodate New Panamax ships; no South Atlantic or Gulf Coast ports can handle the New Panamax ships, and only two U.S. ports can receive Post New Panamax vessels like the Triple-E Class ships (Tacoma and Long Beach). A modernization of U.S. ports must include making ports on all coasts capable of handling the Post New Panamax ships.

Our 2015 Professional Development Conference (PDC) and General Meeting (AGM) will be in New Orleans and the topic of the PDC is “The Changing Face of the Maritime Industry.” Our keynote speaker will be Mr. Gary LaGrange, currently President and CEO of the Port of New Orleans and he is credited with being the guiding force behind the revision of U.S. ports.

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<th>Panamax</th>
<th>New Panamax</th>
<th>Post New Panamax</th>
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<tbody>
<tr>
<td>Length</td>
<td>965 ft</td>
<td>1,200 ft</td>
<td>1,312.3 ft</td>
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<tr>
<td>Width</td>
<td>106 ft</td>
<td>160.7 ft</td>
<td>196.6 ft</td>
</tr>
<tr>
<td>Draught</td>
<td>41.2 ft</td>
<td>49.9 ft</td>
<td>52 ft</td>
</tr>
<tr>
<td>TEU</td>
<td>5,000</td>
<td>13,000</td>
<td>18,000</td>
</tr>
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*Used the Maersk Line’s Triple-E Class for this measurement as it is currently the largest containership in the world. The Triple-E Class maximum draft is 47.6 ft (14.5 m), but an additional 4.4 ft (or more) will be required for safety thus the 52-ft draft measurement for Post New Panamax ships.

**Figure 1: Channel Depth for Container Ships Calling U.S. Ports**

Map copyright © 1998-2014, Dr. Jean-Paul Rodrigue, Dept. of Global Studies & Geography, Hofstra University, New York, USA. Used with permission. Map may not be copied or redistributed, in whole or in part, without authorization from Dr. Jean-Paul Rodrigue.
Greetings, CAMM Shipmates!

I am busy preparing the annual CAMM dues notice, scheduled to be mailed in late November.

Included in that mailing are several items, as follows:

• Your Dues Notice: CAMM members who fall more than three (3) years in arrears are subject to loss of membership, so make sure you keep your CAMM dues status current.
• A flyer announcing the 2015 AGM/PDC events/meetings/activities to be held in New Orleans March 30th - April 1st, and a registration form to attend.
• An AGM/PDC sponsorship flyer to outline the various sponsorship levels available to CAMM members; as well as to advertisers, vendors, and others who may want to participate as exhibitors.
• Two (2) books of CAMM Raffle Tickets, with top cash prizes of $800. Winners drawn at 2015 AGM/PDC Closing Dinner in NOLA on April 1st.
• CAMM membership card for 2015, trusting, of course, that you will pay your dues promptly and completely! I encourage all CAMM members to pay online via the CAMM website at www.mastermariner.org. It saves time, postage, and it assures you a convenient, immediate, and positive way to get that task done. If you’re paying for multiple years, we would prefer that you repeat this step for each year you’re paying for (add item to cart), so we can properly adjust your records in MAS. At the same time, you can pay for raffle tickets and your AGM registration (if registering for AGM, do that first – start on the AGM registration page - and then add dues to your cart).

Let me also remind all CAMM members to confirm/update your mailing address, phone numbers, and email addresses. You may also add some biographical info – let us know something about you, and what you’re doing these days. To change your initial password, use security/password link at the bottom of the page.

I again encourage all CAMM members to reach out to the young, active, and interested masters, mates, pilots (and related maritime professionals ashore that you may know), and sponsor them for CAMM membership! If every CAMM member brought in only one new member, we’d double our ranks instantly! Think about that… now go out there and get ‘em!

Finally, I hope to see a record-breaking crowd in attendance at the 2015 AGM & PDC in the fun and exciting city of New Orleans! Bring your spouse, bring a friend, or bring a prospective new member! This event promises to be one of the best ever – so you won’t want to miss this one! Hope to see you all there!

So that’s “IT” for now, shipmates. As always, I welcome your feedback, advice, comments and suggestions. Until next time – smooth sailing!
1st VP Report: Government & Public Relations
Captain Joe Hartnett, #2193-R

Washington has been quiet with nothing new to report. Just waiting to see who is re-elected.

2nd VP Report: Pilot Relations
Captain Dan Jordan, #2698-R

No report submitted.

Sidelights and Website Report
Captain Tom Bradley, #1966-L Committee Chair

We have finally finished the update and rework of CAMM’s Membership Administration System (MAS), which CAMM members can access from the member login link on our website. MAS allows members to view and update their own personal information, such as email address, phone, postal address.

MAS allows us to receive payments via credit cards for any of our activities such as dues payments, meeting costs, raffle tickets, donations, and sales of other novelty items.

In addition, the online registration for CAMM’s AGM and PDC in New Orleans is up and running, and you should have received an email announcing this in early November. If you did not receive that email, then we do not have it in our system; please login to MAS and update your email, along with any other information that may be outdated.

CAMM officers can make or request a variety of reports so we know where we stand at any given time. The system allows chapter secretaries to manage their local members who are not also national CAMM members.

Progress has been made to accept and process online applications for CAMM membership and will be up and running in the near future.

The website has been updated to the best of our ability; further upgrades or updates will require large expenditures (both hardware and software) and someone who has the time and ability to keep it updated. Banner advertising, first implemented over a year ago, have made our website self-supporting.

Henceforth, requests for changes, updating, placement, or just information to the website, are to be made to our Secretary/Treasurer or President.

North Atlantic VP Report
Captain Frank Zabrocky, #1964-R
No report submitted.

New York Metro
Captain George Sandberg, #1919-R
Chapter President
No report submitted.

Baltimore / Washington, D.C.
Captain Joe Hartnett, #2193-R
Chapter President
The chapter participated at Propeller Club of Baltimore’s Fall Golf Outing on October 9th and in the Ship Operations Cooperative Program (SOCP) Fall Meeting at MITAGS on October 29, 2014.

South Atlantic VP Report
Captain Tim Brown, #1494-R
No report submitted.

Port Everglades / Miami
Captain Paul Coan, #3021-R
Chapter President
No report submitted.

Tampa Bay
Captain Ron Meiczinger, #1747-R
Chapter Secretary
No report submitted.

Gulf VP Report
Captain Michael McCright, #2753-S
I have been in discussions via email with Captain Ed Higgins about future speakers for 2015 CAMM AGM & PDC. The National Weather Service /NOAA headquarters has expressed interest in participating in our next national meeting. PMO Chris Fakes in the Galveston office has been kind enough to collaborate and network with NWS headquarters about this participation. The NWS relies on and is always looking for more weather observations from the seagoing community. For those of you at sea, please encourage your watch officers to send in regular Wx reports; the more the better.

Captain Rusty Kilgore keeps the Mobile chapter afloat, despite October’s meeting was canceled due to ill health.

CAMM portfolios for sale
Leather Zippered Portfolio:
- 4 pockets for business cards
- 3 pockets for handouts and accessories
- 30-paged lined notepad (8-1/2” x 11”)
- basic 8-digit calculator

$25 includes shipping and handling. Pay online using ‘donate’ option or mail check to Captain Manny.
amongst chapter members.

**Mobile Bay**  
*Captain Jerome “Rusty” Kilgore  
Chapter President*

No report submitted.

**New Orleans**  
*Captain Ed Higgins, #2872-R  
Chapter President*

We met at the Red Maple restaurant on 18 October. The chapter members enjoyed a nice meal while discussing the 2015 PDC/AGM which is well along in planning. Also discussions regarding the December holiday meeting set for December 11th at the Red Maple Restaurant. The November meeting will be held at the Global Maritime Center and we expect to have Mr. Campanella as guest speaker, discussing his research in NOLA.

**Houston**  
*Captain Michael McCright, #2753-S  
Chapter President*

We held our October meeting on campus as per schedule. Versabar’s Mr. Tom Cheatum presented a great discussion on a very interesting “can do” company, about their containership salvage operations, and how those operations are changing in wake of larger ships and greater environmental concerns and risks.

Our November 6 2014 meeting featured a PowerPoint presentation prepared by Captain Derek McCann on Lightering here in the Gulf Of Mexico (this was prepared a few years ago).

**South Pacific VP Report**  
*Captain Klaus “Nick” Niem, #2167-R  
Chapter President*

A recent occurrence in San Francisco Bay caused alleged damage to a $30,000,000 power cable near the Carquinez Bridge. The motor vessel M/V *Ocean Life* was proceeding toward the Carquinez Bridge bound for Stockton. The Pilot ordered 31 RPMs for Slow Ahead. The Pilot Card the Pilot received from the Master of the *Ocean Life*, showed 31 RPM for Slow Ahead.

At 31 RPM the engine stalled and being less than a 1/4 of a mile west of the bridge, the pilot called for the starboard anchor to be dropped. 10 length of chain ran out. The port anchor was let go with 6 length of chain in the haws pipe causing a cross in the chains due to the vessel swinging.

Unbeknownst to the Pilot, the 31 RPM for Slow Ahead, has been changed by the manufacturer of the engine to 35 RPM, due to the fact that the MGO fuel at 31 RPM, caused previous engine failures. Only after this incident was the Pilot Card changed to 35 RPM for Slow Ahead. It behooves every Pilot to ascertain from the Master if the Pilot Card is correct including the RPM/speed table.

**Los Angeles / Long Beach**  
*Captain Dave Boatner, #2162-R  
Chapter President*

The Los Angeles / Long Beach Chapter meets at noon the second Tuesday of the month [except August] at Crowne Plaza Hotel’s Beacon Room in San Pedro. We usually have anywhere from six to ten members in attendance. Like many CAMM chapters, LA/LB struggles to increase numbers at local meetings. Our members take an active interest in their profession and encourage all Masters living or visiting in the area to participate in our monthly meetings.

**North Pacific VP Report**  
*Captain Carl Johannes, #2147-R  
Chapter President*

No report submitted.

**Columbia River**  
*Captain Bill Good, #1924-R  
Chapter Secretary*

Continued on next page >>>

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**San Francisco Bay Area**  
*Captain Klaus “Nick” Niem, #2167-R  
Chapter President*

Our group once again had a quorum with three officers and seven members at our October meeting. While this is a good thing, dues paying members have dwindled to 67.

A motion was made by all members present to demand the minutes of the last AGM & PDC to be released or published by CAMM’s President and the Secretary/Treasurer. Motion M/S/A.

We discussed the collision between the *Rickmers Dubai* and the crane barge *Walcom Wizard* in the South-West Lane of the Dover Strait, caused by over reliance of ECDIS. Neither vessel were transmitting on AIS. The *Rickmers Dubai* OOW had not kept a proper look-out. He did not see the course alteration of the *Walcom Wizard* and solely relied on AIS info displayed on the ECDIS for collision avoidance.

Dr. Alan Rice, specializing in Earth & Planetary Sciences attached to the American Museum of Natural History in New York City, was our guest speaker. He is also an avid sailor and has extensive diving and salvage experience. He spoke of difficult salvage operations Down Under.

Captain Niem made a motion to donate $500 to the Shriners Hospitals for Children in San Francisco. M/S/A.

Dr. Alan Rice, guest speaker at SFBA's November meeting. Dulce Shafer, wife of Captain Mark Shafer, in background.
The Chapter held its monthly meeting October 10th at the Quay.

Seattle / PNW
Captain Douglas Subcleff, #2329-R
Chapter Secretary

A total of 12 were at the October 9th Seattle Chapter meeting held at McCormick & Schmick’s. But we were without Chapter President, Captain Klein, and Treasurer, Captain Don Moore, who were attending their class reunions at King’s Point, USMMA. Chapter Vice President, Captain Chuck Lund, took over the con for the discussion of Chapter business and a brief review of the new Seaport Alliance between the ports of Seattle and Tacoma. Chapter Secretary, Captain Doug Subcleff, provided a slide show presentation about the final voyage of the tanker SS CHEVRON MISSISSIPPI. The photo collection and account of the trip were courtesy of Captain David Bivin. He was the master of the MISSISSIPPI on the voyage from San Francisco through the Panama Canal to the Brownsville, Texas ship breaker’s yard, where the ship rang up F.W.E. on December 12, 2002. The November 13th meeting will be our special annual Recognition Day luncheon. At this meeting, we will present a check of our charity golf proceeds to the Youth Maritime Training Association. We are hoping to match last year’s $8,500 amount. The highlight of this year’s Recognition Day will be the presentation of our 2014 Seattle PNW Chapter Maritime Person of the Year Award to Captain Donald Moore. Earlier this year, Captain Moore was the recipient of CAMM’s highest honor: the Lalonde Spirit of the Seas Award. Captain Moore was the Seattle PNW Chapter’s first President, back in 1981, when the Chapter received its charter. Since that time, Don has been deeply involved in both National and Local CAMM. His interest and enthusiasm throughout the years has been consistent and impressive to all those who have known him and worked with him.

Recognition Day was started in 1982 as an opportunity to honor an individual or group that has made an outstanding contribution to the local maritime community. Honorees can be selected from within the CAMM organization or from the maritime community. Our first recipient was Captain Harold Kildall, owner of Kildall’s Nautical School. Other honorees have included naval architect Phil Spaulding, Crowley CEO Thomas Crowley, Sr., TOTE Shipping CEO Robert Magee, Nichols Brothers Shipyard CEO Matt Nichols, MARAD Northwest Lyn McClelland, Catholic Seaman’s Center Father Tony Haycock, Captain Thomas Crawford, TOTE VP Phil Morrell and distinguished CAMM members: Associate Pat Hartle, Captains Andrew Subcleff, Peter Chelemedos and Norm Werner.

On November 13, 2014, Captain Donald Moore’s name will be added to this unique “honor roll” of distinguished service in the Pacific Northwest maritime world.


CAPTAIN KARL JASKIERNEY
#2852-R

The highly respected previous CAMM NOLA Chapter President and former Master with Sea Land Services passed away on September 20, 2014 from a massive heart attack two days after attending the NOLA CAMM Chapter meeting. Karl took the helm of the NOLA Chapter at a very difficult time in the wake of Hurricane Katrina and did a masterful job of holding the chapter together. We will miss him deeply. Karl is survived by his wife, Sylvia, two children and four grandchildren. In lieu of flowers, donations are preferred to Global Maritime Ministries.

CAPTAIN THOMAS E. HENRY
#2029-R

Captain Henry, USNR, (Ret.) crossed the bar February 2014. Thomas was born and raised on the south shore of Long Island, New York and left school at the age of 17 to serve on active duty in the USNR in 1945.

After discharge from the Navy, on the GI Bill he attended Massachusetts Maritime Academy and graduated in 1951. He sailed as master with United States Lines until 1985, when he retired and subsequently served another three years as active duty for the U.S. Naval Reserve as a ship handling instructor at Little Creek, Virginia. Captain Henry later served as an instructor at the Chapman School of Seamanship in Stuart, Florida.


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Sidelights December 2014

The Council of American Master Mariners, Inc.
Dear CAMM,

Is Seamanship Dead?

I have been hearing the question a lot on recent maritime web pages "Is Seamanship Dead"? Actually, I have been giving that a lot of thought for some time myself – going back to the time I was with Isthmian Lines, which I worked for from 1962 until 1973, and when they went out of business I was on break bulk cargo ships carrying anything and everything both dry cargo and liquid. Then, I went to work with Sealand from 1973 to 1997 and we also carried almost anything and everything including bulk and liquids, but it was all in containers that were all handled the same way with the same gear and shore cranes, etc.

It was then that I began to realize that if you needed a rope or wire sling or a cargo net or some other similar type gear there wasn't any onboard because normally we didn't have much use for them; and it was then that I began to realize all the various skills of seamanship used on ships in the past were quickly going out of style and by-the-boards — including rope and wire splicing, and the use of cargo gear, booms, winches, blocks and tackle, too. And, I admit at times I did find it kind of frustrating, but the times had changed and for the most part all the ships in the U.S. Merchant Marine were containerships, tankers or passenger ships.

Also, to make matters worse, the watch mates on the bridge had begun coming aboard the ship without a sextant, with no intentions of doing any celestial navigation. Apparently they all thought that the new "kid-on-the-block" GPS was going do it all for them and that it would never fail or lose power. I even had to force them just to take azimuths of the sun while on watch, to check the gyro for error.

Since I have retired I have been doing a lot of rope splicing, chain to rope splicing and rope to wire because it seems almost no one seems to know how in the marine industry here in Florida. They either use wire clamps for, say, making wire eyes; or buy factory ready-made mooring lines with eyes — at least, that has been my experience while working with West Marine. So, at least to me, I think those who are raising the question of whether or not seamanship is dead may not be right, but it does seem to becoming a dying art!

Captain Liz Clark, #997-L

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1st Prize $800
2nd Prize $500
3rd Prize $200

Proceeds help CAMM carry out its mission statement.

Winner need not be a CAMM member nor present to win.

Winner drawn April 1, 2015 at the AGM Closing Dinner in New Orleans.
Order tickets online at www.mastermariner.org
Or mail check payable to: The Council of American Master Mariners, Inc.
30623 Chihuahua Valley Rd, Warner Springs, CA 92086-9220

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International Secretary-Treasurer

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The Council of American Master Mariners, Inc.

December 2014 Sidelights 11
CAMM to be an exhibitor at the 2015 Maritime Security Conference East

The 2015 Maritime Security Conference East will be held in Jacksonville, Florida, on March 10 - 12. at the Port of Jacksonville’s magnificent new Cruise Ship Terminal, offering spectacular views and ambiance for this event. This will be a target-rich environment for showcasing CAMM’s mission and to attract advertisers and members. Over 400 participants and 50 vendors are expected to attend – representing port authorities, law enforcement, state and local government entities, elected officials, and various federal agencies (including USCG, FBI, TSA, DHS, CBP, and others).

The CAMM exhibit booth will be back-dropped with a large white CAMM flag. The table-top display will include recent editions of Sidelights (and advertiser media kits), membership application forms, CAMM AGM/PDC announcement fliers and registration/sponsorship forms, and several “give-away” items.

CAMM President Captain R.J. Klein will make arrangements for two CAMM representatives to attend. Our National Secretary/Treasurer, Captain Manny Aschemeyer, will be there as a volunteer facilitator working with conference organizers, and has been assured that he will have time to help man the CAMM exhibit space and to give relief to the CAMM representatives.

Additionally, CAMM members will be afforded substantial discounts on the conference registration fee. We encourage CAMM members residing in the greater Jacksonville area to attend as your schedules and circumstances may allow. Please see the ad on the inside back cover for more information.

2015 Lalonde Spirit of the Seas

Nominations now open!

Captain Tim Brown, Chairman of the Lalonde Committee, is now accepting nominations for the 2015 Lalonde Award. Nominations must be postmarked no later than January 15, 2015. Now is the time to think about submitting your nomination for the award—before the holiday seasons overtakes you and the deadline passes! Nominations should be mailed or emailed to Captain Tim Brown. The form and instructions for submitting same are available on CAMM’s website.

Nominations are open to any member in good standing with all the following attributes: humanitarianism, professionalism, seamanship, life-time achievements and noteworthy accomplishments, along with contributions to the maritime industry and the ‘Spirit of the Seas’ in their everyday lives. An eligible nominee may be a member in any category of the CAMM National membership in good standing (who is/was current in their dues to CAMM National and to their chapter, if also they were chapter members). Individuals must be nominated by a CAMM National member, who is also in good standing.

For additional information, application, guidelines and rules, go to the CAMM website or contact your chapter president or regional vice president. And remember, All nominations must be postmarked by January 15, 2015.

Sponsorships Available for 2015 CAMM AGM in New Orleans

Commodore Level - $2,000 & up
- 6-ft space for promotional table and display
- 4 tickets to closing dinner with dinner name card

Captain’s Level - $1,000
- 6-ft space for promotional table and display
- 2 tickets to closing dinner

Closing Dinner Table - $750
- 4 tickets to closing dinner with logo namecard on centerpiece

Creole Queen Cruise - $500
- Logo/Banner display at boarding area
- 2 tickets aboard cruise

Hospitality Suite - $500/night
- Logo/Banner displayed in suite
- All 3 nights for $1,000

Meeting Breaks - $200/break
- Namecard & logo at sponsored set-up

Master’s Level - $500
Mate’s Level - $100

Welcome Kit Items
Any company or individual wishing to donate an item for the welcome kit will be given recognition during the event.

All levels include varying levels of recognitions in event programs, event website, and Sidelights. Please see website for further details.

www.mastermariner.org/2015pdc-agm
Helping the Next Generation through the Door

You may remember that recently I wrote that the second Sunday of each month is designated in the Christian maritime community as Sea Sunday. Well, I was able to sign off the Crowley Maritime tug Ocean Sky just in time to get back to St. Joseph Parish, and hold our local Apostleship of the Sea’s Sea Sunday Mass.

As part of the service, I stressed to the congregation that our local petrochemical industry was intimately tied to the seafarers, both U.S. and foreign, who keep our refineries running, and who carry our products throughout the United States and the world.

I continued by explaining that since Port Arthur was once the homeport for the Texaco, Gulf, Pure Oil, Sabine Towing, and Sinclair fleets, we were once one of the leading labor-supplying cities in the United States. However, because of mergers and flagging out, the doorways for merchant marine employment have closed, and moved to other cities.

I stressed to the congregation that now there is almost no one in our city who is still employed as a merchant mariner, and that the memory of the great officers and crews is quickly dying out. However, I continued by stating that there is a great need for a future generation of U.S. mariners to replace our aging workforce, and to meet the opportunities of new tonnage.

At the end of Mass, many folks expressed their appreciation that they did not realize how important Port Arthur and the Sabine-Neches Waterway were to our nation, and that there were such opportunities available for careers with family wages.

What was surprising though was that the next week, I received two phone calls expressing interest in additional information about maritime opportunities, and how one becomes a merchant mariner, and gain the training that is needed for this special career.

Since July, I have worked with Christile LeJunie and Cory Lockett. I have guided them through their TWIC application process, walked them through the MMC application process, the entry-level physicals and drug tests, and made arrangements with our local MSU-Port Arthur so that Captain Ogrydziak or Commander Twomey could receive these two candidates’ Merchant Marine oaths.

As of this writing, Christile has received her MMC with ordinary seaman, wiper, and food handler endorsements. She has also submitted her application to the Seafarers’ Harry Lundeberg School of Seamanship, and will be taking her basic knowledge test this week. Cory will be taking his entry level physical and drug test soon, and will then submit his application to REC Houston.

As a priest, we are constantly being reminded that we are all vocation directors, and that we have to take affirmative action in inviting young men to consider a life of service to Jesus Christ and his Church. When one thinks about it, the same rule applies to us in the merchant marine.

I have frequently heard stories of OSV captains warning their children not to become “boat trash,” but instead go and get an education and a good job. This is very similar to some priests who are so disappointed with their own vocation that they discourage young men from following in their footsteps. Is there any surprise that we have problems recruiting the next generation of merchant mariners, if all we do is concentrate on what we dislike about the industry?

I believe that we can only feel that our careers are completely successful when we can look back, and see that we have recruited our replacement. I am still working on recruiting the young man who will replace me as a priest, but I am pleased to know that I now have been able to recruit three young people to follow me as merchant mariners.
The master has duties and responsibilities under Title 1. A principal duty of the master is the preservation of the lives aboard the vessel. Preservation of life includes the general welfare of those aboard; the dilution of which may lead to foreshortened lives. Because of the vulnerabilities of young (mid-late adolescent) seafarers, it is incumbent on the master to comply with and to enforce assiduously as a part of his duties the Convention Regulations and their derivative rules as to young seafarers.

The master must be mindful and protective of underage labor. The Convention carefully regulates the management of young or underage labor on ships. The master as competent authority afloat enforces those Regulations aboard. The Convention establishes a minimum age under Title 1 for shipboard work. Standard A1.1 as to minimum age is strict. It is clear that enforcing higher competent authority’s laws and regulations and agreements that the master should prohibit any person under the age of 16 years from working and that he should enforce the language of the Convention for any person under the age of 18 years including the Guideline as to seafarer age.

The master must be knowledgeable of the requirements for medical fitness. The Convention establishes a system of medical certification. A competent medical authority issues certificates to seafarers and therefore masters. There is reciprocity with STCW 95 certificates for seafarers and masters to present to the employing agency and the master; the MLC certificate is the vessel certificate for authorized inspection. This system, in some respects, takes the master out of medical decisions. In others, it gives him or her full responsibility and authority. He may merely deny employment to a seafarer without a valid medical certificate. Because the master is also a seafarer, he is unable to work on the vessel without a valid medical certificate. The master may waive the requirement of medical certification under limited circumstances.

The master must be knowledgeable about training and qualifications. Consistent with the STCW 95, the MLC requires that any seafarer or master who works on a ship be trained properly and qualified in the position wherein he works. It is the duty of the seafarer or master to have the necessary credentials attesting to the same. Deference is made to STCW 95 as meeting the requirement. Thus, the master determines training and qualification and ability to perform under the rules of STCW 95 and its certification regime expressed through the flag State’s rules of administration and the Convention.

The master must know about the recruitment and placement of seafarers and masters. The MLC attempts to regularize crewing agencies or recruitment and placement services. This is a core structural change in current practice affecting masters in their statuses as seafarers, and therefore, masters having those same rights. Thus, essential rights for seafarers enforceable by the master afloat, are promulgated by the MLC with those self-same rights applying to the master.

Regulated public and private placement and recruiting services are recognized. The Regulation and guidance are prescriptive, detailed and urge public services in flag State territory at no charge to seafarer or master with visa charges absorbed by owners. Another option to public and private bureaux is placement of seafarer or master through labor organizations with collective bargaining contracts with owners with similar state oversight. A generally worded admonition to ensure that owners have the means to protect and repatriate seafarers stranded on foreign shores has fewer teeth, however. Novel is the requirement for an insurance scheme to cover costs of seafarer or master where crewing agencies fail in their obligations. A complaint and investigation mechanism is required to be established by the flag State.

1 Regulation 1.1.  
2 Standard A1.1.  
3 Guideline B1.1.  
4 Regulation 1.2.  
5 It thereby affects masters as employers and managers of seafarers. It further affects masters acting for owners as to seafarers and organizations recruiting and supplying them, whether public, private or under collective bargaining agreements.  
6 Regulation 1.4.
The Council of American Master Mariners, Inc.

Conditions of employment are the heart of the legal and economic relationship among owners and masters and other seafarers. Employment agreements, wages, overtime compensation, hours of work, rest, manning and other compensation come under all of the master's principal duties previously detailed. In doing so, he is required under the Convention and other laws to prudently and carefully inspect all the documents involved, maintain and repair them as necessary, provide for their safekeeping and use, have aboard the requisite equipment to do so, record matters as required by law and the Convention, report to the higher competent legal authority in the flag State and the higher commercial authority of the operator, operate the vessel and prosecute the voyage prudently so as to conform with the seafarer conditions of employment, plan the persons and duties and times necessary to maintain the safety of the vessel and other duties and withal manage the system implicated by his duties and the conditions of employment.

Under Title 2, 'Conditions of Employment' can be said to be the core of at-sea regulation for the operating vessel and master along with Title 3, 'Accommodation, Recreational Facilities and Food and Catering.' Title 2 is lengthy and detailed and divided into eight Regulations, each of which has implications for the master.

The master must be cognizant and enforce the rules on written employment agreements. Regulation 2.1 purposes to provide seafarer and master with a 'fair employment agreement.' In doing so, such agreements must be clearly written and enforceable contracts accepted by the seafarer or master with accommodation for advice. It, as appropriate, incorporates collective bargaining agreements; is in a native language of the seafarer or master as well as in the English language; is executed by the parties; has presented original versions to the seafarer or master as well as in the English language; is kept aboard with a work record for each seafarer and the master containing no qualitative information about performance of the seafarer or master; is kept with a file with full seafarer or master personal details. The master's responsibilities are implied in enforcing the requirements of the Convention as to record-keeping as documents available for inspection. Also implied and expressed elsewhere, infra, is the master's inspection of such records for seafarer and master aboard to see that they are in order and properly rendered by the parties according to the Convention and prepared for subsequent inspection by higher legal and commercial authority.

Wage administration is an important shipmaster duty. The wage Regulation8 attempts to regularize and harmonize how seafarers and masters9 are paid according to their wage agreements. It is comprehensive and detailed. The master is impliedly and expressly involved in wages, especially overtime wages, which is a perennial problem on all ships, even those well-managed. Inter alia, pay is monthly and accounted for including exchange rates; allotments are required with reasonable charges; a list of wage definitions lends precision to the Regulation; overtime pay is required to be at least 1.25 times base pay or the State legal rate; base pay is calculated on an eight hour day; base pay and overtime are accounted separately; the master is expressly responsible for maintaining records of the same; deductions are limited to domestic law; wages are paid in legal tender; domestic holiday laws and wage-hour weeks are followed; equal pay for equal work is an aspiration; mone-

8 Regulation 2.2.
9 In most States the master may be a lienor of the vessel for wages and other costs. No rule requires conventions or treaties to have direct and immediate effect as a domestic law. However, some States, through the IMO or through their constitutions, such as the Netherlands and Greece, either permit direct incorporation of conventions or, in the alternative, require enactment of legislation to express a convention domestically, such as Bahamas. If such a mechanism is available, private citizens such as shipmasters may be able to avoid themselves of domestic court jurisdiction to enforce the rights given in a convention. See John A C Cartner, et al., (2009), Pt. III by State.
and rest.11 Fatigue has become a well-known factor in maritime accidents.12 Seafarers and masters have a right to rest. The Convention requires regulation of work and rest hours. Hours of work as well as hours of rest are operationally defined. A maximum of a six day week is prescribed with public holidays. Defined are maximum work periods, rest periods between work periods, minimization of drills and inspections during rest periods, compensatory rest for callouts not otherwise compensated, the posting of work and rest hours for all seafarer and therefore masters, the keeping of records of work and rest; a saving clause for compensation in lieu of rest hours.13 Young seafarers are protected by special rules.14 The master's duties are the fair inspection, maintenance, provision, reporting, operating and planning for the time-keeping system aboard following the ministerial duties he is assigned by the company as a part of his duties to prosecute the voyage as efficiently as practicable and to perform as directed. The duty to report to higher commercial authority or higher flag authority is clear and obvious in such administration as is enforcing flag state law under his warrant and the owner's policies as an employee at will.

Masters and other seafarers are entitled to leave.15 Paid annual leave is required at a minimum of 2.5 days per month of work [thirty days per annum]. Justified absences including national holidays are not annual leave. Foregoing annual leave is prohibited. Service off-articles, maternity [but curiously, in light of the gender-neutral position taken elsewhere in the Convention, not paternity] leave, illness or injury, compensatory leave and temporary shore leave are counted as service. Leave may be taken at a place convenient to the seafarer and therefore master if not more costly to the owner than the place of repatriation. Recall during leave is exceptional and only with the seafarer and therefore master's consent. Annual leave is uninterrupted and is pro-rated if less than a year's service or termination is involved. Young seafarers are given special treatment. The master keeps seafarer and master records as a part of his express and implied duties to the flag State and to the owner.

Masters and other seafarers are entitled to repatriation.16 Repatriation is the catchall word for the right of a seafarer or master to return home from his work. Masters have an implied duty to facilitate repatriation of seafarers under his command both for the commercial principal as well as for the flag State authority. Further, the Convention expresses a ministerial duty, infra. Thus, ‘Seafarers and therefore masters’ have a right to be repatriated at no cost to themselves in the circumstances and under the conditions specified in the Code.17 This notion led the Members to agree in the Convention that owners flying the flag of a State shall provide financial security for repatriation under the Code when the employment agreement expires; when employment is terminated by the owner or by the seafarer or master for ‘justified reasons’; or if the seafarer or master cannot perform his duties under specified conditions. States Parties are required to enact laws on repatriation according to the Code including destinations of repatriation, mode of transport, expense covered and other arrangements made by owners. An advance payment for repatriation or recovery of costs of repatriation from wages is prohibited except in certain specific cases. Members shall not prejudice an owner's right to recover the cost of repatriation under third-party contractual arrangements. Where an owner fails to arrange or pay the cost of repatriation the flag State arranges for repatriation, the State of repatriation or nationality may do so and recover

11 Regulation 2.3.
12 See John A.C. Cartner, et al. (2009) for the master's right to rest and a review of the fatigue literature and the STCW 95 requirements for rest periods.
13 ibid. for the peculiar problems of the master and rest and work periods.
14 Guideline B2.3.1.
15 Regulation 2.4.
16 Regulation 2.5.
17 ibid.
from the flag State who recovers from the owner. No charge accrues to the seafarer or master. Recovery may be made at law.\textsuperscript{18} Members facilitate repatriation and replacement for seafarers or masters on vessels in territorial or inland waters and may not refuse repatriation because of an owner’s financial circumstances or refusal to replace. A seafarer’s or the master’s costs are paid for passage (usually by air), accommodation and food, pay and allowances, transportation of 30 kg of personal luggage and medical treatment during repatriation. Time spent awaiting repatriation and repatriation travel time may not be deducted from paid leave accrued. Notices of right to repatriation are made available to seafarers and masters, which is an implied duty of the master under various enumerated conditions. Rules of sea service are included in the Convention. Destinations for repatriation are the place of engagement, a place agreed to in collective bargaining, State of residence or another mutually agreeable place at engagement, each equally valid. Seafarers and masters are time-barred in a conventional expression of the doctrine of laches from collecting if an unreasonable time passes for a claim. Members should provide for the repatriation if a seafarer or master of a foreign-flag State is put ashore in a foreign port, reasons for which the seafarer or master is not responsible, to the port of engagement or nationality or residence or another port as agreed among the seafarer or master or owner and approved by the competent authority or for medical care and maintenance if not self-inflicted. Special rules are set out for young seafarers.

Masters and other seafarers must be compensated for loss or foundering.\textsuperscript{19} The purpose of the regulation is to ensure that seafarers, and therefore masters, are compensated when a ship is lost or has foundered.\textsuperscript{19} Thus, a seafarer or master is adequately compensated in the case of injury, loss or unemployment arising from loss or foundering. Each State Party is required to have rules to effect the Regulation requiring the owner to indemnify against unemployment resulting from loss or foundering without prejudice to any other rights a seafarer or master may have from the loss or foundering. Unemployment indemnity is paid for the time unemployed at the same rate as the wages payable under the employment agreement, limited to two months’ wages. A seafarer or master has the same remedies for recovering such indemnities as for recovering arrears of wages earned in service. The master’s implied duty here is to him in collecting payments from the owner and facilitating the owner’s efforts to make such payments as practicable. His further duty is to cooperate with the flag State authority in ensuring such payments are made and reporting if they are not or are irregular, as a part of his duty to enforce flag State law and to prosecute the voyage, albeit truncated, as efficiently as practicable and duties as an employee at will of the owner or the owner’s agent.

The master should enforce safe manning levels.\textsuperscript{20} The purpose of the safe manning language in the Convention is to ‘ensure that seafarer and therefore masters work on board ships with sufficient personnel for the safe, efficient and secure operation of the ship.’ The Convention is brief as to this requirement\textsuperscript{21} apparently relying on other major conventions, discussed elsewhere herein.

Each Member shall require that all ships that fly its flag have a sufficient number of seafarers on board to ensure that ships are operated safely, efficiently and with due regard to security. Every ship shall be manned by a crew that is adequate, in terms of size and qualifications, to ensure the safety and security of the ship and its personnel, under all operating conditions, in accordance with the minimum safe manning document or an equivalent issued by the competent authority, and to comply with the standards of this Convention. When determining, approving or revising manning levels, the competent authority shall take into account the need to avoid or minimize excessive hours of work to ensure sufficient rest and to limit fatigue, as well as the principles in applicable international instruments, especially those of the International Maritime Organization, on manning levels. When determining manning levels, the competent authority shall take into account all the requirements within Regulation 3.2 and Standard A3.2 concerning food and catering.

However, the master has a right to have sufficient seafarers aboard to operate the ship safely. While owners strive to reduce short-term operating costs, they can lose sight of the long-term large costs caused by those reductions. The effort to reduce costs by reducing manpower leads to seafarers and masters being overworked and fatigued, which puts the ship, the people aboard her and the cargo at risk. This is a direct violation of the master’s principal duty. Safe manning is a function of the number of qualified and experienced seafarers necessary for the safety of the ship, crew, passengers, cargo and property, and for the protection of the marine environment.\textsuperscript{22} Under SOLAS, all ships are required to have a Minimum Safe Manning Certificate in order to ensure that they are sufficiently manned.\textsuperscript{23} Port State control authorities check manning certificates as a part of their safety efforts. It is ultimately the duty of owners or managers to supply the funds or personnel for a ship to ensure that a ship is adequately manned at all positions for safe operation. It is the duty of the master to demand such officers and ratings

\textsuperscript{18}International Convention on Arrest of Ships, 1999.
\textsuperscript{19}Regulation 2.6.
\textsuperscript{20}Regulation 2.7. See also John A C Cartner, et al., (2009), 159.
\textsuperscript{21}Standard B.2.7.
\textsuperscript{23}See SOLAS, reg. 13(a)–(b); see also K X Li & Jim Mi Ng, ibid.
More Real-Time Weather Reaching Alaska Mariners through AIS

Imagine you are at the helm of your vessel, 10 miles from cell phone coverage, and the wind is picking up and fog settling in.

You are concerned over the weather conditions ahead and due to the ship's background noise didn't clearly hear the recent VHF marine broadcast. Would you like to have real-time conditions for areas around you right on your AIS screen? The Alaska Ocean Observing System (AOOS) is partnering with the Marine Exchange of Alaska (MXAK) to provide just that.

Many boats transiting Alaska’s coast are equipped with AIS (Automatic Identification System) transceivers, which provide map-based information on the location of other vessels in the area. AIS is designed to help prevent collisions, as well as provide information to the Coast Guard to locate vessels in distress and those nearby who could help. Over 120 shoreside AIS stations send and receive signals across Alaska’s coast – many in remote places. In a ground-breaking effort, AOOS and the MXAK are developing a system capable of augmenting many of these AIS stations with weather sensors and the capability to digitally transmit real-time weather conditions over the AIS network. Wind speed, temperature, precipitation, ice and other information can also be presented on captains’ AIS screens, even when they are out of internet or cell phone service. Eventually, even endangered marine mammal species sightings can be relayed to vessels in time for them to avoid ship-animal interactions. The information is also provided to the National Weather Service and can be viewed with smartphones and iPads when a vessel is in range of cellular service.

To launch the effort, the MXAX recently installed 12 new stations containing AIS transmitters and weather stations with the help of AOOS funding. Locations range from the inside passage of Southeast Alaska, west to Dutch Harbor in the Aleutian Islands and north to Barrow. More stations are planned in the coming months.

As the technology behind the system becomes fully functional, boaters with AIS capabilities in these regions will be able to track real-time weather without an internet or cell phone signal. “During my 30 years with the Coast Guard, I realized providing mariners with clear, real time weather information from more areas would save lives. This project squeezes more value out of AIS technology,” says Captain Ed Page, U.S. Coast Guard (Retired).

So far, the partnership has helped advance the hardware and software required to build and operate an AIS/weather network in Alaska. The Marine Exchange conducted a pilot project this summer with the U.S. Coast Guard vessel Healy. Refinements to data transmission and renewable power systems continue to be made, and the capability to expand this system to other regions
looks promising. “The impetus for this project came directly from AOOS stakeholders who are looking for more efficient and reliable real-time data,” said AOOS Executive Director Molly McCammon. “Maritime conditions in Alaska can be challenging and often dangerous. Our mission at AOOS is to increase observing and forecasting capacity across the state and make sure that information goes into the hands of those who need it. Improving marine navigation safety is one of our major goals,” she added.

AOOS is one of 11 regional observing systems across the U.S. representing a network of critical ocean and coastal observations, data and information products that aid in the understanding of the status of Alaska’s marine ecosystem. As part of the Integrated Ocean Observing System – or U.S. IOOS, AOOS strives to reach users who rely on coastal and marine information for decision making, marine safety, conservation, recreation, coastal development, and other uses. The AOOS data portal serves as the cornerstone of the program – providing information ranging from map-based model forecasts to gridded satellite data to habitat and shoreline characteristics on a single user interface. Users can also view a real-time sensor map that connects to over 3,000 sensors statewide including webcams. Visit AOOS at www.aoos.org.

This article is part two of a three-part series, appearing in the October 2014, December 2014 and February 2015 issues of Sidelights.

Captain Dr. John A. C. Cartner is an unrestricted master mariner (U.S.) and maritime lawyer practicing in Washington, D.C. He is also a member of: the Law Society of England and Wales; the District of Columbia Bar Association; the Maritime Law Association of the United States, designated as a Proctor in Admiralty thereby; and of other maritime law associations. He is also a fellow in several maritime engineering associations in the U.S. and U.K.

MLC 2006 >>>Continued from page 17 to permit him to perform his paramount duties for the safety of the vessel and its contents. The master’s duties to maintain the safety of the vessel, the souls aboard, the cargo, the voyage and the environment are violated by under-manning. As warrantee of the flag State, he must act to sail only with safe manning. As commercial agent of the owner having custody and other duties related to the vessel he must sail only with safe manning. His duties are to inspect the experiences and credentials of all seafarers and to reject those not adequate for safe manning, to maintain the disciplinary and training regimes necessary to continue safe manning, to provide for, record and report safe manning operations and documents as required commercially or legally, to operate plan and manage manning as an essential part of his duties of command. Curiously, the same Regulation touches on dispute settlement relating to manning issues.

The master must deal with seafarer skill development and opportunities. The Convention recognizes the need to have an orderly seafarer and master skill development and employment opportunity system as well as an orderly method of seafarer and master recruitment, and

it purposes to promote career and skill development and employment opportunities. The language for the most part is merely hortatory. Further, in Standard A2.8, ‘...in order to provide the maritime sector with a stable and competent workforce... The aim of the policies... shall be to help seafarers [and masters] strengthen their competencies, qualifications and employment opportunities.’ After consulting the shipowners’ and seafarers’ [and masters’] organizations, each Member shall establish objectives for the vocational guidance, education of and training of seafarers [and masters] whose duties primarily relate to safe operation and navigation including on-going training.

26 Guideline B2.8.1 is hortatory.

24 Each Member should maintain, or satisfy itself that t60here is maintained, efficient machinery for the investigation and settlement of complaints or disputes concerning the manning levels on a ship. Representatives of shipowners’ and seafarers’ [and therefore masters’] organizations should participate, with or without other persons or authorities, in the operation of such machinery. Guideline 2.7.

25 Regulation 2.8.
The National Weather Service Marine Program has a mission to provide marine weather forecasts, warnings, and other information for the protection of life and property while on the waters. Weather and ocean data are critical to the mariner. This is due to a combination of hazards — such as strong wind and large waves — and the inherent isolation while on the water. Mariners in smaller vessels encountering hazardous conditions in the coastal waters and Great Lakes may be hours away from safe port and at the mercy of the elements. Large ships at sea also face potentially great dangers and are often days away from a safe port. When in peril, rescue of these vessels may be hours or days in coming. Reliable, rapid, and easy access to weather information, when properly understood and applied, supports decisions which ultimately lead to saving lives and reducing economic losses. Not having accurate and timely weather information and the knowledge to properly apply it, increases risk to mariners and their vessels.

NOAA’s National Weather Service is responsible for issuing marine forecasts and warnings for the U.S. coastal waters and Great Lakes, offshore and high seas portions of the Pacific and Atlantic Oceans, Gulf of Mexico, Caribbean, and for a portion of the Arctic Ocean (north of Alaska).

In coastal areas, NWS provides vital services and products to inform and protect residents, businesses, tourists, and others from hazardous weather and surf conditions. Typically in the coastal community, rip currents, inundation due to storms and unusually high tides are the primary focus. Marine observations and forecasts also support ecological assessments and predictions, disaster response, and decision support services.

The NWS marine forecast services support vital decision-making processes for short, medium, and long-range planning, emergency response, and hazard mitigation. This empowers mariners and other users to be better informed — and therefore safer and more productive.

Over half of the U.S. population lives within 50 miles of the coast. At sea, maritime commerce has tripled in the last 50 years. In the following sections, we will explain how marine weather forecasts are made, the history of marine weather forecasting, then take a look at the future of marine weather forecasting.

The History of Marine Weather Forecasting in the National Weather Service

In 1870, a Joint Congressional Resolution requiring the Secretary of War “to provide for taking meteorological observations at the military stations in the interior of the continent, and at other points in the States and Territories... and for giving notice on the northern lakes and on the seacoast, by magnetic telegraph and marine signals, of the approach and force of storms” was introduced. Congress passed the resolution and on February 9, 1870, President Ulysses S. Grant signed it into law. A new national weather service was born within the U.S. Army Signal Service’s Division of Telegrams and Reports for the Benefit of Commerce that would affect the daily lives of most of the citizens of the United States through its forecasts and warnings for years to come.

A Marine weather program began on January 23, 1873 at the United States Army Signal Service’s Division (U.S. Army Signal Corps today) in New Orleans, Louisiana. On that day, the Signal Observer transcribed meteorological data from the ship logs of those arriving in port. On October 1, 1890, the weather service becomes a civilian agency when Congress, at the request of President Benjamin Harrison, passes an act transferring the meteorological responsibilities of the Signal Service to the newly-created U.S. Weather Bureau in the Department of Agriculture. Official three-day marine weather forecasts for the North Atlantic began in 1901 (from U.S. Navy). The responsibility of marine forecasting was transferred to the Weather Bureau in 1904 and in 1905, the SS New York transmits the first wireless weather report received on ship at sea.

In the early 1900s, the Norwegian Cyclone Model created by V. and J. Bjerknes provided the first glimpse as to the structure of the atmosphere across the mid latitudes. This meteorological advancement and the increase in ship-
board observations for the first time provided the ability for meteorologists to create a crude map of the state of the atmosphere.

In 1912, the RMS Titanic sank and in response, the International Convention for the Safety of Life at Sea (SOLAS) was formed in 1914. A maritime safety treaty, SOLAS determines requirements for safer ocean voyages across the globe ensuring that ships flagged by signatory States comply with minimum safety standards in construction, equipment and operation.

A hurricane warning service was established in 1935. In 1940, the Navy established a weather center and President Roosevelt ordered the U.S. Coast Guard to man ocean weather stations. A defining moment in marine weather forecasting occurred during WW II when the decision to invade Normandy on June 6, 1944 was based on accurate weather forecasts indicating the correct combination of tides and winds.

In 1957, the United States Weather Bureau started to publish the Mariners Weather Log, a bi-monthly publication addressing marine issues. The Mariners Weather Log is still published today and documents significant storms over and near the Earth’s oceans and the Great Lakes of North America, tropical cyclones and non-tropical cyclones. The U.S. Weather Bureau became the National Weather Service in 1970. Forecast weather maps began to be published by offices in New York City, San Francisco, and Honolulu for public use. North Atlantic forecasts were shifted from a closed U.S. Navy endeavor to a National Weather Service product suite via radiofacsimile in 1971, while northeast Pacific forecasts became publicly available by the same method in 1972.

In 1975, the first “hurricane hunter” Geostationary Operational Environmental Satellite (GOES) is launched into orbit; these satellites with their early and close tracking of hurricanes greatly reduce the loss of life from tropical cyclones. In 1977, the success of weather satellites results in the elimination of the last U.S. weather observation ship; real time access to satellite data by national centers advances hurricane, marine and coastal storm forecasts. It was not until the turn of the 20th century that radio communications became commonplace on ocean faring vessels, which allowed for ships to contact and be contacted by other ships or land. While early radio communications were not standardized and mainly tailored to the ability of passengers to receive telegrams, it was the first time in which real-time observations were able to be relayed to others in the region. During this same time the density of meteorological observations and understanding of the atmosphere was increasing at a rapid rate.

Today, the Ocean Prediction Center and the Tropical Analysis and Forecast Branch are responsible for issuing Offshore and High Seas forecasts and warnings for much of the North Atlantic and North Pacific Oceans including tropical sections such as the Caribbean Sea and Gulf of Mexico. These forecasts are broadcast internationally via SafetyNET, the international service for the broadcast and automatic reception of maritime safety information (MSI) and search and rescue (SAR) related information and NAVTEX (Navigational Telex), an international automated medium frequency direct-printing service used for delivery of navigational and meteorological warnings and forecasts within 200 nm of the coasts. Individual Weather Forecast Offices are responsible for issuing marine forecasts and warnings for near shore coastal waters of the U.S. and its territories.

Marine Weather Forecasting Today

Marine forecasting, that of telling the future state of wind and wave conditions, is millennia old. However, techniques of marine forecasting have come a long way in the last several thousand years, bringing us into the modern era of marine observations via satellite and buoys, and forecasting using sophisticated computer programs. The role of marine weather forecasters worldwide is a complicated one and will continue to change in response to evolving technology and user requirements.

Over the course of time and through the understanding of changing weather patterns, it became clear to mariners that weather controlled the conditions of the ocean. Early on however, weather forecasting over the ocean was difficult at best. In situ observations, literally meaning “on site,” were the only way of gaining information as to what the conditions were like on the water. If a mariner was skilled enough to make it back to port in poor conditions, then and only then could the severity be relayed to others preparing to venture out.

In the modern era (since the 1980s) meteorological understanding has increased at a rapid rate. In the marine environment, meteorologists began accessing observations from local and transoceanic vessels as well as buoys and coastal meteorological equipment. Continued on next page >>>


Picture 2 - Coast Guard aircraft used to drop hurricane warnings to sponge fishermen off the west coast of Florida. Photo Courtesy of U.S. Weather Bureau circa 1938.
Meteorologists also gained data from remote sensing instrumentation (i.e. satellites).

In just a 100 years, meteorologists have gone from rudimentary to highly sophisticated marine weather forecasting. Meteorologists now have access to traditional data such as buoys and ship observations, to detailed satellite imagery and an array of remote sensing equipment. Current science allows the forecaster to see the wind field across swaths of the ocean as derived by satellite. Some satellite instrumentation even allows the meteorologist to view sea heights. High frequency radar along the coast allows mariners to view detailed information regarding the surface currents.

Vast amounts of meteorological information are available to the marine forecaster today. An incomprehensible amount of data coupled with an ever growing understanding of the atmosphere has necessitated the development of advanced atmospheric numerical models. These models are driven by atmospheric physics with observations as the initial input. Atmospheric models are only limited by the computing power available. Many models now exist and are typically researched by universities and implemented operationally by governments.

Atmospheric models are not the sole beneficiary of scientific understanding and computational advancements. Wave models have also skyrocketed in their development since the 1990s when Dr. Hendrik Tolman brought wave physics to the operational realm through the development of the “wavewatch” model. The wavewatch model is primarily an open ocean wave model used globally by universities, private weather enterprise, and public weather services. Wavewatch has been possible due to the development of atmospheric models since it uses the wind field from the Global Forecast System (GFS) to drive wave development. Prior to the wave models pioneered by Dr. Tolman, only a few models from the military were developed. Otherwise wave forecasting was solely done by extrapolation by model derived wind speed using the Beaufort scale, which was instituted in 1805.

The Delft University in the Netherlands, from which Dr. Tolman came, continues to produce increasingly complex wave models through their engineering department. In the late 1990s came the SWAN (Simulating Waves Nearshore) model from Delft. This incorporated shallow water wave physics and was only possible through increased computational power. In the early 2000s SWAN was brought to the United States and adapted to nearshore wave modeling on the west coast. The chief benefit of using SWAN for nearshore waves has been separating it from using atmospheric models as the wind input, but instead utilizing forecaster knowledge to create a wind field which then drives local wave development. As of the first half of the 2010s the National Weather Service has dedicated resources to taking the SWAN engine into the operational environment through the development of the Nearshore Wave Prediction System (NWPS). As computational power increases, the marine forecaster will benefit from further development of higher resolution wave models.

In general, a marine forecaster must:
- analyze and monitor continually the marine weather situation;
- forecast marine weather phenomena, variables and parameters;
- warn of hazardous phenomena;
- ensure the quality of meteorological information and services; and
- communicate meteorological information to internal and external users.

The marine forecaster’s responsibility is to continuously monitor the current situation, ongoing advisories, forecasts and warnings of weather and marine parameters and variables; and significant weather phenomena. They must determine the need for issuance, cancelation or amendment/update of advisories, forecasts and warnings according to documented thresholds and regulations. This is accomplished through maintaining a weather watch over the marine weather situation and evolving significant weather phenomena and then comparing current forecasts and warnings against observed conditions.

The forecaster must be able to interpret:
- radar and satellite imagery to identify fog, severe convective system, tropical cyclone, thunderstorms, squalls, sea ice and other potentially dangerous phenomena;
- numerical weather prediction guidance (including Ensemble Prediction Systems), marine products and other forms of objective guidance, and their assimilation into forecast/warning preparation;
- observed variables and parameters when there are differences between automatic sensor technologies and manual observing techniques and the impact on forecast and warning products; and
- coded real time raw data including buoy and ship reports.

Particular knowledge required includes:
- Knowledge of relevant observing systems, platforms, and sensors that may include remote sensing (satellite altimeters, scatterometers, microwave sensors; radar, lightning detection systems; in-situ sensors (anemometers, tide gauges, moored wave buoys, drifting buoys, bottom pressure sensors); human observing procedures (ship, shore) and how their advantages and limitations vary with respect to prevailing seasonal and meteorological conditions.

Forecasts include many of the following parameters:
- wind including directional variability, speed and wind gusts;
- sea state;
- damaging large waves or multiple swell systems;
- precipitation and associated horizontal visibilities;
-
• fog or mist, and associated horizontal visibilities;
• other types of obscuration to visibility, including smoke, haze, sand-storms, dust-storms, blowing snow, volcanic ash/rock and associated horizontal visibilities;
• sea ice state;
• synoptic situation for tropical, sub-tropical, temperate and polar climate zones as required;
• thunderstorms, heavy precipitation with poor horizontal visibility, down-burst/microburst, squalls or gust front, tornadic hail, tornadic/water spout activity;
• freezing spray or precipitation, snowfall;
• icing on the vessels or structures;
• tropical cyclones/hurricanes/typhoons; and/or
• icebergs and their movement.

Warning of hazardous phenomena is the most critical aspect to the marine forecast. Protection of life and property is of the utmost importance. Warnings must be issued in a timely manner when hazardous conditions are expected to reach documented threshold values or impacts and as appropriate, amended or cancelled, according to documented criteria.

The phenomena to be warned and forecasted for includes/but may not be limited to:
• tropical cyclone / hurricanes / typhoons;
• wind hazards - gales/storm/hurricane force wind
• thunderstorms, heavy precipitation with poor horizontal visibility, down-burst/microburst, squalls or gust front, tornadic hail, tornadic/water spout activity;
• ice accretion: freezing spray or precipitation and icing on the vessels or structures;
• restricted visibility (less than 1nm), including: reduced horizontal visibility caused by precipitation, fog, smoke, smog, dust, smoke, haze, sand-storms, dust-storms and blowing snow; and reduced horizontal visibility caused by volcanic activity;
• unusual and hazardous sea-ice conditions: exceptional and rapidly changing sea ice conditions; and icebergs; and/or
• storm-induced water (sea) levels: sea level and storm surge.

Once the forecast and/or warning message is complete, it must be communicated in a timely manner to meet user community needs. This is done through ensuring that all forecasts and warnings are disseminated via the authorized communication channels to user groups. NWS marine forecasters also provide marine weather briefings as necessary, providing consultation to meet specific user needs (Decision Support Services) and utilizing the forecasts and warnings of meteorological parameters and phenomena to describe their impact on marine operations.

Today, in a NWS Weather Forecast Office, marine forecasting is a complex task of viewing data, both observed and model, then synthesizing it through knowledge and experience to create a forecast product. Within the NWS, the marine forecaster uses powerful workstation computers to create a forecast.

Today, when a forecaster arrives on station for a forecasting shift the first item of business is to receive a briefing from the forecaster leaving duty. This provides immediate situational awareness to the incoming shift. Once settled at a workstation, the forecaster will check the ongoing forecast against currently available observations, both winds and seas. At times some observations will be missing which will then require the forecaster to use local knowledge and meteorological understanding to fill in the gaps in observed data. These steps are completed to ensure the ongoing forecast remains valid and does not become unrepresentative of the ongoing conditions. If the forecast is valid then no

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amendments are required. Otherwise, the forecast will need to be updated to reflect current conditions.

Across nearly all the U.S. coastal waters the NWS uses a Graphical Forecast Editor (GFE) to create the marine forecast. GFE is a gridded database in which each grid represents a 2.5km square area and allows the forecasters to define a value for a given weather element (wind, wave, period, etc.) within an individual grid.

Creating a strong marine forecast always begins by verifying model data against current conditions. Model assessment should originate at the synoptic scale (a large area) then downscaled to the local area. If models have initialized well against observed data then the forecast process may proceed easily. However, if the models are not handling the current situation well, which is typically the case along complex coastlines, then local knowledge and high resolution atmospheric models should be utilized. The marine forecaster should be able to mentally correct for model inadequacies and include this information into GFE.

GFE is where the marine forecaster creates a foundational dataset by assigning specific values to each of the grids, described previously. From this foundational dataset all marine products will emanate. Within GFE the wind field should be the first edited by the marine forecaster, as winds provide the forcing to generate local waves. In some areas there are meso-scale wind effects or timing issues that models may not pick up on which the marine forecaster needs to include into the foundational dataset. As such, standard tools that are used to populate the gridded wind field with model data may not be appropriate. In these cases it will take a personalized touch from the marine forecaster to ensure the winds are correct for the situation. Tools and methodologies to populate the wind field can vary from office to office depending upon local needs. The NWS provides a wind forecast that goes out to minimum of seven days.

Once the wind grids are in place the marine forecaster will begin to assess the local wave regime. Many coastal offices within the NWS solely provide a singular wave height with the addition of primary wave direction and period at the offices discretion. Offices in the Pacific basin tend to include multiple wave systems including their direction, height, and period. For the purposes here, we will highlight the Pacific basin while making reference to the others.

For NWS offices along the west coast and Gulf of Mexico the Simulating Waves Nearshore (SWAN) model is available to generate local waves based on the edited wind grids the marine forecaster would have already completed. Other offices that do not use SWAN would rely on tools that derive local wave energy based on wind speed from the GFE wind grids. Outside the local wave energy is distant source wave energy. This is accounted for by the Wavewatch model.

Mariners are interested in waves that will make their time at sea rough. This could be in the form of a steep locally generated wave or a couple different waves arriving from differing directions which can make for an uncomfortable ride. When utilizing the SWAN model, the marine forecaster can expect to wait a short time for the model to run and return data useful for GFE. After the data returns it will need to be quality controlled to verify how well it has initialized against current conditions, similar to the winds previously. If the model has initialized well and seems to be handling the forecast situation in an acceptable manner, the marine forecaster can populate the local waves with data from SWAN and non-local wave data from the Wavewatch. Usually minor manipulations are needed to adjust model wave data toward observed wave data. Tools have been developed to perform such tasks within GFE. 

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Some NWS Forecast Offices utilize Hanson Plots to display varying sets of wave trains that affect coastal waters.

Interactive Hanson Plots shown here from the Weather Forecast Office in Eureka, California.
For the west coast marine forecaster there are typically three wave systems available for use in GFE. While each is not utilized at all times it allows for placement of a steep locally generated wave and two separate distant source waves (or swells). Once quality control has been completed the marine forecaster uses tools within GFE to pull model data into the foundational dataset. It will be up to the forecaster to decide which and how much data to put into the foundational dataset, but will be based on current and developing conditions. Some basic editing may be needed to clean up these forecast grids in the foundational dataset.

Now that the wind and wave grids are complete and representative current conditions, products can be generated using the information from the foundational dataset. The most widely seen product across the coastal waters and Great Lakes is the coastal waters and open lakes forecast. To generate this product the marine forecaster will run a program that samples the individual grid points over a particular area then calculates an average (typically a weighted average) which is returned in the form of a discrete value in the text forecast. The program will perform this averaging for each wind, wave, and period time frame in the forecast.

The coastal waters and open lakes forecast’ are not the only product that can be generated from the foundational dataset. This dataset is the base for all marine forecast information and simply needs to be told what to return. Some offices have had success running a surf zone forecast in support of user groups like surfers and crabbers. A “bar” forecast can also be generated from the foundational dataset for mariners going into or out of a harbor. Again, the forecast data is there once the marine forecaster has entered the latest and best information, all that needs to be done now is to have someone tell it what products to yield.

Products that fall out of the foundational dataset can be found online from local forecast offices, as well as on NOAA weather radio.

Outside of coastal forecast offices, the NWS also has a few National Centers that have responsibilities for the high seas of the Atlantic and Pacific from around the equator to high latitudes of around 70°N. The high seas forecast data is slowly transitioning toward a GFE based forecast. However, the geographical area that is covered is much too immense at this time to easily grid and entire basin and have a computer process those fields with any timeliness. That said, steps have been taken to bring the offshore waters (60 to 250 nautical miles from the coast, as well as the Gulf of Mexico, Caribbean Sea, and the Bering Sea) into the modern era of gridded forecasts. Currently, the high seas forecasts are done through a mix of graphical forecast charts which display the position, intensity and movement of lows and highs through time, and through a succinct text product that provide basic regions of marine warnings and forecast conditions.

Regardless of which office a marine forecaster is located in, the steps are the same. First is to compare model data to observed data to verify consistency. Second is to generate a foundational dataset that begins with observed data then runs out in time with the best forecast based on the understanding of the atmosphere. Third is to run programs that pull data from the foundational dataset to create forecast text and graphical products. Finally, and this should be done at each step, quality control everything to ensure the best information is making it out. The best information will lead to the best decisions which will lead to saving lives, moving vessels most efficiently, and building our Nation’s economy.

Meteorologists are looking into the future where more and higher resolution remote sensing can be achieved. This will come in broader areas of satellite derived winds and seas, greater detail of sea surface, and more and better shipboard observations. The possibility even exists, with cost effective technology, that ships may carry their own remote sensing equipment, such as highly detailed weather radars, which could replace the coarse radars aboard ships now. The modern mariner now includes anyone from merchant mariners to pleasure crafting weekend recreational boaters.

The Future of Marine Weather Forecasting in the National Weather Service

The National Weather Service (NWS) routinely assesses its marine weather forecast products and services to identify areas of improvement. Future strategic planning for all NWS products and services revolves around the concept of building a Weather-Ready Nation. NOAA’s Weather-Ready Nation is about building community resilience in the face of increasing vulnerability to extreme weather and water events. For more information on NOAA’s Weather Ready Nation go to: http://www.nws.noaa.gov/com/weatherreadynation/.

Services – Mobile Devices and Internet

With the popularity of mobile electronic devices such as smart phones and tablets increasing rapidly, the NWS recognizes the need to make its most critical information available via mobile devices. The NWS sends urgent weather warnings via Wireless Emergency Alerts (WEA); text messages sent by authorized government alerting authorities through mobile carriers. Marine weather messages currently sent through WEA are Tsunami Warning, Typhoon Warning, and Hurricane Warning and there are plans to add more urgent marine weather messages to WEA in the future. For more information on WEA, go to: http://www.nws.noaa.gov/com/weatherreadynation/WEA.html#.VA8WvdVdVHU. The NWS also has a mobile version of their webpage at www.mobile.weather.gov and at www.cell.weather.gov, one can get

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NWS >>> Continued from page 25

The NWS will make the National Marine Weather Web Portal operational in the near future. It is currently experimental and can be viewed at: http://preview.weather.gov/mwp. This new portal displays hazards, forecasts, observations and many other data layers useful for briefing mariners, coastal managers, emergency managers and first responders on current and future marine weather. This web page can be configured to display information pertinent to a geographic area. Forecast tracks of tropical systems will be available along with other vital datasets such as tides, sea surface temperatures and analysis and forecasts of key marine variables such as wind, wind gusts, significant wave height and surface water currents.

Product Improvement - Graphics

Graphical marine weather products will be an important part of the future of marine weather forecasting. For example, the Tropical Analysis and Forecast Branch (TAFB), the Ocean Prediction Center (OPC) and the Honolulu Weather Forecast Office (HFO) will provide graphical forecasts (on an experimental basis) for their offshore waters and high seas forecast areas of responsibility for the Atlantic and Pacific basins. The Weather Forecast Offices (WFOs) in Fairbanks, Anchorage and Juneau, Alaska will provide (experimentally) graphical forecasts over their offshore waters in the Arctic basin. For an example of what these look like, go to: http://www.nhc.noaa.gov/marine/grids.php

Improvements in Wave Forecasting

NWS offices are testing an experimental enhancement to their Coastal Waters Forecast (CWF), additional wave height fields using advanced theoretical statistics (Rayleigh Distribution). Future marine forecasts will have several different wave statistics based on this Distribution; such as the Significant Wave Height (HS) and the average height of the highest 10 percent of waves (H1/10) observed at sea.

The current CWF product provides a forecast range of the expected significant wave height (average height of the highest 1/3 of the waves) across the coastal waters. For example:

Tonight...Northwest winds 13 to 18 knots becoming northeast 16 to 21 knots. Seas 2 to 4 feet building to 4 to 6 feet late. Dominant period 6 seconds. Intracoastal waters choppy in exposed areas. Slight chance of showers.

Adding the highest 10 percent of waves height to the CWF product will provide a more descriptive and accurate assessment of the wave field expected for any particular time across a given marine zone. User knowledge of this information could reduce the number of marine accidents at sea, saving lives.

For example an improved forecast will look like the following:

Tonight...Northwest winds 13 to 18 knots becoming northeast 16 to 21 knots. Seas 2 to 4 feet with occasional 5 feet building to 4 to 6 feet with occasional 8 feet possible late. Dominant period 6 seconds. Intracoastal waters choppy in exposed areas. Slight chance of showers.

Digital Forecast Improvements

The NWS is improving its forecasts for major shipping channels by using digital forecast data. For example, the Tampa Bay Marine Channel Forecast (experimental) uses digital forecast data of winds, gusts, waves, weather, rain chance, and hazards and also includes water level relative to mean sea level. The Marine Channel Forecast is displayed on a static Google map with the Tampa Bay shipping channel and the forecast points overlaid. Users may click on any forecast point to view the forecast. The Marine Channel Forecast is currently available at the following web address: http://www.srh.noaa.gov/tbw/?n=marinechannelsforecast

Storm Surge

In an effort to improve overall awareness and understanding of the storm surge flooding threat, the NWS is working towards implementing a storm surge watch/warning which would be issued for life threatening storm surge events. Storm surge is an abnormal rise of water

In a fictional hurricane affecting the west coast of Florida.
generated by a storm (tropical or non-tropical), over and above the predicted astronomical tides. Storm surge is the greatest weather related threat to life and property along the coast.

In 2014, the NHC began issuing an experimental Potential Storm Surge Flooding map. The Potential Storm Surge Flooding Map is an experimental product (Google interface) which depicts the risk associated with the storm surge hazard from a tropical cyclone. The map shows geographical areas where inundation from storm surge could occur and how high above ground the water could reach in those areas. The map is based on the forecast track, intensity, and size of a tropical storm or hurricane. Plans are for the product to remain experimental for two years and become operational in 2016. The experimental Potential Storm Surge Flooding Map paves the way for a graphical depiction of storm surge flooding from non tropical storm surge in the future. In the future, the storm surge watch/warning and Potential Flooding Map will be provided in a GIS format.

The map will be part of an interactive display made available on the NHC website (www.hurricanes.gov) in situations where hurricane watches and warning are in effect for portions of the continental U.S. The map will be experimental for at least two years (2015 and 2016). This effort will be expanded for tropical cyclones in the Pacific Ocean and similar products and services for storm surge associated with non tropical storms are also being developed.

Near Shore Wave Prediction

The Nearshore Wave Prediction System (NWPS) is a numerical modeling system designed to provide routine and on-demand, high-resolution nearshore wave model guidance to coastal NWS forecasters throughout the United States. For more information, go to: http://polar.ncep.noaa.gov/waves/nwps/.

The development of NWPS will enhance the forecasting skill for surf zone hazards by providing guidance on a space and time scale small enough to capture common hazards of the surf zone such as rip currents. A statistical rip current forecasting model is under development using NWPS. The new model will provide consistent rip current forecast guidance to specific beaches; a much smaller scale than the current forecasting methods.

For a complete listing of NWS marine forecasts and services, visit the Marine and Coastal Services Branch webpage at: http://www.nws.noaa.gov/om/marine/home.htm

National Weather Service (NWS) Marine Weather Forecasting – Conclusion

The NWS and marine weather forecasting within NWS began in the 1870s. For the first 30 years or so, the marine weather program in the NWS provided mainly observations at sea and not much in the way of predicting future conditions. In the early 1900s, a better understanding of the atmosphere began to emerge and rapid advances in radio communication took marine weather forecasting to a new level of future prediction.

The sinking of the RMS Titanic in 1912 created a need for international marine weather forecasting policies. A defining moment in marine weather forecasting within the U.S. Government came when accurate wind and tide forecasts helped make the decision to invade Normandy during WW II.

Advances in satellite technology greatly improved forecasting of tropical cyclones and international broadcasts of marine meteorological information allowed for a much wider audience to receive important marine weather forecasts. These two developments significantly reduced the number of lives lost due to extreme marine weather events.

In the past 100 years, techniques have come a long way bringing us into the modern era of marine weather forecasting using sophisticated computer programs, and marine observations via satellite and buoys. Today marine forecasting is a complex task of viewing data, both observed and model, then synthesizing it through knowledge and experience. The NWS marine forecaster then uses powerful workstation computers to create forecasts – in both graphic and text formats.

Warning of hazardous phenomena is the most critical aspect to the marine forecast. Protection of life and property is of the utmost importance. Warnings must be issued in a timely manner when hazardous conditions are occurring or expected. Hazards include tropical and non-tropical cyclones, high winds and waves, thunderstorms, ice accretion, reduced visibilities, sea ice, and rising water at the shorelines.

When a forecast or warning message is complete, it must be communicated to users in a timely manner. Marine weather forecasts and warnings are disseminated to mariners at sea via voice radio frequencies, radio teletype, and satellite broadcasts. As more mariners take mobile phones out on the water, the NWS is making its information available in user friendly formats via these mobile devices.

Meteorologists are looking into the future where more and higher resolution remote sensing can be achieved. This will come in broader areas of satellite derived winds and seas, greater detail of sea surface, more and better shipboard observations, and possible highly detailed weather radars on ships.

In the future, The National Weather Service will improve its marine weather services by developing products and services which can be easily viewed on mobile electronic devices and the Internet. The NWS will continue to develop more graphical products and digital forecasts which along with text products, will enhance understanding of weather information and decision making based on weather information. Current experimental projects within the National Weather Service will allow for improvements in critical components of marine weather forecasting such as waves, storm surge and nearshore wave conditions.

The Council of American Master Mariners, Inc. December 2014 Sidelights 27
In October 1947, after having laid up the **William Leroy Gable** in Norfolk, I found that waterfront jobs were few and far between. I answered an ad in the *Seattle Times* for a warehouse clerk paying $175 per month. The job was at a central distribution center for a shoe company that had twenty stores in Western Washington. I was taking over the desk from a woman who was leaving to get married. The personnel manager told me women had held the job in the past, but since as soon as one got efficient at the job, she would leave to get married or have a baby. So, the company was changing the position to use a man at the task.

My predecessor spent the day copying the incoming orders onto delivery orders to send down to shipping, waiting for the completed orders to come back, and making out the bills of lading for the truck outfits. The next morning, she would post the shipments on the inventory cardex, and then start on the next day's orders. This would take her until about ten o'clock the next morning.

My predecessor spent the day copying the incoming orders onto delivery orders to send down to shipping, waiting for the completed orders to come back, and making out the bills of lading for the truck outfits. The next morning, she would post the shipments on the inventory cardex, and then start on the next day's orders. This would take her until about ten o'clock the next morning.

My first day on the job by myself, I made out the delivery orders first and sent them down to shipping, along with the appropriate bills of lading filled out except for the quantity in case of back-orders or additions, and then posted the orders on the cardex. I was all finished by 2:30, and commenced reading the newspaper while awaiting the "confirmed shipped" slips from shipping to note any changes or back orders on the cardex.

The manager came up and asked me why I was reading the paper when I had so much work to do. But when I showed him that it was all done and up-to-date he was astonished. He said, "You know, this is the first time all the shipments have gone out so early and no one has to work overtime to do it. But you must understand, the $175 per month includes overtime. The base pay for the job is only $135, and if you work so fast, that is all you get paid."

I asked him, "Why don't you make the base for the desk the $175? You will be saving the overtime all down the line."

He replied, "I'm sorry, this is the way it has to be."

I said, "Fine. You can run the desk yourself then, because I can't afford to spend the time here when I could be earning enough to feed my family." Then I left.

The next day, I answered an ad for someone to "cruise" Christmas trees. I had to drive over to Coeur d'Alene, Idaho, to meet my supervisor. Since my 1936 Chevy coupe hadn't been in desert country since before the war, I had to pull off the road to a farmhouse somewhere west of Moses Lake to add water, which I got from a horse trough under a windmill. While driving back to the road, the car bogged down in the soft sand.

I hiked out to the highway and finally flagged down a passing pickup truck, which hauled me out, but it cost the last five dollars I had with me. I still had enough gas to get to my destination, but it meant going without supper and breakfast.

The supervisor arranged for me to stay with a family at Coeur d'Alene, and stopped by for me early in the morning. We would drive around the countryside looking over the trees and, when we found a patch of young trees that looked good for Christmas trees, we would go back to the county seat to find out who owned that piece of property and drive out to find the owner, or farmer, timing it so we wouldn't interrupt his milking or plowing. Then the supervisor would start dickering for the trees. My pay was based on the number of trees we purchased, plus my mileage. This made for a rather long day. The supervisor always wanted to spend the evenings visiting the various taverns and roadhouses around the area between Thompson Falls and Coeur d'Alene and, since I didn't drink, wanted me to chauffeur him. I put in for mileage for this work, but also put in for overtime. This didn't sit too well with him, so I had to go back to Seattle on my own.

I then applied at Frederick & Nelson for Christmas time clerking, and was hired to work in men's haberdashery. While awaiting my interview, I met Eda Guzzie, who was also applying for part-time work. We teamed up for the interview and, since we were both new in the work, met to compare notes over coffee from time to time.

Standing on the marble floor of
SS carried a load of something. Just the thought of going to the radar school at Alameda made me happy. I was trying to find out when the school would start, but I was still there. Then I went on to register at the American Mail Lines office. I was happy to be there, and invited me aboard the Oregon Mail.

When we got to Oakland, I met Captain Beekin who had been my captain on the SS John A. Johnson. He was now skippering the SS Oregon Mail.

He said he would be in 'Frisco later on in the week and invited me aboard for lunch.

When I got to San Francisco, I checked into the American Mail Lines office and my respects to Barbara Watson and the few others left over in operations who were still there. Then I went on to register at the radar school at Alameda.

The next day when I called the office to find out when the Oregon Mail would be in, Miss Watson told me that Captain Beekin had left a message for me to meet him at the office the next day for lunch, that he had hit the wildest storm coming down the coast and blamed it on the bad luck I had brought him on the John A. Johnson. Just the thought of my coming aboard was more than he wanted to chance.

The next day, I got a call from Miss Watson to get over to the office right away. She was sending me out as Second Mate on the Liberty ship SS Hiram Maxim. Captain Dick Williamson, with whom I had sailed on the Island Mail in 1943, was skipper. I missed out on the lunch with Captain Beekin.

The Hiram Maxim carried a load of salt to Pusan, Korea, that trip.

On the long days crossing the Pacific at the ten-knot speed of a Liberty ship, I got to thinking about Peter Steven's request for an electric train. I thought a four-year-old was a little young for an electric train, and it would probably be forgotten in a short time. Instead, I took a copy of the blueprints of the ship to the carpenter's shop and made a nine-inch scale model of the ship. Using medical swab sticks for masts and booms and painting it up with real ship's paints, it came out pretty well.

I returned home late one night in April. Since the children were asleep, I placed the model ship by Peter Steven's bed.

The next morning I was wakened by a gentle push, and found Steve standing by the bedside with the model cradled in his arm. He said, “This is an awfully nice ship, Dad, but where is the electric train?”

I went up to MacDougal & Southwick that day to buy a battery-operated model train.

Chapter 25: Ashore 1948-1952

When we returned in April 1948 from the trip to Korea, the Hiram Maxim went into idle status and I was home again. Shipping was slower than ever, so Kay suggested I go to an accounting school and learn a new way of making a living. I enrolled at Auerswald's in Seattle and spent the next six months or so learning the difference between debits and credits, a smattering of business law, typing practice, business English and related subjects. One day, I was called into the office and offered a job as assistant timekeeper at Young Iron Works.

Since our bank balance was quite low and Kay's job at an automotive dealer was taking its toll on her and the children, who were at Seattle Day Nursery, I took advantage of it, figuring to continue my studies at night school.

I went to work just before the winter business downturn at this plant, which made tools and equipment used in logging camps.

About a month later, “Smokey” Johnson, my skipper on the George H. Williams, who was now a Longshore Foreman, called me and told me of a Second Mate's berth on the SS Yankee Star, which was hauling a load of supplies to Yokohama for the military while she was being operated by Fall River Navigation Company.

I hemmed and hawed trying to bring

Continued on next page >>>>
The Yankee Star trip to Japan was rather brief. I plotted her westbound trip down along the low-powered steamer lanes, instead of going north on the modified great circle route. After all, it was December. What happened, though, is that we managed to be heading into the wind for most of the storms we ran into, while listening to radio reports from ships north of us that had fair winds.

After discharging our cargo at Yokohama, we started out light ship for Manila for a return load. Two days out of Yokohama we were diverted to Portland, Oregon, which meant we had to cross the North Pacific in March with a light ship with no ballast except what little sea water we could carry in Number Four and Number Five lower holds up to the top of the shaft alley.

We didn’t have any wind for the first week or so, but the swells kept getting larger and larger, running up to twenty-five feet and more. Then the wind caught up with us. We tossed and rolled across the Gulf of Alaska in waves and troughs so deep that I could stand on the top bridge of the ship and look up at the crest of the next wave approaching.

When we arrived in Portland, we found that the ceiling boards in the holds had drifted loose and, floating on top of the ballast water, had shaved themselves to sawdust on the rolled-up metal on top of the shaft alley. This meant we couldn’t pump out the holds with the ship’s pumps as they would have filled with sawdust and shavings.

I paid off at Portland and returned home. I stopped by Young Iron Works and found that Louis, the timekeeper, was being drafted. I could have his position if I cared to return. I took the opportunity and, during the next two years, also took over as purchasing agent.

When Paul Isaacson sold the business to Isaacson Iron Works, the office manager went over to Wenatchee to start up the Columbia Tractor and Equipment business, and I was offered the office manager position.

When Louis returned from Korea, I rehired him as timekeeper.

Kay and I moved from the little house we had first purchased to a large old home on Gatewood Hill in West Seattle, with a view of Puget Sound and the Olympic Mountains.

Two weeks after we moved in, during a heavy rain, we awoke to find the cliff below the house had slid down the hillside from a point about two feet from the corner of the house.

Our next-door neighbor worked for a private power company, which had taken down an old water tower recently, and the twelve-by-twelve timbers were available. Together, we purchased some long piling and had a construction company bring its rigs over and drill for setting the piling in. We used the timbers to build a bulkhead to retain the remainder of our respective yards on the hilltop.

I joined the local chapter of AHEPA, the American Hellenic Education and Progressive Association, in order to meet members of the local Greek community. They promptly drafted me to be secretary. This was entertaining in a way, because the old expression “When Greek meets Greek, they start an argument” extends to read “and when they meet a third Greek, they start an argument.” Trying to keep minutes of the meetings was an experience. Once in a while, one of the old-timers would lapse into the Greek language, which I could not understand. I would just put down my pen and wait until he noticed that I wasn’t recording his great words and resumed speaking in English.

During the years while I was secretary of AHEPA, one of the annual conventions was held at the Palace Hotel in San Francisco.

One day, while I was a delegate there, I went across the bay to Albany and brought my father back to the hotel to meet some of my Greek friends from Seattle. Dad was wearing a hat. As we walked through the lobby, he took off his hat and held it in his hands for a few minutes. Then, when he wanted to shake hands with someone, he put it back on his head.

I asked, “Dad, why are you so nervous?”

“My hat. I don’t know whether to leave it on or carry it,” he answered.

“Leave it on, you’ll just be in the lobby. But tell me, why are you so nervous?”

“You know, the last time I was in this hotel was May of 1907, after they rebuilt it after the earthquake. I applied for a dishwasher job here and didn’t get it.”

To pick up a bit of much-needed extra money in those years, I kept books for some of the Greek taverns and restaurants along skid row. The office for the area was upstairs in a storefront mission. The door at the head of the stairs was locked by a combination padlock.

One day, one of my clients started up the stairs carrying an armload of books to be worked on. The following conversation took place:

“Tom! Let me carry those books.”

“No, Peter, it’s all right. I can carry them.”

“Tom! Give me those books.”

“What’s the matter with you? I can carry them.”

“Tom, when you get to the top of the stairs with that armload of books, how are you going to open that padlock?”

Tom looked up at the lock, then, turning to me said, “You’re not all Greek, are you?”

“No,” I answered. “Why?”

“You can think that far ahead!”

I held the position at Young Iron Works while continuing night school for another year, until Henry Isaacson, the new owner, informed me that his wife’s nephew was now out of school and would take over my position. When Paul Isaacson heard this, he gave me an extra two months’ pay along with my termination pay. 
What is a Chief Officer?

by Captain H.D. Smith

Chief officers are a fortunate lot, as everyone knows, a chief officer has nothing to do, that is except:

To decide what is to be done, to tell somebody to do it, to listen to reason why it should not be done, why it should be done by someone else or why it should not be done in a different way, and to prepare arguments in rebuttal that shall be convincing and conclusive.

To follow up to see that the thing has been done. To discover that it has not been done. To inquire why it has not been done, to listen to the excuses from the persons who should have done it and did not do it, and to think up arguments to overcome the excuses.

To follow up the second time to see if the thing has been done, and to discover that it has been incorrectly, to point out how it should be done, to conclude as long as it has been done, it might as well be left as it is, to wonder if it was not the time to get rid of the person who cannot do a thing properly to reflect that in all probability any successor would be just as bad – or worse.

To consider how much simpler and better things would have been done, had he done it himself in the first place, to reflect satisfactorily that had he done it himself, he would have been able to get it right in 20 minutes and that as the things turned out, he himself spent two days trying to find why it has taken three weeks to do it wrongly and to realize that such an idea would have a very demoralizing effect on the organization because it would strike at the very root of the foundation of the belief of the whole ship’s company that a chief officer has really nothing to do. ☆

Captain H.D. Smith, deceased, was a Master Captain Tom Bradley served with many years ago.

The Ship’s Tree

Written by Captain Bill Dickerson, #1727-R

As we head out to sea,
We’ll gaze at our tree,
It’s lashed to the mast,
As in all Christmas’ past.
We’ve dreaded all year,
From vessel ops to hear,
There’d be no Christmas,
With family that miss us.
The Bos’n and his jolly crew,
Secured, lighted and lashed,
A grand fir tree up the mast,
Before anyone even knew.
Twelve hours in town,
That’s all it would be,
Then back out to sea,
To dream with our tree.

It’s bright lights shone forth,
The watch did report,
A warm, wonderful sight,
When viewed in our ports.
The Chief’s in a funk,
His generator is junk,
The Port Engineer asked to see,
Couldn’t you fix it for free?
The Mate’s in a tizzy,
Thinks the Captain’s quite dizzy,
But his orders will be,
The lights stay on our tree.
The steering is buzzing,
The radars are blinking,
“Quiet” screamed the First,
“We’re all really thinking.”

For Christmas, our thrusters,
May be seal busters,
With chain falls, they cling,
And bilge alarms do ring.
Christmas dinner will be a sight,
The cooks worked on thru the night,
We’d eat it with a will,
If the ship would just stay still.
Trees, wreaths, and holly,
Presents given on the eve,
The crew is thus jolly,
In Christmas, we believe.
Yes, northward we’ll go,
Through the waves and the snow,
To deliver our cargo,
We’d like you to know.
On to Anchorage and Kodiak,
And the dreaded Dutch too,
In not much more than a zodiak,
But, we’ll always get through.
Santa has twelve reindeer,
Of which we have none,
Just seven tiny pistons,
To get this job done.
With Rudolph on lookout,
The Christmas mouse down below,
We’ll bring her about,
And drive on through the snow.
So, with our tree on the mast,
And smoke from our stack,
Merry Christmas to all,
Until we get back.

THE CAPTAIN, OFFICERS AND CREW
M.V. SEA-LAND ANCHORAGE

Captain Doug Subcleff recreates “The Ship’s Tree” on the mast of a model of the MV SEA LAND ANCHORAGE.

Photo: Doug Subcleff
IFSMA Report

The maritime world is changing and the amount of legislation coming from the IMO is quite frightening.

It is also problematic in the fact that the legislation is increasing and there is no removal or reduction to balance matters out. Because of this IFSMA must fight to stop the criminalization of the Shipmaster.

IMO Sub-Committee on Carriage of Cargoes and Containers (CCC)

IFSMA was prepared to make the following intervention on “Agenda item 12 – Development of measures aimed at preventing the loss of containers,” but due to machinations of the IMO, the paper was not allowed to be presented.

“IFSMA representing shipmasters thanks France and Spain for submitting this useful and informative paper. While welcoming these measures in the interests of safety of life at sea, IFSMA believes that substantive action is required with respect to the International Tonnage Measurement Convention of 1969. It is our belief that the design and build of Container vessel is being determined by adherence to this Convention and commercial pressures; these vessels are increasing becoming unsafe. When such losses occur, in addition to dangers presented to other marine users there is a potential danger to the vessel. Masters and seafarers are continually being placed in considerable danger. The incidents identified in this paper are well known, but not isolated cases. Action needs to be taken. I would request that this intervention is recorded in the report of this meeting.”

IMO Facilitation Committee (FAL)

IFSMA Intervention on Agenda item 9 – 39/9 “IFSMA on behalf of the shipmasters would agree with the opinion already expressed by Australia and particularly Norway and others that the proposals contained in the annex of the document go a little far to say the least. However, we do believe as shipmasters, that it is vitally important that mooring personnel have sufficient training to ensure their own personal safety and that of the ship.”

“General knowledge of ships mooring arrangements, and effective communication between ship and shore are particular areas that need to be addressed. We therefore believe that a short practical course, appropriate to the individual’s role, is essential.”

NGO Groups

As well as the meetings, IFSMA is involved with other NGOs and Flag States in co-sponsoring a number of papers all of which are related to the shipmaster. Additionally, IFSMA makes interventions of papers that may not be fully supported but stating its support.

- Intertanko – Ports / Places of refuge – this is still in discussion for content and direction.
- Nautical Institute – 6on–6off – No co-sponsoring but a major intervention will be made.
- ICS – Requirements for periodic servicing and maintenance of lifeboats and rescue boats, launching appliances and release gear.

Electronic Maritime Certificates

Indeed, progress is coming and coming fast. After a meeting at the IMO last month, the Facilitation Committee issued a request for all IMO member States to accept the use of electronic certificates.

In the future, it must be easier to use electronic certificates. Something which according to the Danish Maritime Authority (DMA) will pave the way for less paperwork, nuisance and delays for the shipping industry.

In an attempt to sway the IMO, the Danes invited Thomas Mørk, Vice President of Marine Standards at DFDS A/S, to deliver a message from the industry to the Committee. Mørk stated that it is time that the maritime world changed from burdensome paper certificates to modern electronic certificates.

A conclusion borne out of a pilot project where the Danish Maritime Authority and DFDS A/S tested electronic certificates in practice, and which demonstrated that there are savings to be gained both in terms of time and money.

So once the major technical or legal barriers are removed it should be full steam ahead to an electronic future. In time it could also be that we move away from simply time served, and begin to record data on actual tasks and experience.
36 YEAR SENTENCE FOR MASTER OF THE “SEWOL”

IFSMA condemns the sentence of Captain Lee Joon-seok as a travesty of justice. This sentence and that of the other crew members may assuage public grief over this tragedy, but on its own it is compounding the victims of the event. Over 300 people, many of them school children, lost their life and this must never be forgotten. The families of those who died are victims with a life sentence of remembering the loss of their loved one. It is a terrible burden for anyone to carry.

The question that must be asked is will this sentence resolve any of the issues surrounding this case. The answer is a simple NO. In the wake of the sinking there have been numerous reports, trials and sentencing of those involved in the severe problems within the Republic of Korea’s domestic shipping industry. The results were people resigning or when found guilty given sentences of three years or less.

It would appear to any observer looking from the outside that the Captain and crew were used as pawns in a political game to divert attention from the industry and focus on the crew instead. The only good to come from this sentencing is the fact that the death sentence sought by the prosecutor was not upheld.

The sentence of 36 years is too severe and should Lee Joon-seok survive he will be released at the age of 105 years. Other crew members are facing sentences of up to 30 years and so their life will be over. The reaction of the master to the situation was human. He was overwhelmed by what was taking place on his vessel. He did not react well, but should that be the reason for such a sentence. We are not born to be heroes, circumstances dictate those that do.

In 1953, the Princess Victoria was lost in the North Irish Sea. This was the first Ro-Ro to be lost and since then there has been a litany of Ro-Ros being lost with many of the passengers being lost too. Perhaps if anything can be learned from this terrible event it is that this ship type will continue to take a toll on those that use them unless major revisions of the rules of construction and the training of the crews is undertaken.

The final irony of this trial and the sentencing of the master and crew is that it comes on the day that World War I ceased and the world will be remembering all of those that lost their lives 100 years ago.

Captain Hans Sande
President
IFSMA  11th November 2014
IFSMA Statutes and Bye-Laws

The policy book has been completely rewritten and is now in separate documents titled:
- About the IMO
- Compilation of IFSMA Resolutions and Statements (2000 – 2014)
- Guidance for Delegates Representing IFSMA
- Statutes & Bye-Laws

These four booklets are available on the IFSMA website and can be downloaded (Useful Info menu). These have been available since the summer and are important for everyone to understand how IFSMA works. It is also necessary for anyone who would like to attend the IMO on IFSMA’s behalf that these documents are read and understood.

Cadet Survey and Placement On Board Ships For Seatime

IFSMA took an active part in the Intertanko initiative which resulted in the document *It’s a career not just a job* – Best Practice Guide for Recruitment, Welfare and Competence of Cadets. This was a global survey and the results were significant.

From this the ExCo have decided to move matters forward on an international basis. One of the core problems lies with cadets completing all of the courses required only to find that they cannot find a berth to complete the sea time to become a certified officer. More needs to be done to find ways to have berths made available for cadets. IFSMA knows that by itself there is a limited amount of success that can be achieved but working with other NGOs, flag states and shipping companies it can assist in reducing this problem while difficult at this time, it will come to be a major problem in the future.

UN-HCR – Initiative on Protection at Sea

IFSMA is proud to be part of this initiative and will be working hard to ensure that the shipmaster is protected under this growing problem in the maritime industry. The following is part of the document circulated by the UNHCR.

1. As you may be aware, the United Nations High Commissioner for Refugees (UNHCR) has recently developed a two-year Global Initiative on Protection at Sea, which aims to support action by States and others in collaboration with a range of partners and stakeholders.

The initiative is intended to limit loss of life at sea as well as exploitation, abuse and violence experienced by those travelling by sea; and to ensure that responses to irregular migration by sea are sensitive to the international protection needs of specific individuals and groups and in particular to refugees.

2. UNHCR sees the shipping industry – including shipmasters, insurers, ship owners and operators, and their representative organisations including IFSMA - as key actors in upholding the rescue-at-sea tradition and important partners in protection at sea including on the issue of safe disembarkation of those rescued. In particular the ship master network including through P&I Clubs are partners with regard to search and rescue, disembarkation to a place of safety and for stowaway related issues.

Do you rely on AIS?

A recent study by Windward concluded that AIS signals are being increasingly manipulated. The research identifies the top five methods of data manipulation, quantifies the magnitude of this fast-growing trend, and discusses the implications for decision makers. Some of the key findings are:

- False Identities on the Rise: There has been a 30% increase in the number of ships reporting false identities over the past two years, with 1% of all ships currently reporting a false identity;
- Obscuring Destinations: Ships report their final port of call during only 41% of their voyages, on average, undermining commodity traders and others tracking global commodity flows and supply and demand dynamics.
- GPS Manipulation: There has been a 59% increase in the number of ships transmitting incorrect positioning information over the past two years, allowing ships to obscure their actual location. Chinese fishing vessels account for 44% of GPS manipulators.
- ‘Going Dark’: 27% of ships do not transmit data at least 10% of the time, and large cargo ships shut off their transmissions 24% longer than other ships. 19% of ships that ‘go dark’ are repeat offenders.
- AIS Spoofing: AIS can be spoofed, allowing interested parties to create ‘ghost ships’ where none exist.

In the finance industry, taking AIS data at face value may result in a distorted view of commodity flows, a flawed understanding of supply and demand dynamics, and even impact trading models. These manipulations also undermine security and intelligence communities’ use of watch lists as ships change identities and erase their digital footprints. As ships grow aware that they are being watched via their AIS transmissions.

The full report may be found at tinyurl.com/ltg89lz.

AGA 41 – Chile

The AGA is set for the 16 and 17 April 2014 at Vina Del Mar. In addition there will be a separate event of a cruise from Punta Arenas to Cape Horn departing on 19 April. There has already been a circular sent to all of the membership alerting them of the AGA and certain conditions relating to it. This will be directed to you in more depth to allow all members to make the decision on attendance or not. It is hoped that there will be a good turnout for this event.
Draft Polar Code approved by IMO’s Marine Environment Protection Committee

A key step on the way to a mandatory Polar Code for ships operating in Arctic and Antarctic waters

has been reached with the approval by the Marine Environment Protection Committee (MEPC) of the International Maritime Organization (IMO) of the environmental provisions in the draft International Code for Ships Operating in Polar Waters (the Polar Code), together with associated draft amendments to the International Convention for the Prevention of Pollution from Ships (MARPOL), to make the Code mandatory.

Following this approval, the MEPC will consider the Code and the draft amendments for adoption at its next session, in May 2015. Once adopted, the Polar Code and MARPOL amendments could enter into force on 1 January 2017.

The draft Polar Code covers the full range of design, construction, equipment, operational, training, search and rescue and environmental protection matters relevant to ships operating in waters surrounding the two poles. The environmental provisions add additional requirements to those already contained in MARPOL, to be applied to ships operating in the polar waters. As the Antarctic area is already established as a Special Area under MARPOL Annexes I and V, with stringent restrictions on discharges, the Polar Code aims to replicate many of those provisions in the Arctic area.

The MEPC approved the preamble, introduction and part II of the Polar Code, which includes mandatory provisions in chapters covering the following topics:

- prevention of pollution by oil, including discharge restrictions prohibiting any discharge into the sea of oil or oily mixtures from any ship, as well as structural requirements including protective location of fuel-oil and cargo tanks;
- control of pollution by noxious liquid substances in bulk, prohibiting any discharge into the sea of noxious liquid substances, or mixtures containing such substances;
- prevention of pollution by sewage from ships, prohibiting the discharge of sewage except for comminuted and disinfected sewage under specific circumstances, including a specified distance from ice;
- prevention of pollution by garbage from ships, adding additional restrictions to the permitted discharges (under MARPOL Annex V, discharge of all garbage into the sea is prohibited, except as provided otherwise). Food wastes shall not be discharged onto the ice and discharge into the sea of comminuted and ground food wastes is only permitted under specific circumstances including at a not less than 12 nautical miles from the nearest land, ice-shelf or fast ice. Only certain cargo residues, classified as not harmful to the marine environment, can be discharged.
- Also approved were draft amendments to MARPOL Annexes I (prevention of pollution by oil from ships), II (noxious liquid substances), IV (sewage) and V (garbage) to bring the introduction and corresponding chapters in part II-A of the Polar Code into force under those annexes. Recommendations in Part II-B of the Polar Code were approved, including a recommendation to refrain from carrying heavy fuel oil as cargo or fuel in the Arctic (a current regulation in MARPOL Annex I already prohibits the carriage of such fuel in the Antarctic); and a recommendation to apply the standards contained in the International Convention for the Control and Management of Ships’ Ballast Water and Sediments (BWM Convention), 2004 (this instrument has not yet entered into force).

In May 2014, IMO’s Maritime Safety Committee (MSC), approved the Introduction and part I (safety provisions) of the Polar Code, along with a draft new chapter XIV of the International Convention for the Safety of Life at Sea (SOLAS) on “Safety measures for ships operating in polar waters”. The MSC will consider the adoption of the Polar Code and SOLAS amendments at its next session (MSC 94, 17 to 21 November). Once adopted, it is expected that the SOLAS amendments making the Polar Code mandatory would enter into force on 1 January 2017.

The outcome of other issues on the MEPC agenda will be available in due course.
From the International Perspective

Oil Pollution Act 1990 of USA (OPA 90)

The ARGO MERCHANT oil spill off the coast of Massachusetts in 1976 caused a public outcry, culminating in passage of the Clean Water Act of 1977. In the wake of Exxon Valdez disaster on Good Friday 1989, U.S. Congress passed the Oil Pollution Act of 1990. It stipulates extensive liabilities to ensure that, in the event of a spill or release of oil or other hazardous substance, responsible parties including owner, operator, or demise charterer of a vessel are held liable for removal costs and resultant damages to environment, natural resources, real or personal property, revenues, profits, earning capacity, and public services. The Clean Water Act (CWA) and Section 107 of the Comprehensive Environmental Response, Compensation, and Liability Act also authorize recovery for damages to natural resources. The Refuse Act, Act to Prevent Pollution from Ships (APPS) and Ocean Dumping Act, all supplement OPA 90.

Section 311 of OPA 90 establishes limitations of liability at higher levels than international conventions and holds the owner/operator strictly liable. It also removes limitation protection if pollution was caused by gross negligence or willful misconduct and imposes criminal liability for such violations. Recent amendments stipulate fines between $5,000 and $50,000 per day for each deliberate violation, and/or up to three-years imprisonment. Criminal penalties under many other laws, which govern transportation of oil and petroleum products by sea, have been substantially increased. Ship owners and insurers have major liability risk. $1 billion cover for pollution is typical to insure and discourages low quality operators from trading to USA.

If there is an oil spill, the polluter must manage clean up at its cost, pay for civil liability and protect itself from strict criminal liability. Archaic statutes such as the Migratory Bird Treaty Act and Refuse Act are unrelated to regulation and enforcement of oil transport activities, but still exist as further threats. The U.S. Coast Guard, responsible for enforcement by specially trained inspectors, examine an average of 25% foreign vessels. This highly effective and rigorous enforcement, recognized worldwide, is a strong deterrent to potential polluters and has reduced detentions to about 1%. High-profile companies such as Carnival, Cunard, Holland America, Costa, Royal Caribbean and Norwegian Cruise Lines were polluting the environment by systematically avoiding pollution regulations. In two out of every three visits, cruise vessels owned by them violated a California state law passed in 2000.

Modus operandi on board ships is that crew deliberately and fraudulently manipulate pipes to by-pass oily water separators at sea and discharge oily mixtures above permissible levels. They flush clean water past the sensors during discharge, so that the meter registers clean oil water content, instead of real content of bilge waste. Otherwise, if and when the oil content meter sounds an alarm, engineers don’t record illegal discharges in the Oil Record Book. They reconnect the pipes in port, during MARPOL and other inspections. Some ship owners admitted that some oil discharges were seven times the legal limit. Two former employees of a U.S. tanker operator pleaded guilty to cover up illegal dumping of thousands of gallons of waste oil and sludge on the high seas in voyages from USA, Caribbean, Europe and Latin America. A Chief Engineer told the judge he authorized ship’s engineers to continue the dumping practice begun under his predecessor.

Furthermore, the U.S. Dept. of Justice has targeted widespread, illegal practice of merchant ships polluting the high seas even in International waters. Federal prosecutors in the U.S. have been relentlessly pursuing vessel owners, operators, crew members, and shore employees involved in illegal discharges on the high seas, under all above legislations. Companies and individuals making false statements are on their priority list. APPS does not give jurisdiction to U.S. authorities to prosecute foreign-flag vessels for discharges of oily bilge water.
beyond U.S. territorial waters. Violations of MARPOL occurring on the high seas can only be dealt with by the Flag State for enforcement. But compliance of MARPOL provisions require log book entries to be made when oily substances are discharged from ships, to ensure that oil content of such discharges is in accordance with MARPOL.

Ships' staff usually violate MARPOL provisions and make false entries in their log books on the high seas as no one is looking. When a ship arrives in a U.S. port, the USCG and Federal prosecutors charge violators under The Federal False Statements Act (FSA) on the basis that intentional entering of incorrect data in oil record books, under MARPOL and APPS, to conceal illegal discharges, constitute false statements made to the U.S. government when oil record books were presented to the USCG in a U.S. port. Even though APPS requires vessels to maintain accurate oil record books and imposes criminal penalties for noncompliance, there is no requirement in APPS to produce those record books to the USCG. Regardless of this, Federal prosecutors have taken the position that it is a crime under APPS to make an inaccurate entry in an oil record book and claim that such “false statement” presents jurisdiction to the USCG.

Evidence is being obtained under an APPS whistleblower provision, which rewards half of the assessed penalty amount to crew members who provide information leading to conviction. This encourages disgruntled crew of a ship to “blow the whistle.” This happened in the Norwegian Cruise Lines and Carnival cases, as well as in Freja Jutlandic and Cygnus cases. A Holland America Line engineer received $500,000. Two crew members on tanker Freja Jutlandic received half of $500,000 fine on the ship and owners by the court. The largest known reward was to a third engineer who received $2.1 million out of a fine of $4.2 million on his ship and owners.

APPS also requires foreign-owned ships sailing in the U.S. 200 mile coastal zone to hold or treat any ballast water. As a result, the volume of oil spilled in U.S. waters from tankers has decreased 95%, from an average 70,000 barrels per year to 4,000 barrels per year on both coasts. Nearly $50M have been collected in fines in some high profile cases alone in the last three years. Boyang of Korea, and their crew were fined $5.5M and two chief engineers and a master jailed for lying about their ships polluting the seas.

Managers ashore have not been spared. Micky Arison of the Miami-based cruise giant Carnival pleaded guilty to federal offenses related to environmental crimes on his ships and was fined $18M. Carnival Corp. pleaded guilty to having illegally discharged ballast water 244 times out of 333 voyages into California waters since January 1, 2000. They were fined US$18 million for violating U.S. environmental laws.

Expanding use of APPS to prosecute discharges by foreign flag vessels in International waters raises serious questions bearing on international law and policy. The U.S. government remains aggressive in its battle to stop pollution and their courts are awarding severe prison sentences to those targeted, typically who are more senior in the companies. Bad things can happen to good companies. The key is to be prepared to deal with the bad before it happens. Owners should establish and implement detailed environmental compliance plans, train their employees to conduct regular audits, and correct deficiencies on the spot. There should be confidential reporting systems to promptly address vulnerabilities.

Unless there is will amongst the nearly 1.2 million seafarers who actively sail the oceans, plus shore managers and operators, who run and manage the nearly 87,239 ocean going ships listed in the year 2001, it is impossible to detect activities of ships and seafarers on the oceans miles away from effective policing systems. Seafarers must develop more respect for our oceans which provide them with livelihood and must cooperate to implement regimes prescribed in rules, laws and conventions. They must understand that these reservoirs of food, energy and life, gifted to us by nature, are not civic drains into which they can flush their toilets and pump out unwanted water, sludge and oil. Otherwise, rules, laws and exchange methods, whether 200 miles or 50 miles from the coast, will not be effective as those on board will continue to fudge log books and record books till they are caught. No ship can throw out oily pollutants without active connivance or cooperation of her crew. Therefore, it is for us seafarers to understand that unless we do the right thing by our environment, nature will not do the right thing by us.

The world’s fourth largest cruise line, Norwegian Cruise Lines (NCL), not only...
caused pollution, but also covered it up by falsifying logbooks and admitted that it "systematically lied to the U.S. Coast Guard over years." They were fined $1 million and ordered to pay $500,000 to environmental service projects.

In 1998, Royal Caribbean Cruise Line (RCCL) pled guilty in Miami and San Juan to conspiracy, false statements, obstruction of justice, and APPS violations related to illegal discharges and paid a $9 million fine. In 1999, they again pled guilty, in six jurisdictions, for dumping waste oil and contaminated gray water, and for lying, and paid $18 million in fines.

A shore-side manager of Holland America Line (HAL) was prosecuted for shipboard violations for the very first time. They paid a $2 million fine. In earlier settlements, Royal Caribbean and Princess Cruises admitted to oiling the ocean, conspiracy to obstruct justice, making false statements, and violating the Clean Water Act.

Captain of the Muskegon Clipper was convicted to conspiracy and violations of the Ocean Dumping Act and APPS, and sentenced to two years in prison as “person responsible” for dumping trash bags full of asbestos and renovation debris. Chairman of the Board/Chief Executive Officer, President, Vice President Operations, Pier Superintendent, Master, and Chief Officer from Sabine Transportation were indicted for their role in illegal discharges, falsifying documents, and impeding the USCG's investigation in a case stemming from Sabine's guilty plea in 2003. They paid $2 million in fines for illegally dumping waste materials, including oily water, oil contaminated grain, and plastics, from the S.S. JUNEAU and S.S. TRINITY, and for failing to maintain required records. In 2004, OMI Corporation agreed to pay $4.2 million fine for preparing false documents to cover up an illegal oil discharge from the Guadalupe.

Owners of the Panama flagged Drake and Indian Chief Engineer Shashank Pendse were indicted on Feb. 6, 2004, because the ship dumped oil and sludge at sea through a pipe that bypassed the ship's pollution control equipment and defendants made false entries in the oil record book.

The chief engineer of the Singapore flag tanker Araal Sea pleaded guilty in a U.S. Federal Court in Maine for his role in concealing overboard discharges of oil-contaminated bilge water. When investigation began, a Coast Guard inspection team found waste oil in overboard piping of the vessel managed by Tanker Pacific Management. Chief Engineer Jarnail Singh was asked about operation of oil water separator. He said it was working properly and presented the oil log book, which created the false impression that the ship's equipment was being operated properly.

On further investigation, the Coast Guard learned that Singh had directed that the separator be 'tricked,' which allowed oil in excess of the legal limits to be discharged overboard. Obviously such information is supplied to USCG by ships’ staff who are given money if it is found correct. The Americans call such bribes, a 'reward.'

Captain A.K. Bansal is a member of the Company of Master Mariners of India, teaches Master revalidation courses and is qualified as a Bar-at-Law in India and the U.K., does not actively practice law.
Busting Membership Myths:

**MYTH:** CAMM is a retired men’s social club.

**TRUTH:** The Columbia River and Baltimore/D.C. Chapters have more active working Masters than retired!

**MYTH:** Only sea-going masters and pilots are members.

**TRUTH:** Masters working inland rivers and lakes are members, too.

**MYTH:** We don’t do anything for our members.

**TRUTH:** We have arranged legal counsel and provided expert testimony to get masters released from jail.

**MYTH:** Have to belong to a chapter and attend chapter meetings.

**TRUTH:** Most members of CAMM are not affiliated with local chapters.

**MYTH:** CAMM is part of IOM&M&P

**TRUTH:** CAMM is independent of any union; we work with all unions toward common goals.

Join forces with America’s Master Mariners

With vessels that are ever larger and more complex, the ability of the Shipmaster to control his/her destiny has seriously eroded.

The modern Shipmaster and/or Pilot can find their views and expertise ignored, and in the fast-moving stream of “progress” the voice of a single Master is easily overwhelmed by the tide of change.

At best, the outspoken Master may be seen as an individual with a single, albeit experienced, self-serving point of view. The stand-alone, say-what-I-think Master may have the courage of his/her convictions, but he or she is rarely effective.

**CAMM’s issues are your issues!**

We’re all in the same boat (pun intended). CAMM is active today on fronts that include simplifying and rationalizing the credentialing process and the medical evaluation process, and improving marine accident reporting.

**Works to advance the professional profile of our industry**

CAMM is dedicated to improving maritime and nautical science by promoting the exchange of information and the sharing of experience among professional ship masters and members of allied professions.

**CAMM builds partnerships**

CAMM is devoted to fostering a spirit of common purpose among all organizations whose members believe in the importance of a strong U.S.-Flag Merchant Marine. CAMM works closely with professional mariner organizations around the world to protect the rights of licensed seamen from all nations.

**Representation at IMO through IFSMA**

CAMM is a member of the International Federation of Ship Masters Associations (IFSM&A), which has consultant status at the International Maritime Organization (IMO) of the United Nations.

**CAMM is on your side**

CAMM is dedicated to promoting an efficient, prosperous American Merchant Marine. The expertise of CAMM members is well recognized throughout the world maritime community. There are frequent requests to CAMM to provide expert witness testimony in maritime legal cases.

**CAMM supports maritime education**

Local CAMM chapters support maritime education through local maritime high schools, Sea Scouts, and cadets at maritime academies.

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