

## MINUTES OF THE USSVI NORTHERN VIRGINIA BASE MEETING HELD ON SATURDAY, AUGUST 11, 2018

The Base CDR, Chuck Martin, called the meeting to order at 1100 on Aug 11, 2018, at the American Legion Post 162, Lorton, VA. and he welcomed all members.

### MEMBERS AND GUESTS IN ATTENDANCE

Debbie Bishop, Steve Bishop, Cathy Chatham, Howard Chatham, Daniel Eubank, Brian Haller, Darlene Jaeger, Steve Jaeger, Chuck Martin, Ed Mattran, Paul Nelson, Terry Nelson, Marie Phoenix, Joe Phoenix, Mike Varone, CAPT Robert Wolf (guest speaker), and Woody Woodworth. (17 total)

 Holland Club Member

 Associate Member

 Guest

The COB, Mike Varone, led all hands in the Pledge of Allegiance.

The Base Chaplain, Steve Jaeger, delivered the Invocation.

After a moment of silence, the CDR read the list of boats lost in the month of August. These were:

USS Bullhead (SS-332)	Aug 6, 1945
USS Flier (SS-250)	Aug 13, 1944
USS S-39 (SS-144)	Aug 13, 1942
USS Harder (SS-257)	Aug 24, 1944
USS Cochino (SS-345)	Aug 26, 1949

The Ship's Bell was rung twice for the twenty-four (24) USSVI NOVA Base members on Eternal Patrol.

**IN MEMORIAM:** Submarine sailors recently departed on Eternal Patrol are:

CAPT George A. Barunas, Jr., USN, Ret. – 9 January 2018;  
CAPT Glenn M. Brewer, USN, Ret. – 23 February 2018;  
CAPT Herb Bohrer, USN, Ret. – 2 April 2018;  
CAPT Gerald Denny Hicks, USN, Ret. – 7 May 2018;  
CAPT Glen Niederhauser, USN, Ret. – 26 May 2018; and  
William Corcoran – 15 July 2018.

### MEETING MINUTES

The minutes of the June meeting were distributed by e-mail. There was no base meeting in July as we held the informal Dining Out at Kilroy's Restaurant in Springfield, VA. The minutes were accepted.

### TREASURER'S REPORT

The Treasurer, Steve Jaeger, presented the following:

Starting balance:	\$ 7,996.06
Receipts	\$ 180.64

Expenditures           \$   88.20

Ending Sub-Total: \$ 8,088.50, as of August 11, 2018

Some of these funds (\$1,169.40) were specifically funded by, and are restricted for use by, our Base's Kap(SS) 4 Kid(SS) program, as a result of our Walmart stores' Community Fund donations in 2016 and 2017. Subtracting these fenced funds yields:

Grand Total (discretionary) \$6,919.10

Additionally, we have received \$2,000.00 in 2018 from Walmart and, because we are a 501(c)(3) organization, those monies have been deposited in a fenced account with the USSVI Charitable Foundation for our NOVA Base K4K use only. The report was accepted.

## **HISTORIAN:**

Our Historian, Woody Woodworth, spoke about one of former USSVI NOVA Base member Dex Armstrong's favorite people, the CO of the USS Requin, LCDR Ed Frothingham. It seems that when Woody was on one of his first subs, the XO was the same LCDR Frothingham. While conducting helicopter Medevac operations at sea, the helo's tail rotor hit the sub's rudder and the helo went rotating and down at sea with the loss of one of the two crew members. The helo's crashing also cut off two of the XO's fingers. Another larger helo had to then come out to rescue the original Medevac person, the pilot of helo # 1, and the XO. Young Woody was topside for all of this excitement for both helo approaches. The XO returned weeks later to re-qualify with 8 good fingers and then go on to command the USS Requin.

## **COMMITTEE REPORTS**

### **EXECUTIVE BOARD**

**CDR:** Board of Directors meeting was held August 1st and they discussed:

- Membership
- Plans for upcoming meetings and events
- K4K status and plans
- Updates to the website
- USSVI National Convention
- Eagle Scout program, and
- Detailed budget mid-year review of expenses for 2018

**VCDR:** Nothing to Report (NTR)

**CHIEF OF THE BOAT:** NTR

**MEMBERSHIP REPORT** by the Steve Jaeger: 81 Members

- 41 Holland Club Members with 3 WW II Members
- 30 Regular Members
  - o One member dropped for non-payment of 2018 base dues
- 10 Associate Members

**PAO:** Mike Varone reported that:

- The video for the 2018 4th of July Parade for Dale City, Virginia, is on YouTube at <https://www.youtube.com/watch?v=bgZavQFOIS4> To see the USSVI Northern Virginia Base, start viewing at 32 minutes, 20 seconds. The Base received a trophy for First place in the Color Guard/Honor Guard category.
- The Memorial Day Foundation hosts The National War Memorial Registry at <http://www.nationalwarmemorialregistry.org/>. The registry is a great resource for locating memorials throughout the USA. Currently they list 117 sites for submarine memorials.
- Vietnam Veteran Lapel Pin. Living United States veterans who served on active duty in the U.S. Armed Forces at any time during the period of November 1, 1955 to May 15, 1975, regardless of location, are eligible to receive one lapel pin. For more information on how to obtain a lapel pin talk with Mickey Garverick or visit The United States of America Vietnam War Commemoration website at [https://www.vietnamwar50th.com/about/vietnam\\_veteran\\_lapel\\_pin/](https://www.vietnamwar50th.com/about/vietnam_veteran_lapel_pin/).

#### **VETERANS AFFAIRS:**

- **The TRICARE Retiree Dental Program ends Dec 31, 2018.** The program will now be under the Federal Employees Dental and Vision Insurance Program (FEDVIP) starting in 2019. Open season for enrolling is from Nov 12 through Dec 10. **Visit [Tricare.benefeds.com](http://Tricare.benefeds.com) to learn more about FEDVIP open season and to sign up for email alerts.**
- **TRICARE Health Benefits Open Season.** Prime and Select Enrollees may switch benefit plans during open season from Nov 12 through Dec 10. If you choose to do nothing in 2018, your plan will remain the same for the next year. Remember, you can only change Prime and Select Plans during Open Season or with a Qualifying Life Event. **Learn more by visiting [Tricare.mil/openseason](http://Tricare.mil/openseason).**

**SK:** Howard Chatham reported:

- 2018 USSVI calendars are available at greatly discounted prices. The pictures are well worth the investment.
- Base patches and stickers of several types are available.

#### **WEBMASTER:**

Photos from NOVA Base activities in July are posted on the website.

**K4K:** Steve Bishop reported:

- Our last K4K visit was to Fairfax INOVA in Falls Church, VA on July 26, 2018. At that visit we saw our 498<sup>th</sup> child since starting this program in July 2010.
- Our next visits are:
  - o Walter Reed Medical Center in Bethesda, MD on Wednesday August 22, 2018 at 10:15 AM.
  - o UVA Medical Center in Charlottesville, VA on Thursday, September 20, 2018 at 1:00 PM.

**CHAPLAIN:** Steve Jaeger reported that Arlington National Cemetery has notified the Jaeger

family that the date for Darlene's mother's inurnment will be arranged soon. (Post Meeting Note: the date has been set as October 24<sup>th</sup>.)

**SCOUTING COORDINATOR:** Chuck Martin reported:

- Recent Eagle Scout Court of Honors:
  - o Eagle Scout John P Law, Jr Eagle Scout Court of Honor was held on June 23, 2018
- Upcoming Eagle Scout Court of Honors: None

**NJROTC / SCHOOL PROGRAM COORDINATOR:** NTR

**SUBLEAGUE:**

- Upcoming NSL Events
  - o 2018 Annual Symposium will be held 7-8 November at the Hyatt Regency Crystal City in Arlington, VA. Plan now to attend. Registration will open on the NSL website in September, but discounted rates are available now for booking rooms at the Hyatt Regency Crystal City. To make a reservation, use this link: <https://book.passkey.com/go/NSL36thAnnualSymposium>.
  - o The Capitol Chapter luncheon is scheduled for Thursday 11 October 2018 at the ANCC, 1130-1330.
  - o The DC Area Submarine Fall Social will be held Friday, 16 November 2018 at the Ft. Myer O-club.
- NSL Library - We have increased our library space and would be grateful if all NSL and/or USSVI members who have written books, especially if they involve submarines, would send a complimentary copy to the office for the library. Autographed copies would be even more exciting! Our mailing address is 1737 King St., Suite 600, Alexandria, VA 22314.
- Photo Contest - Deadline Extended; Photos due by September 1. The contest is co-sponsored by NSL and Director, Submarine Warfare (OPNAV N97). Four cash awards: \$500, \$250, \$200, \$50. Photos to be published in a future edition of UNDERSEA WARFARE magazine and on the homepage of the NSL website. For details on how to submit, go to page 39 of the Winter 2018 issue, online at: Winter 2018 or email [underseawarfare@hotmail.com](mailto:underseawarfare@hotmail.com)

**2018 USSVI National Election**

- Voting for the 2018 USSVI National Elections is now open. Members have the option of voting electronically or by paper. Ballots must be received by the Election Master by 2359 on October 10, 2018. Members for which NOVA is your primary base, the following positions and proposals are on the ballot:
  - o National Commander
  - o National Senior Vice Commander
  - o National Junior Vice Commander
  - o National Secretary
  - o National Treasurer
  - o Northeast Region Director
  - o Proposed Revised Constitution and Bylaws

- Howard Chatham, USSVI NOVA's Past Commander, provided a summary on the proposed revised Constitution and Bylaws.

## **2018 Constitution and Bylaws Proposal Summary**

Combinations iaw recommended practice of government (State of CT) and taxing (IRS) authorities. Two year process, "diligently" working on this. Intent was to eliminate redundancy, wordiness (somewhat), update antiquated language and gender specific wording (but only in about 50% of the instances), incorporation of prior amendments/revisions, and keep the intent of both documents.

### **Significant Changes:**

1. Eliminated text discussing what happens to sponsorship of an Associate of a member on Eternal Patrol although this is probably addressed in the paragraph addressing widows/widower/child/ grandchild of a deceased member but changed the text to say it can only be assumed by a member of the Base where it used to say "or" the Base. The NC says only a member can sponsor any one which conflicts with the previous paragraph. Also deleted the text saying Associate Members were grandfathered even though they may not meet new requirements.
2. Deleted minimum size of a Base and the note that Base By-Laws cannot conflict with the National Constitution/By-Laws. However this may covered in the duties of the District CDR when he/she must assure Base By-Laws don't conflict with Nation and State laws.
3. Now states that relevant policies and procedures adopted in the prior 10 "to 15" years will be included in the PPM.
4. Major changes to the BOD meetings to incorporate Mid-Term and Periodic meetings.
5. Incorporates By-Laws change in National Ballot to establish an Election Master (instead of the previously identified National Secretary) and make various process changes.
6. Slight revision to the number needed to establish a quorum at the ABM to be in line with RRO.
7. Deleted the Scholarship Committee as it is covered in the Charitable Foundation documentation.
8. Added to the duties of NSVC to include convening of the Audit Committee and directly overseeing the National Convention Committee and deleting his participation in the Scholarship Committee.
9. Modified the duty of the National Treasurer from "being responsible for collection of all monies due the organization" to "Accounting for and managing all financial activities".
10. Deleted the Memorials and Ceremonies Committee as it is covered in the PPM.
11. No longer addresses what happens if there are no nominees for National offices.
12. Deleted reference to the Base CDR Group as that was previously dissolved.
13. Major rewrite of the Audit Committee duties including no longer requiring an annual audit of the NSK. The NSK is an independent contractor (BC Patch) who submits quarterly reports to the BOD detailing costs, sales and profit. Considering BC Patch makes all purchases from their own funds and just provides a 20% profit to USSVI, the BOD decided not to require further audits.
14. Added an Investment Advisory Committee.
15. Major revisions to how the National conventions are planned and run.

16. Modified the Article on what used to be the Ladies Auxiliary to just an “Auxiliary” whose members would be limited to spouses, widows, siblings, parents and children (NLT 16 years old). Each Base can adopt an Auxiliary at its own discretion.
17. Added a paragraph allowing the BOD to alter, amend, add, delete, or otherwise change the Constitution/By-Laws at its discretion to comply with the Articles of Incorporation and/or Federal/State laws applying to 501.c.19 organizations.

## **OLD BUSINESS**

- USSVI Scholarship Fundraiser – Frank Hood, Vice CDR of USSVI Marblehead Base, has published a book titled "Poopie Suits and Cowboy Boots" that is about the day-to-day life aboard a US Navy submarine. All proceeds go to the USSVI Scholarship Fund.
- The 2018 USSVI National Convention Caribbean Cruise Registration is still open! You may register and obtain more information by going to <http://www.ussviconvention.org/2018/>
  - Convention/Caribbean Cruise is scheduled for October 21, 2018 through October 28, 2018.
  - The cruise will be departing from the Port of Ft. Lauderdale and making port calls to Half Moon Cay, Bahamas; Ocho Rios, Jamaica; Georgetown, Grand Cayman; and Cozumel, Mexico then returning to Ft. Lauderdale.

## **NEW BUSINESS**

- USS Ling (SS-297), a World War II-era submarine owned by the Submarine Memorial Association which runs the New Jersey Naval Museum in Hackensack, New Jersey, is closing their doors. This is a direct result of hurricane Sandy. They have to vacate the premises by August 14<sup>th</sup>. There are still some large items available to anyone who wants them, but you have to make arrangements to move the item(s). Contact the Base Commander for further details.
- ARIZONA SILENT SERVICE MEMORIAL PROJECT – Potential support includes purchase of pavers (4X8 - \$100, 3 lines; 8X8 - \$200, 6 lines) or sponsor a Lost Boat for \$500. To learn more about this project, please visit their website at [www.arizonanasilentservicememoril.org](http://www.arizonanasilentservicememoril.org).
- The Executive Committee has discussed and is planning on initiating a “Wellness Check” call process so that our members residing in the local area who are over the age of 80 years, and who don’t make it to a monthly meeting, are contacted on a regular basis by an active member. This ensures we as a base become aware of any member’s health or transportation problems, and can offer to provide help and assistance, if desired. If any member wishes to be a part of this “members looking out for other members / wellness check” program, please contact any elected board member.

## **BINNACLE LIST**

### **“PLEASE KEEP THE FOLLOWING IN YOUR PRAYERS.”**

Barbara Harmody, Tony Poblete, Ray Stone, Tom Perault, and Lorraine Sargent.

## **FOR THE GOOD OF THE ORDER**

The 50/50 raffle was won by Marie Phoenix, who donated her winnings back to the Base treasury. Thank you, Marie!!

**BIRTHDAYS FOR THE MONTHS OF JULY AND AUGUST WERE/ARE:** Steve Bishop, Frances Burke, Cathy Chatham, Jeff Curren, Bill Decker, Christine Gault, Robert Gilmore, Sue Maruzo, Frank Pasquinel, Joe Phoenix, Lorraine Sargent, Jeanie Truslow, Mike Varone, and Bill Waylett.

**THE NEXT REGULARLY SCHEDULED MEETING WILL BE ON SEPTEMBER 8<sup>TH</sup> AT AMERICAN LEGION POST 162, WITH A MEMBER APPRECIATION LUNCHEON AFTERWARDS AT DIXIE BONES BBQ IN WOODBRIDGE, VA.**

**The guest speaker for the October 13, 2018 meeting will be Sgt Major James Kuiken, USMC, Retired. Members of the American Legion Post 162 are being invited to attend. Feel free to bring friends and relatives to hear this true American Hero's presentation, starting about noon. A flyer on the meeting is included after the minutes and provides a synopsis of his lifetime of service.**

The Benediction was delivered by the Chaplain.

The CDR adjourned the meeting at 11:45 AM .

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After a short break, the Base Commander, Chuck Martin, introduced our Guest Speaker, CAPT Robert Wolf.

### **CAPTAIN ROBERT A. WOLF SUBMARINE ESCAPE & RESCUE PROGRAM MANAGER (PMS 391)**

Captain Robert Wolf of Fort Worth, Texas, graduated from the U.S. Naval Academy in 1995 with a Bachelor of Science degree in Systems Engineering. He also holds a Master of Science in Engineering Management from Catholic University of America and Naval Engineer and Master of Science in Systems Engineering degrees from the Massachusetts Institute of Technology.

Upon commissioning, Wolf completed nuclear power training and submarine school and reported to USS KEY WEST (SSN 722) where he qualified in submarines and served as a division officer in engineering and weapons departments deploying twice to the Western Pacific. Wolf then served as an action officer for the Director, Submarine Warfare Division (OPNAV N87) for submarine escape & rescue and Arctic programs. He transferred into the Engineering Duty Officer (EDO) community and completed his EDO qualifications at Norfolk Naval Shipyard where he was the deputy project superintendent for the USS CHARLOTTE (SSN 766) depot modernization period. Subsequently, Wolf served at Program Executive Officer (PEO) Carriers, as the assistant program manager for testing and technical issues for USS GEORGE H. W. BUSH (CVN 77); at PEO Submarines as the executive assistant to the PEO and as the assistant program manager for Post-Delivery VIRGINIA Class submarines; at Supervisor of Shipbuilding, Conversion & Repair in Newport News, Virginia as the Submarine Project Officer and VIRGINIA Class Submarine Program Manager's Representative where he work on 12 new construction submarines, delivering two as well as completing two major submarine repair availabilities; and at Director, Submarine Warfare (OPNAV N97) as the branch head for VIRGINIA Class new construction and in-service submarine hull, mechanical & electrical maintenance and modernization.

Wolf currently serves as the Program Manager for Submarine Escape and Rescue (PMS 391) where he is responsible for advanced development initiatives, acquisition, test and evaluation, in-service support, international engagement, foreign military sales and certification for all undersea escape, rescue and survivability systems for the US Navy.

Wolf has received various personal and campaign awards, including the Meritorious Service Medal with two gold stars and Navy Commendation Medal with three gold stars.

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The Captain started by thanking George Wallace for inviting him to speak today. George's people at NTT support his program office at PMS 391.

PMS 391 was deeply involved last year when the Argentinean submarine went down. Today's presentation will cover what PMS 391 does, and what happened during the multi-nation rescue attempt on ARA San Juan, the SUBSUNK Argentinean sub.

He covered four major areas of interest for PMS 391: Escape; Survivability; Rescue; and Global initiatives.

**ESCAPE:** Steinke hoods and DSRV's are no longer used by today's submarine force.

Today, we use the Submarine Escape and Surface Survival Personnel Equipment (SESSPE) system. It is an orange suit used by each sub sailor to don and then ride up to the surface from the escape trunk from less than 600 ft. Once on the surface, the suit converts to a personal life raft.

**SURVIVABILITY:** Only passive means are used now to control the atmosphere in a downed sub. The LiOH canisters are gone. Instead, the CO2 removal is done by hanging curtains to absorb the noxious gas. O2 candles are still used. All measurements of the atmosphere are done on battery-powered instruments. There is an emergency beacon that can be sent to the surface



from an escape trunk.

**RESCUE:** Three big systems are used: Deepwater Rescue System (DWRS), Sub Rescue Chamber good down to 850 feet, and the McCann Bell.

**GLOBAL INITIATIVES:** Several countries are working with the US and have MOUs and MOAs in place for mutual support of their submarine forces. Russia has its own rescue system and they still do not play well with others. China has drilled with the US, but South Korea not so much.

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All of the US equipments that are pre-positioned and planned for use to recover submariners by US forces are in San Diego on North Island. These equipments fly out of Miramar Marine Corps Air Station on C-5s and C-17s. It is the self-imposed goal to get equipments to the rescue scene within 96 hours Time to First Rescue (TTFR). All US submarine rescue devices are tethered to a surface ship so battery life is not an issue on any dive. Here are the pieces and players involved in the US submarine rescue team: Undersea Rescue Command (URC) has 40 active duty personnel and 40 contractors. **These rescue systems are government owned and contractor operated.** In addition, every US military diver is trained in San Diego, CA, and is familiar with these submarine rescue systems. All medical military reservists are on call for any submarine rescue 24/7/365.

### **What happened last year with the loss of the Argentinean diesel submarine ARA San Juan?**

On November 15, 2017, in sea state 6 to 7 seas about 300 nm off Argentina, the sub suffered a battery casualty. The US Department of State had to get the official OK for the US to help Argentina. The US sent a NASA P-3 with special sensors to join the 8 ships from 4 nations already in the search effort. Then the Navy sent P-8s to search. The US Navy went to alert standby on Nov 17 and that meant that all URC equipment were palletized and made ready for air transport. In 43 hours, 8 aircraft lifted 365 tons of URC equipments to the nearest airport in Argentina. Trucks then took the URC gear to the piers.

This was a humanitarian relief effort, so the US paid for all of this rescue effort. Three commercial ships were contracted away from servicing Argentinean offshore oil fields in order to support the US effort. URC equipments and people went to sea on these ships.

1. *Skania Patagonia* is an Anchor Handling Tug Supply (AHTS) ship. It is an anchor handler with a crane for the rescue chamber acting as the dive support ship. This ship was on station at sea with the US rescue chamber aboard in 100 hours – almost meeting the 96 hour global deployment self-imposed challenge
2. *Sophie Siem* is a Multipurpose Supply Vessel (MPSV). She was modified heavily, including cutting off a portion of her stern to support the large launch and recovery system for deep rescue chamber. Afterwards, the US paid to have her restored in an Argentinean shipyard.
3. *Didi K* is also an AHTS ship. She was used to house 200 rescue people on site.

Four nations came together and worked closely for months to search for the ARA San Juan. These were: UK, US, Chile, and Argentina. This created lots of good will, particularly after the Falkland Islands debacle between Argentina and the UK.

The Captain fielded many questions from the audience after his presentation.

After the presentation and Q&A session, Base Commander, Chuck Martin, presented CAPT Wolf with a NOVA Base Challenge coin and thanked him for his uplifting presentation.

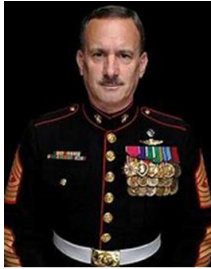


Meeting Minutes Respectfully Submitted by  
Stephen C Bishop  
Secretary, USSVI Northern Virginia Base

Attachments:

1. Sgt Major James Kuiken USMC, Ret. Flyer
2. Upcoming Events
3. USSVI News & Other Submarine News Articles
4. Selected Undersea Warfare News Articles

**Sgt Major James Kuiken USMC, Ret. Flyer**



**Sgt Major James Kuiken USMC, Ret**

Guest Speaker at United States  
Submarine Veterans meeting  
Saturday, October 13 at noon

**American Legion Post 162, Lorton VA**



- Combat Veteran in seven wars / police actions
- Force Recon “tip of the spear” sniper and intelligence national asset
- Senior enlisted for MEF 1 and MEF 3 in Pacific
- SES in ICE / DHS for IRAQ and other locations
- Purple Heart, Legion of Merit, TBI....
- Advocate for injured returning service women and men so they get the right help when and where needed

**A true American Hero - come hear his story and see how he is helping others. Oct 13, 2018 at noon**

## **Upcoming Events**

## **August**

### **1 August – USSVI National Election Voting Starts**

At 0001 August 1, 2018 the voting polls open for USSVI National Election.

### **22 August – USSVI Northern Virginia Base Kap(SS) For Kid(SS) Visit**

USSVI Northern Virginia Base Kap(SS) For Kid(SS) Team will be visiting Walter Reed Medical Center in Bethesda, MD on Wednesday August 22, 2018 at 10:15 AM. Contact Steve Bishop at 703-895-8137 if you would like to join them.

## **September**

### **8 September – USSVI Northern Virginia Base Meeting & Member's Appreciation Lunch**

USSVI Northern Virginia Base meeting will be held at American Legion Post #162. The meeting begins at 1100. After the meeting will be the Annual Member's Appreciation Lunch at Dixie Bones BBQ in Woodbridge, VA.

### **20 September – USSVI Northern Virginia Base Kap(SS) For Kid(SS) Visit**

USSVI Northern Virginia Base Kap(SS) For Kid(SS) Team will be visiting UVA Medical Center in Charlottesville, VA on Thursday, September 20, 2018 at 1:00 PM.. Contact Steve Bishop at 703-895-8137 if you would like to join them.

## **October**

### **10 October – USSVI Northern Virginia Base Kap(SS) For Kid(SS) Visit**

USSVI Northern Virginia Base Kap(SS) For Kid(SS) Team will be visiting INOVA Children Hospital in Falls Church, VA on Wednesday, October 10, 2018 at 2:30 PM.. Contact Steve Bishop at 703-895-8137 if you would like to join them.

### **10 October – USSVI National Election Voting Ends**

At 2359 October 10, 2018 the voting polls shuts for USSVI National Election.

### **11 October – NSL Capitol Chapter Luncheon**

The NSL Capitol Chapter is hosting a luncheon on Thursday October 11, 2018 at the Army Navy Country Club. The event is from 1130-1330.

### **13 October – USSVI Northern Virginia Base Meeting with guest speaker Sgt Major James Kuiken USMC, Ret.**

USSVI Northern Virginia Base meeting will be held at American Legion Post #162 with Sgt Major James Kuiken USMC, Ret. as our guest speaker. The meeting begins at 1100.

### **21-28 October – 2018 USSVI National Convention Caribbean Cruise**

The USSVI Convention/Caribbean Cruise is scheduled for October 21, 2018 through October 28, 2018. The cruise will be departing from the Port of Ft. Lauderdale and making port calls to Half Moon Cay, Bahamas; Ocho Rios, Jamaica; Georgetown, Grand Cayman; and Cozumel, Mexico then returning to Ft. Lauderdale.

### **26 October – 'Hunter Killer' movie premiers**

The premier of 'Hunter Killer' is Friday October 26, 2018. You can watch the movie trailer at [https://www.youtube.com/watch?v=mnP\\_z3qXDCQ](https://www.youtube.com/watch?v=mnP_z3qXDCQ). The movie is based on the book, Firing Point, by George Wallace and Don Keith.

## **November**

### **7-8 November – 2018 Annual Symposium**

2018 Annual Symposium will be hosted by Naval Submarine League on 7-8 November at the Hyatt Regency Crystal City in Arlington, VA. Plan now to attend. Registration will open on the NSL website in September.

### **10 November – USSVI Northern Virginia Base Meeting with a guest speaker**

USSVI Northern Virginia Base meeting will be held at American Legion Post #162. The meeting begins at 1100.

### **12 November – 2018 TRICARE Health and Dental Benefits Open Season**

The TRICARE Health Benefits and Federal Employees Dental and Vision Insurance Program (FEDVIP) open season is from November 12 through December 10. During this period TRICARE Prime and Select members can change their health benefits and members of the Federal Employees Dental and Vision Insurance Program (FEDVIP) [formerly TRICARE Retiree Dental Program] members can make changes to their dental provider. Visit [Tricare.benefeds.com](http://Tricare.benefeds.com) to learn more about FEDVIP open season and to sign up for email alerts. Learn more about the TRICARE Health Benefits open season by visiting [Tricare.mil/openseason](http://Tricare.mil/openseason).

### **16 November – DC Area Submarine Community Fall Social**

The DC Area Submarine Community Fall Social is being held Friday November 16, 2018 at the Ft Myer Officer Club.

**USSVI News**  
**&**  
**Other Submarine News Articles**



**USSVI Official Business #NAT-0003**

Shipmates,

Online voting for the 2018 USSVI National Election is now live. The poll opened at 0001 today – August 1, 2018. Voting will continue until 2359 October 10, 2018.

Members may vote by logging on to the USSVI web site – [ussvi.org](http://ussvi.org) – and clicking on the “Vote in National Election” button. Due to the file size of the the new combined C&Bs please use this link to view the new combined C&Bs that you are voting on

[https://www.ussvi.org/Documents/Online\\_Organization\\_2018\\_Combined\\_Constitution\\_and\\_Bylaws.pdf](https://www.ussvi.org/Documents/Online_Organization_2018_Combined_Constitution_and_Bylaws.pdf)

Base Commanders: You may bring a laptop to a Base meeting and members may vote at the meeting. Members may assist other members in voting, but each member must cast his own vote.

For those voting by paper ballot follow the voting instructions in the second issue of the 2018 American Submariner and send your paper ballot to:

Tom Conlon, PNC

USSVI Election Master

8 Davis Ave

Harrison, NJ 07029

Remember, your vote is your voice in the makeup of our organization’s “Command Team.”

Tom Conlon Election Master

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NEWS-01: 2018 Convention Cruise Information  
Submitted by: Wayne Standerfer on 7/18/2018

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Shipmates,

There seems to be a misconception going around that the cruise has been cut off and is no longer available to book.

**There is no cutoff date for joining the cruise!**

The cruise is open to book until staterooms sell out.

Pricing and convention amenities (shipboard credit, drink cards, dinners) are guaranteed until August 6. After that you can still book staterooms on a space available basis at the current Holland America price and amenities package. This can be done until sailing date based on availability.

If at some point prior to departure the cruise actually completely sells out and closes, AAA will advise us, but until then please continue to register.

Regards,  
Wayne Standerfer  
NSVC

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NEWS-01: ARIZONA SILENT SERVICE MEMORIAL PROJECT Info Submitted by:  
William C. Andrea on 7/28/2018

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ARIZONA SILENT SERVICE MEMORIAL PROJECT  
July 25, 2018

Greetings Shipmates,

On June 15th I sent out a plea to all the Regional Directors for Support for Lost Boat Sponsorships for the Arizona Silent Service Memorial (ASSM) project. I received one response and that was from the Southeast Region. Steve Bell immediately contacted me and said he would reach out to the Southeast Region District Commander asking for support from their respective bases. The response from our Southeast Region shipmates has been absolutely awesome!

To date, we have received donations from individuals, bases, and districts for over \$1500 which includes three (3) Lost Boat Sponsorships. I have been informed that additional donations are on the way. A big Bravo Zulu to all of our shipmates in the Southeast region. Because of their support for the project, we only have three (3) Lost Boats remaining that need sponsors and one of the 3, has a potential sponsor pending.

I am deeply gratified by the support we have received from the Southeast Region for the ASSM project and hope that our shipmates from that part of the country will be able to attend the dedication ceremony when that event is announced.

To learn more about this project, please visit our website at  
[www.arizonasilentservicememorial.org](http://www.arizonasilentservicememorial.org). Thank you.

Tim Moore  
Tim Moore, Chairman  
Arizona Silent Service Memorial  
P.O. Box 86155  
Phoenix, AZ 85080  
Phone: 602-574-3286  
E-mail: [seawolfssn@outlook.com](mailto:seawolfssn@outlook.com)

[www.arizonasilentservicememorial.org](http://www.arizonasilentservicememorial.org)

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NEWS-01: American Submariner Magazine  
Submitted by: Michael Bircumshaw on 7/29/2018  
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Shipmates,  
The transition to the new editorship is well underway for the American Submariner, however, there were issues with the "Cloud" and none of the Links connecting to the photos normally included in the magazine were recoverable. Therefore, I am not certain of exactly when we will be printing the Third Quarter edition of the American Submariner. It is looking like early September at this moment and

there for the below listed Boat reunions will most likely not be on the streets before the reunion. I am sending out this POC to keep you and to make sure you always get the info you deserve.

USS George C Marshall (SSBN-654) 8/15/2018 to 8/17/2018 Groton, CT:  
Gregory C. Kane [gkane@aol.com](mailto:gkane@aol.com) 860-989-1426.

USS Albacore (AGSS-569) 8/9/2018 to 8/12/2018 Portsmouth, NH:  
John Don Gandiello [gandiello@sbcglobal.net](mailto:gandiello@sbcglobal.net) 317-441-8843.

USS Archerfish (SSN-678) 8/30/2018 to 9/1/2018 in Groton, CT:  
John J. Carcioppolo [gumba700@comcast.net](mailto:gumba700@comcast.net) 860-514-7064.

Let me thank those of you who sent me the next ten years of material for the magazine. I am sure I will be asking for more soon. I will get to all which is deemed "printable" by our large editorial staff and get them out in the order received. Prepare to go to Flank!

Best,

Michael

National Editor, American Submariner (2005-2010 & 2018-AI Fin)  
SSN-588, SS-339, SSN-590, SSBN-601, SSN-646, SSBN-620 COB ('60-'70)

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NEWS-01: IMPORTANT! Online voting  
POC Managers forward ASAP  
Submitted by: Tom Conlon on 8/2/2018

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Shipmates:

Online voting for the 2018 USSVI National Election is now live. The poll opened at 0001 today – August 1, 2018. Voting will continue until 2359 October 10, 2018.

Members may vote by logging on to the USSVI web site – [ussvi.org](http://ussvi.org) – and clicking on the "Vote in National Election" button.

Base Commanders: You may bring a laptop to a Base meeting and members may vote at the meeting. Members may assist other members in voting, but each member must cast his own vote.

Remember, your vote is your voice in the makeup of our organization's "Command Team."

Tom Conlon  
Election Master

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NEWS-01: National Election Voting clarification Submitted by: Tom Conlon on 8/7/2018

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Shipmates,

Many members have written and called saying that they cannot view the proposed revision to the Constitution and Bylaws on the online ballot. This is because the document cannot "fit" in the "View" window on the ballot.

Information regarding the proposed C&B revision was published with the Ballot information in the American Submariner.

You can read and print out the proposed revision by going to the USSVI web site where you can read and print the document. Here's the link

[https://www.ussvi.org/Documents/Online\\_Organization\\_2018\\_Combined\\_Constitution\\_and\\_Bylaws.pdf](https://www.ussvi.org/Documents/Online_Organization_2018_Combined_Constitution_and_Bylaws.pdf) (NOTE: Incorrect hyperlink, see the below USSVI News for corrected hyperlink)

Also, if you have any problem with online voting, you can always vote by paper ballot.

Balloting is open until 2359 October 10.

Regards,  
Tom Conlon, PNC  
Election Master

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NEWS-01: Proposed Combined C&B hyperlink correction Submitted by: Tom Conlon on 8/8/2018

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In this morning's POC, the hyperlink to the proposed C&B didn't show up completely. For whatever reason, the end of the link wasn't included in the full link. If someone clicked on it, they'd get an error.

Here's the complete hyperlink.

[https://www.ussvi.org/Documents/Online\\_Organization\\_2018\\_Combined\\_Constitution\\_and\\_Bylaws.pdf](https://www.ussvi.org/Documents/Online_Organization_2018_Combined_Constitution_and_Bylaws.pdf)

Tom

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NEWS-01: Submarine memorabilia available Submitted by: William C. Andrea on 8/14/2018

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Shipmates,

The Bowfin Museum has some brow banners and duplicate plaques they are willing to give to either boat reunions or individuals. The only cost you would incur would be the shipping. The museum will pack them up for shipment. They are as follows:

**Brow banners:** Indianapolis, John Marshal, Robert E. Lee and Skate.

**Plaques:** Archerfish, Tigrone, Remora, Sirago, Trigger, Wahoo, Gudgeon, Grayback, Swordfish, Barbel, Scamp, Barb (2), Daniel Webster, Tecumseh, Tautog (2), Pogy, Francis Scott Key, Hawkbill, Birmingham, Omaha, Indianapolis, Bremerton, Baltimore, City of Corpus Christie, San Francisco, and Topeka (2).

If you are interested in any of the items, contact:

Maggie Curtain, USS Bowfin Museum Assistant [Museum@bowfin.org](mailto:Museum@bowfin.org)

Bill Andrea  
NJVC

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NEWS-01: New E-mail system testing!  
Submitted by: Alfred H Singleman Jr on 8/14/2018

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Shipmates,

The programmers for the new system are presently testing and troubleshooting the National e-mail system. They are trying to narrow it down by testing all the Regions and Districts to see where the problem is within the National listing.

You do not have to reply to test emails and you just trash the emails when they are received. Please do not call me or email me about the test emails as this is the only way to fix the problem. Your understanding of this issue will be greatly appreciated.

Pride Runs Deep,  
Al Singleman, Jr. IPNC

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NEWS-01: A SAD DAY FOR THE WWII LOST SUBMARINE MEMORIAL USS LING AND THE NJ NAVAL MUSEUM Submitted by: William C. Andrea on 8/15/2018

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Shipmates,

This is a sad day for us in Hackensack. Over this past weekend our USS Gudgeon WWII Submarine Memorial was vandalized and the four bronze plaques for the 52 Lost Boats and the names of all of the USS Gudgeon sailors that we lost when the Gudgeon was sunk in WWII for stolen. However the vandalism didn't stop there. A person or

persons unknown boarded the USS Ling opened all of the hatches and somehow (unknown at this time) was able to flood out the whole submarine. All of the watertight doors that were previously shut were also open and we estimate about 10 feet of water in every compartment. Until the water is pumped out the authorities are unable to go below into the sub.

And if that wasn't enough, today was the last day the NJ Naval Museum had to vacate the property to make way for luxury condos and a hotel to be built on the site where the museum has been since 1972. As of today we have moved everything from the museum and other trailers to one 40' and 2 20' containers. We still don't know where we will be able to store those container until a new home can be found for the museum.

We still have a few torpedoes, a WWII torpedo mover, an Army missile and a few other large items that need a home ASAP before the property owner "Disposes" of them.

If you are interested in any of the items and are able to move them please contact me via email or call NE Region Director, Les Altschuler at 917-748-2275.

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Fox News Story on the Vandalism onboard the USS Ling

<http://www.foxnews.com/us/2018/08/16/world-war-ii-era-submarine-flooded-by-vandals-in-new-jersey.html>

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NEWS-01: USS Ling Artifacts

Submitted by: Les Altschuler on 8/23/2018

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Thank you from the USS Ling/NJ Naval Museum Shipmates,

On behalf of the USS Ling/NJ Naval Museum I wish to thank all of you that have offered to help us after the recent vandalism at the Ling and our museum. I have received so many phone calls and emails and I've tried to answer them all.

Also we offered many of our artifacts to many USSVI Bases, VFW's and American Legion Posts rather than let the owner of the property that we've been evicted from sell them to a scrap dealer.

The good news is we now have a place in NJ to store not only the three large containers holding the contents of our two museum buildings but also too store our torpedoes and the other large items that were on our grounds.

If things change in the future and our items again become available I will let everyone know.

Fraternally,  
Les Altschuler  
NE Region Director  
Vice-Pres. NJ Naval Museum

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NEWS-01: Subj: New USSVI Base – Grand Strand Base in Myrtle Beach, SC  
Submitted by: Steve Bell on 8/21/2018

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Shipmates:

We would like to welcome to our organization a new base in Myrtle Beach, SC. The commissioning event will be held on 28 August 2018.

The officers of the base are:

Tom Czulewicz – Base Commander

Bruce MacKinzie – Base Vice Commander

David Fischer – Base Treasurer and Tools Manager

John Brough – Base Secretary

This will be base number 41 for the Southeast Region. Many of us remember that number from somewhere. 41 for Freedom.

We want to wish the best to this base. Welcome to USSVI.

Steve Bell  
SERD

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Navy Times 14 August 2018

**Submarine XO in the brig for illicit recordings** by Geoff Ziezulewicz

(<https://www.navytimes.com/news/your-navy/2018/08/14/fired-submarine-xo-pleads-guilty-jailed/>)

A former second-in-command of the submarine Alaska (<https://www.navytimes.com/news/yournavy/2017/07/25/alaska-blue-crew-xo-fired/>) has been convicted of using a cellphone to secretly record others before broadcasting the footage.

Lt. Cmdr. Bryan P. Watson was fired as the blue crew executive officer of the Georgia-based boat in July 2017, for what officials said at the time were the preliminary results of a Naval Criminal Investigative Service (<https://www.navytimes.com/news/your-marine-corps/2017/04/07/ncis-15-active-duty-troopsmay-have-broken-the-law-in-marines-united-case/>) investigation.

As part of a pre-trial deal, Watson pleaded guilty to indecent visual recording and broadcasting of an indecent visual recording charges on May 1.

Watson was sentenced to 15 months in the brig and a dismissal, according to the Navy. Officer dismissal is equivalent to a dishonorable discharge.

A redacted charge sheet provided to Navy Times does not state where or when the offenses occurred, but notes that the infractions happened on several occasions in private areas where the victim “had a reasonable expectation of privacy.”

Navy officials declined to say how Watson disseminated the footage and said only the information on the charge sheet was releasable.

Watson was transferred to the Navy’s brig (<https://www.public.navy.mil/bupersnpc/support/correctionprograms/brigs/charleston/Pages/default.aspx>) at Charleston, South Carolina, in June and could not be reached for comment. “They’re not entitled to talk to the media,” the brig’s administrative officer, James Greenway, said

Tuesday.

The nuke officer was commissioned in 2003 and had stints on the submarines New Hampshire, Louisiana and Michigan before reporting to the Alaska in March 2017, according to Navy Personnel Command records. He also worked at the Office of the Chief of Naval Operations from 2013 to 2016, according to the records.

Navy Judge Advocate General Corps (<http://www.jag.navy.mil/>) officials said personnel issues prevented Watson's May conviction from being posted online until recently.



## **Selected Undersea Warfare News Articles**

## **A Look Inside The USS Cobia And The Role Wisconsin-Built Submarines Played In World War II**

**Staff, Milwaukee Independent, July 18**

Adjacent to the Wisconsin Maritime Museum, the World War II fleet submarine USS Cobia (SS-245) is moored along the Manitowoc River. Named after a species of perciform marine fish, the vessel has local and national significance as an icon of Wisconsin's shipbuilding heritage, a GATO-class fleet submarine similar to the twenty-eight subs built in Manitowoc during World War II.

Technically, the USS Cobia was produced by the Electric Boat Company of Groton, Connecticut, but it is the same class of submarine built by Manitowoc shipbuilders. All but three were constructed in time to see action during the war, but none of the freshwater submarines were available for preservation at the Wisconsin Maritime Museum.

Launched on 28 November 1943, and commissioned on 29 March 1944 with Lieutenant Commander Albert L. Becker in command, the USS Cobia was one of the most effective submarines of this type during the two decades that it was in use. It had six patrols during World War II and sank ever kind of ship from troop transports to battleships. By 1959, however, the U.S. Navy considered it obsolete and transferred her to the Milwaukee Naval Reserve Center where she served as a training platform for eleven years. On 1 July 1970, it was struck from the Naval Register and towed to Manitowoc, Wisconsin where she serves as an international memorial to all submariners.

As the Manitowoc Maritime Museum changed its name to the Wisconsin Maritime Museum, the USS Cobia has become one of the its major exhibits. Visitors can go aboard and tour her topside and inside, visiting the torpedo rooms, wardroom, crew's quarters, and engine rooms. Three different types of tours are offered, including the opportunity to spend a night aboard the vessel. For the "Life at Sea" tour, guests learn about the crew and living conditions aboard a submarine; the "Nook & Cranny" tour gives visitors a detailed look at the technical mechanics of how a submarine works; and "Cobia After Hours" tour for adults over 21, shares historical events experienced by the USS Cobia, supplemented by a "Torpedo Juice cocktail."

The USS Cobia undergoes routine maintenance, and requires many man-hours to preserve and restore the vessel. The first step of the long-term plan to rehabilitate the USS Cobia was completed in 1996, with a dry-docking stay in Sturgeon Bay. The exterior hull was restored, allowing museum staff and volunteers to focus their efforts on the interior. After years of labor, the submarine was returned to its appearance at the peak of its life during World War II. The USS Cobia's SJ-1 radar equipment is considered one of the oldest operational radar units in the world.

## **One of the Navy's Greatest Tragedies: The Sinking of Sinking of the USS Thresher**

**Kyle Mizokami, National Interest, July 17**

In the United States Navy, submarines lost at sea are said to be on "eternal patrol." One such submarine was USS Thresher.

But a loss of electrical power was only half of the problem. According to Navy testimony provided in 2003 to the House Science Committee, the crew was unable to access vital equipment to stop the flooding. As the submarine took on water, the ballast tanks failed to operate. Investigators believe restrictions on the air system and excessive moisture in the air system led to a buildup of ice in the ballast valves, preventing them from being blown and counteracting the effects of the flooding.

In the United States Navy, submarines lost at sea are said to be on "eternal patrol." One such submarine was USS Thresher. Meant to be the first in a new generation of fast nuclear-attack submarines, today it rests in more than eight thousand feet of water, along with its crew. Thresher is one of two American submarines lost since the end of World War II.

In the mid-1950s, the U.S. Navy was still pushing nuclear propulsion out to the submarine fleet. USS Nautilus, the world's first nuclear submarine, had just been commissioned in 1954, and nine classes of submarines were created, including the Sailfish, Barbel, Skate and Skipjack classes, before the Navy felt it had a design worthy of mass production. Preceding classes of nuclear submarines were built in small batches, but Thresher would be the first class to build more than five. Altogether fourteen Threshers would be built.

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The creation of SUBSAFE led directly to tougher—and safer—submarines. (Another U.S. Navy submarine, Scorpion, was lost in 1968 but there is no conclusive explanation for the sinking.) In 2005, the USS San Francisco collided with a seamount at maximum speed—an estimated thirty miles an hour at a depth of 525 feet. SUBSAFE’s careful watch over submarine design and manufacture is credited with ensuring the San Francisco not only failed to sink, but that only one sailor died and the ship could even make it back to Guam on its own power. Although the loss of Thresher to eternal patrol was a painful one, the reforms undertaken by the Navy ensured the 129 lives lost would not be in vain.

## **German Sub Brought World War I to Massachusetts**

**Virginia Mayo, Raf Casert, *The Associated Press*, July 17**

ORLEANS — Over 3,000 miles from the trenches and battlefields of the Western Front, where many hundreds of thousands had already died, residents of Orleans, Massachusetts, were enjoying a typical summer morning on July 21, 1918, waiting for the fog to lift off the shore.

Then suddenly, a German U-156 submarine broke the surface and brought World War I home. Orleans became the only part of the United States to be shelled by the enemy. For a brief moment, “over there” had become “over here.”

Just after 10.30 a.m., the heavy thump of something hitting land signaled the first attack on American soil in 100 years.

“I don’t know if it was the first shot or the sound of my feet hitting the floor,” the late Ruben Hopkins, then a 22-year-old guard at Orleans’ lifesaving station No. 40, recalled in a recording. “I was out of my bunk up there in seconds flat.”

To this day, it remains a mystery why such an advanced submarine would attack a target that had no real value. While instilling fear in the American public by attacking shipping was a tactic, going so close to shore seemed an undue risk. One theory is that the sub had hoped to cut the underwater communications cable that ran from Orleans to France.

A commemoration is planned for Saturday afternoon on Nauset Beach to mark the 100th anniversary.

That day, the Perth Amboy tug, towing four barges, was taking the long route around the elbow of Cape Cod rather than passing through the newly opened Cape Cod Canal. German Capt. Richard Feldt’s U-156 was watching and started shooting.

Looking out from the station watchtower window, Hopkins recalled: “I could clearly make out the shape of the submarine. I saw a splash where it hit in the water next to the tug.”

The Perth Amboy took a direct hit to the pilothouse, and a member of the crew was wounded. The sub then directed its attention to the barges.

The local lifesavers, some of the best in the U.S., launched their boat directly into the line of fire. Their motto: “You have to go out, but you don’t have to come back.” Nothing, however, really prepared the lifesavers for such a close encounter with the enemy.

Residents flocked to the beach to see what the excitement was about before shells hitting land sent some scurrying back home. Dr. Danforth Taylor, visiting his daughter on the bluff above Nauset Beach, telephoned *The Boston Globe* immediately.

Miles away at the Chatham Naval Air Station, Ensign Eric Lingard piloted an HS-1L flying boat and flew north, since lifesavers had already reached the tug and barges. His first two bombing runs were unsuccessful.

Hopkins recalled: “I couldn’t see he dropped anything. It appeared to me he was trying to frighten the sub, and the sub just wasn’t frightened.”

Just behind Lingard, an R-9 Seaplane came in for a run at 500 feet. The bomb hit its mark but also did not detonate.

The German submarine, perhaps feeling that it had achieved its mission or thinking its luck was running out, dived back below the surface and left Cape Cod.

In less than an hour, the attack was over. The Perth Amboy was still afloat, although heavily damaged, and three of the four barges were on their way to the bottom of the ocean. While no one was killed in the attack, two crew members were sent off to a Boston hospital badly injured.

Feldt and his U-156 continued attacking ships running up through Canada and Newfoundland. However, just two months before the Nov. 11 Armistice, the sub failed to clear the Northern Barrage minefield between Britain and Norway. It was never heard from again.

Lingard never got to see the Armistice, dying of pneumonia just a week before his 27th birthday — less than two weeks before the end of the war.

## **U.S. STRATCOM To Take Over Responsibility For Nuclear Command, Control And Communications**

**Sandra Erwin, SpaceNews Online, July 23**

WASHINGTON – After a months-long review, the Pentagon has decided that U.S. Strategic Command should be solely in charge of the classified communications system that keeps the president connected to military forces during a nuclear event.

The review was prompted by concerns that the nation’s nuclear command, control and communications systems, or NC3, was not under a single chain of command. Officials also have warned that the technology is outdated and that there is no clear plan to modernize it.

“The Chairman of the Joint Chiefs of Staff has appointed the commander of U.S. Strategic Command to be the NC3 enterprise lead, with increased responsibilities for operations, requirements, and systems engineering and integration,” U.S. STRATCOM spokeswoman Maj. Meghan Liemburg-Archer said on Monday in an email to SpaceNews.

The office of the undersecretary of defense for acquisition and sustainment will handle resources and acquisition for NC3.

Defense Secretary Jim Mattis ordered the review out of concern that NC3 did not have a cohesive governance structure. The commander of U.S. Strategic Command Gen. John Hyten told SpaceNews in March that he was spending a lot of time dealing with the future of NC3.

CNN reported on Friday that Hyten revealed during a recent speech at the naval base in Kings Bay, Georgia, that he would be taking charge of NC3 operations and systems.

Hyten said in that speech that Mattis wanted a single officer responsible for NC3, as opposed to the “committee-like” structure that has existed so far. Air Force Global Strike Command manages the Air Force’s portion of NC3. The Air Force is responsible for about 70 percent of the 62 air, space and ground systems that make up the NC3 and collectively provide secure, survivable and resilient communications for the president to issue nuclear orders.

The Pentagon’s Nuclear Posture Review released in February raised alarms about the state of the NC3 system. Networks that were on the cutting edge in the 1970s are now “subject to challenges from both aging system components and new, growing 21st century threats,” the NPR said. “Of particular concern are expanding threats in space and cyber space.”

The NC3 includes warning satellites and radars; communications satellites, aircraft, and ground stations; fixed and mobile command posts; and the control centers for nuclear systems. The NPR said many of these systems use technology that has not been modernized in almost three decades.

Ensuring the security of satellites that support classified nuclear communications and missile warning is a major concern because they are also used by the military in day-to-day operations. Some are specific to the nuclear mission, but most support both nuclear and conventional missions.

In the interview with SpaceNews, Hyten noted that NC3 is “very resilient against threats, and I’m very confident it can handle anything today. But not 10 years from now.”

When nuclear weapons systems now in development become operational — like the the B-21 bomber, a new long-range cruise missile, a new ICBM and the Columbia-class submarines — they will have modern

technology and will have to plug into the NC3 architecture. This will require a major update of NC3.

Hyten said Mattis came to STRATCOM headquarters at Offutt Air Force Base in Nebraska last September. “We probably spent half a day talking NC3.”

## **Navy May Bring Back Harpoon Missiles on Attack Subs After Successful SINKEX; RIMPAC Also Highlights Ground-to-Ship Strike Capability**

**Megan Eckstein, USNI News, July 30**

The Navy may once again arm its attack submarines with the Harpoon anti-ship cruise missile, after a sub-launched Harpoon performed well during a sinking exercise this month in the biennial Rim of the Pacific (RIMPAC) 2018 exercise.

Los Angeles-class attack submarine USS Olympia (SSN-717) fired a Harpoon at the ex-USS Racine (LST-1191) during the first of two SINKEX events in RIMPAC this month. That shot marked the first time a Harpoon had been fired from a U.S. submarine in more than 20 years, and Commander of U.S. Pacific Fleet’s Submarine Force Rear Adm. Daryl Caudle said he expects that the cruise missile will be added back into the SSN’s regular armament.

“The old guys like me actually were on ships that had Harpoons. So it has been a long time since we’ve actually had it onboard our ships,” the admiral joked during a July 25 interview in his office in Pearl Harbor. He said the missile was “designed predominantly to go against Russian ships and their surface action groups – Cold War – from our submarine force.” But as that threat declined and modernization dollars were needed elsewhere, the Harpoons went out of favor.

“We thought we could get by with our heavyweight torpedo, our advanced capability (ADCAP) Mk 48 torpedo, because we thought the predominant threat at the time when that decision was made was submarines, instead of needing the standoff distance of an anti-ship cruise missile. We took those missiles and, like we do so well in our Navy, we shelved them and thought we may need to bring them back.”

As the global threats the Navy faces have evolved, leadership decided about a year ago that it was time to pull those old Harpoons back off the shelves.

“Today’s highly capable navies and adversary countries, the competitive countries we’re in great power competition with, have extremely good surface ships with very capable missile systems themselves. So to be able to actually improve our lethality at ranges much greater than the Mk 48 torpedo, we want to actually bring back an anti-ship cruise missile,” Caudle said.

“The way to bring back that in a phased way was to basically go to our Naval Undersea Warfare Center, NUWC, and have them reconstitute the capability, to build the software necessary to use our existing combat control system and talk to that Harpoon cruise missile. Olympia was chosen because we knew she was going to be part of RIMPAC. ... We decided to shoot for the 2018 RIMPAC to test the Harpoon cruise missile system again. So this has been at least a year in the making. The folks doing the software coding were working hard up in Newport to get that system built, that coding built. The guys onboard the squadron here, Submarine Squadron 7 that owns the Oly (Olympia), working hard on that ship to practice the tactics, techniques and procedures to shoot the Harpoon; had to bring those back out of the mothballs as well to actually know the language that we speak to prepare for firing and actually shooting the weapon. So had to dust those procedures off.”

What happened next was partly a great performance due to hard work by the submarine community, and partly a serendipitous set of events.

With two Harpoons loaded – one as a backup – Olympia “got in position on the range at PMRF (Pacific Missile Range Facility), which is over off of Kauai. We thought we were going to have to shoot second, and as luck turned out and I was very thrilled, the Air Force mission which was to shoot a LRASM, a long-range anti-ship missile, they got delayed, so we got to shoot first. We shot the Harpoon perfectly, went into cruise and hit the ex-Racine, which is an LST, dead center,” Caudle said of the July 12 SINKEX.

“The beautiful part of this is, the Oly was not expected to shoot the torpedo too. They had been scheduled for the next hulk (decommissioned ship) to shoot the Mk 48, but the way that things unfold in real world, the shooters changed that day, so Oly got tasked about mid-day to go and actually shoot an ADCAP also. ... So we got to move into position and actually then shoot the heavyweight torpedo. That torpedo, again, a warshot, worked perfectly, went out there and did its job and honed in on the Racine, broke its keel, and a couple hours later it was on the bottom. Our torpedo is an extraordinary weapon, it really is.

“So the interesting part is, you can see kind of almost a tactic there that I think is important that we got to

practice just by happenstance: shooting a long-range shot and then move in for the close-range shot,” the admiral concluded.

Though the decision for if and how to bring back the Harpoon missile to the attack sub fleet is out of his hands – leaders back in Washington will work through that process – Caudle said “no question” the missile shot was a success and “from my perspective, it worked flawlessly.”

The undersea warfare directorate (OPNAV N97), the Program Executive Office for Submarines, NUWC and others will now study the shot, ensure that it did in fact meet all criteria, “and then there will be a decision made about how to phase that weapon back in and to what extent we’ll phase it back in,” he said.

“So that’s a decision that’s yet to be made, but the shot by the Oly will inform that decision.”

Depending on what N97 and the PEO find, Caudle said there could be another Harpoon test shot if another aspect of its performance needed to be validated, or engineers needed to validate the interoperability between the missile and a different iteration of combat system software. But, he said, “I would say what we learned from this test would be sufficient to field it, from my perspective.”

Members of the Western Artillery of the Japan Ground Self-Defense Force launch a surface-to-ship missile (SSM) from the Pacific Missile Range Facility Barking Sands, July 12, toward decommissioned ex-USS Racine (LST 1191), positioned at sea. The SSM was shot in conjunction with the High Mobility Artillery Rocket System from 17th Field Artillery Brigade, headquarters of the U.S. Army’s Multi Domain Task Force Pilot Program, in support of the Rim of the Pacific (RIMPAC) exercise. This was the first time U.S. Army ground forces have participated in a sinking exercise during RIMPAC. US Army photo.

Additionally, the SINKEX that sent Racine to the bottom of the Pacific also proved out a ground-to-ship missile capability that has been in the works for several years. Both the U.S. Army and the Japan Ground Self-Defense Force shot at Racine from ashore in Hawaii, with the Japanese firing a surface-to-ship missile and the Army firing a Naval Strike Missile (NSM) from a launcher on a Palletized Load System. This was the first time ground forces had ever participated in a SINKEX at RIMPAC.

“When you normally think of a SINKEX you think of ships shooting other ships kind of thing. But we’ve now gotten to the point we have capabilities where Army and the JGSDF both have the ability to shoot a surface-to-surface missile from ground to ocean in a maritime environment. And that becomes a big deal, so to coordinate the maritime environment we need to incorporate the multi-domain task force of the U.S. Army into this, as well as the JGSDF,” Vice Adm. John Alexander, commander of U.S. 3rd Fleet who led RIMPAC, said in a July 20 press conference.

Eric Sayers, who previously served as a special assistant to the Commander at U.S. Indo-Pacific Command and is now an adjunct senior fellow at the Center for a New American Security, said this year’s SINKEX was important for several reasons, and showed significant growth in Pacific theater capabilities in recent years.

“First, and perhaps most importantly, you have a Japan that is willing to publicly display their advanced land-based, anti-ship capabilities alongside U.S. forces. This should not be overlooked and it is really the result of the leadership of Japan’s Chief of Defense, Admiral Kawano. When Japan was invited to join this effort last year, it was Kawano who helped ensure the Ground Self-Defense Force took part. This is a great demonstration of what the future of alliance cooperation can look like,” Sayers told USNI News.

“Second, you have a U.S. Army that is slowly but steadily embracing this land-based, anti-ship mission that just a few years ago they wanted nothing to do with. In fact, despite the role it could play in deterrence and warfighting in the Pacific as well as elsewhere, it was shunned openly as a costly and dated mission. It was only after the determination of key individuals at [U.S. Army Pacific], [U.S. Army Training and Doctrine Command], [Strategic Capabilities Office], and PACOM that the argument was won and we are now moving in the direction you see on display in Hawaii. This is an example of the type of innovation in military warfighting concepts that are only possible when motivated officers and civilians, often with minority views, can make a compelling argument about the future of war and successfully maneuver a bureaucratic path forward.”

Sayers added that, in sum, the two SINKEX events at RIMPAC showed a “multi-axis strike capability” the U.S. is developing and could field in a few years. He noted it was just earlier this decade, when Adm. Robert Willard led PACOM from 2009 to 2012, that PACOM “was sending urgent operational needs statements back to Washington for an anti-ship weapon.”

“Today, this SINKEX is showing the Congress, our allies, and the Chinese that we have air, ground, surface, and undersea options for the anti-ship mission. We aren’t there yet, but we are slowly moving in the



right direction,” Sayers said.

The Racine SINKEX also included a Harpoon shot by a Royal Australian Air Force P-8 Poseidon aircraft, which was the first time the Australian plane had participated in a RIMPAC SINKEX.

The second SINKEX put ex-USS McClusky (FFG-41), an Oliver Hazard Perry-class frigate, at the bottom of the ocean much faster than anticipated. The Singapore Navy shot two Harpoon missiles at the frigate, and “typically if you shoot a Harpoon and it hits above the waterline it’ll punch a hole and blow up but it won’t sink a ship; theirs just happened to hit at the waterline and the ship started sinking about halfway through the event, so there were some countries that didn’t get to shoot their missiles and weapons, but for the most part the SINKEXs have been a success.”

In all, six Harpoons were successfully shot between the two SINKEX events, according to manufacturer Boeing.

## **Sub Lost In World War II Saluted In Ceremony At USS Cod Submarine Memorial**

### **Staff, Cleveland Plain Dealer, July 30**

CLEVELAND, Ohio – A ceremony honoring 70 sailors lost aboard the submarine USS Grunion during World War II was held today on the 76th anniversary of its sinking, at the USS Cod Submarine Memorial.

The public was invited to participate in the event that saluted each crewman, including seven Ohioans, three from Northeast Ohio.

As each name was read aloud, a member of the public, Cod volunteers or veterans cast a flower into Lake Erie as the sub's bell was rung.

The Cod is identical to the Grunion, which disappeared while patrolling the Bering Sea near the Aleutian Islands as part of the American counteroffensive to the Japanese invasion of Kiska and Attu islands off the coast of Alaska.

The Grunion sank two patrol boats and survived an attack by a Japanese destroyer, but reported intense enemy anti-submarine activity in its last radio transmission on July 30.

The submarine remained missing for 60 years until three sons of the vessel's skipper discovered an account of an encounter between an armed Japanese cargo ship and a submarine near Kiska.

Some reports speculate that the sub may have been severely damaged by one of its own, malfunctioning torpedoes that circled back on the Grunion.

Among the lost crew members were Navy Signalman Third Class Frank Alexander, of Elyria; Pharmacist's Mate First Class Paul Sullivan, of Akron; and Fireman Second Class Ralph Youngman, of Cleveland.

A search was launched, and in 2006 the imploded remains of the Grunion were found 3,000 feet below the surface.

Other Ohioans on the crew were Merritt Graham, of Circleville; Louis Doell, of Cincinnati; Richard Carroll, of Springfield; and George Caldwell, of Columbus.

In 2008, some 70 families of lost crewman came to Cleveland for a memorial service at the Cod.

The names of the crew were also read aloud during that event, reflecting one family member's belief that, “When you speak their names, their spirits are released.”

## **'Hunter Killer': A High-Speed, Explosive Navy Blockbuster Packed with King Leonidas, Rear Adm. Common — and oorahs?**

### **J.D. Simkins, Navy Times, July 30**

What could possibly be better than the “Olympus has Fallen” version of Gerard Butler kicking ass to save the president of the United States? A U.S. Navy submarine commander variant of Gerard Butler kicking ass to save the entire world...by saving the president...of Russia.

Get ready, because the next Navy blockbuster, one that looks like the lovechild of “Fast and Furious” and “Hunt for Red October,” will be surfacing in theaters on Oct. 26.

**Based on the book, “Firing Point,” by George Wallace and Don Keith**, the film drops Butler’s character, submarine commander Joe Glass, on a next-generation sub in the Arctic Ocean, where his crew is responding to a distress call from another U.S. boat. But while navigating the icy depths, Glass discovers the Russian president has been kidnapped and a coup is threatening to plunge the world into a third World War.

To prevent worldwide devastation, Glass must partner with a team of Navy SEALs in a desperate race to extract the Russian president and navigate through treacherous enemy waters to safety, all while under the constant threat of a symphony of Michael Bay-level bombardments that would make Optimus Prime proud.

“Oorah!”

Say again? Oh yeah, evidently, the Navy featured in “Hunter Killer” has gone full-blown devil dog with motah, motah, gotta lotta motivation. Yut!

And although times are tense, and world peace hangs in the balance, don’t let Glass’ name fool you — his nerves are shatterproof.

Punishment-worthy dad jokes aside, “Hunter Killer” looks poised to melt your face off with non-stop intensity and a noteworthy cast.

Fresh off of an Oscar win for his portrayal of Winston Churchill (“Darkest Hour”), Gary Oldman brings his acting chops to the fray as Adm. Brad Crawford. He’s assisted by Common, a rear admiral whose character currently is credited as...“Rear Admiral.” Oorah, rear admiral.

Michael Nyqvist (“John Wick,” “The Girl With the Dragon Tattoo”), Linda Cardellini (“Avengers: Age of Ultron,” “Grandma’s Boy”) and Toby Stephens (“13 Hours: The Secret Soldiers of Benghazi,” “Black Sails”) also lend their talents to the explosive thriller.

The film was “fully supported” by the U.S. Navy, a press release said, “with active-duty submarine subject matter experts, access to bases, submarines and the men and women who proudly serve every day in our Nation’s silent service” offering support.

No matter the viewer’s takeaway of the trailer, these heart palpitation-inducing films certainly have a niche audience. Gerard Butler ass-kicking has practically developed into its own genre, much like the well-established Academy Awards category of “The Liam Neeson Large Portions of Name-Taking.”

Sadly, Rihanna did not cross rate into the submarine community in time for film production, but the rest of the “Hunter Killer” crew is ready to bring the noise.

## **Submarine Squadron Six Welcomes New Commodore**

### **MC1 Jeffrey Richardson, Navy.mil, August 1**

**NORFOLK, Va.** – Capt. Carl Hartsfield was relieved by Capt. Martin Muckian as Commander, Submarine Squadron Six, today, during a change of command ceremony aboard the Virginia-class fast-attack submarine USS Washington (SSN 787) at Naval Station Norfolk.

Hartsfield, who assumed command of Squadron Six in August 2016, reflected on how much he enjoyed squadron command for the rewarding mentorship opportunities and teamwork.

“Though you are thoroughly involved with every ship’s challenges, you are just detached enough to see the bigger picture and reflect upon experience,” said Hartsfield.

During his remarks, Hartsfield recognized those who have had the biggest impact in shaping his career, including family, friends, and shipmates past and present and thanked them for the years of education, mentorship and support. “I have learned from all of you and I hope I have reciprocated,” said Hartsfield.

Vice Adm. Joseph Tofalo, Commander, Submarine Forces, who served as the keynote speaker and presiding officer over the event, lauded Hartsfield for his leadership of his Norfolk commands and the training and certification of submarines for deployment.

“One of the biggest things we do as a submarine force is generate readiness. Squadron Six, here in Norfolk, sets the standard for doing just that,” said Tofalo. “Consistently and successfully generating readiness, and getting these warships to sea to accomplish their demanding missions is a credit to the crews, the supporting staffs, and the highly-capable staff of Submarine Squadron Six, but it starts at the top with the squadron commander.”

Muckian, who entered naval service in 1995, has served on USS Greeneville (SSN 772), USS Louisville (SSN 724), USS Alexandria (SSN 757), the staff of Commander, Submarine Group Eight, Bureau of Personnel, Special Assistant to the Chief of Naval Personnel.

Tofalo welcomed the incoming commanding officer with praise for his experience and leadership. “Your impressive career has prepared you well for this extremely important assignment.”

Muckian reports to Submarine Squadron Six from his position as Military Assistant to the Deputy Under Secretary and Under Secretary of Defense for Policy.

“Over 22 years ago, I reported to my first submarine right down the pier, here in Norfolk. I can’t say clearly that remember what I was thinking as I reported aboard that day, but I can tell you that if someone had



said to me, ‘Someday you’re going to be a commodore,’ I would have been very surprised,” said Muckian. “To the men and women of Submarine Squadron Six, both the amazing squadron staff and outstanding submarine crews, I have been blow away from what I have seen so far. From new construction to deployments to overhaul conversions, you are supporting the full spectrum of what the submarine force does. I can’t wait to work with all of you.”

Following the change of command, Hartsfield will serve in Omaha, Neb. as the Executive Assistant to Commander, U.S. Strategic Command.

Submarine Squadron Six oversees the leadership of 11 attack submarines and their crews. The squadron staff is responsible for training and preparation of their submarine crews in all facets of operations, including tactical and operational readiness for war, inspection and monitoring, nuclear and radiological safety, and development and control of submarine operating schedules.

For more information on the submarine force visit the Submarine Force web site at:

<http://www.public.navy.mil/subfor/hq/Pages/default.aspx>

## **Leidos Awarded Contract to Study Health Impact of Ops on Submariners** **Stephen Kuper, Defence Connect, August 2**

Leidos has been awarded a follow-on contract by the US Naval Medical Logistics Command to support biomedical research and development at its Naval Submarine Medical Research Laboratory (NSMRL).

NSMRL provides innovative, human-centric research solutions to sustain superiority in the undersea domain. Leidos will support this mission by conducting research studies and analyses, developing guidelines, and supporting new initiatives.

The investigations will focus on submariner wellness, submariner psychological factors, shipboard and diving force health protection, human factors, and undersea warfighter health and performance.

"Leidos employs a multi-disciplinary approach to R&D that has enabled us to uncover meaningful and actionable information to support the customer’s mission," said Leidos health group president Jon Scholl.

NSMRL provides research solutions to the most medically challenging platform in the Navy, the US submarine. NSMRL serves the submarine fleet by taking the lead in undersea human factors, sensory sciences and operational medicine, delivering timely evidenced-based healthcare solutions.

Scholl said, "Our focus is to provide insight that aids in decision-making, identifies potential health threats and optimises safety within these challenging operational environments."

The NSMRL provides key research into:

**Submariner wellness:** NSMRL hearing conservation efforts span from basic to applied research, with the use of otoacoustic measurements to predict hearing loss, a toolkit to assist field audiologists in hearing education, and field studies on board combat littoral ships. As a member of a Multi Service Partnership of the DoD Hearing Consortium, NSMRL is helping to develop an ANSI standard for testing hearing protection devices (HPDs) and tactical communication and protection systems (TCAPS).

NSMRL also conducts physical health studies including bone density/vitamin D studies on board submarines. NSMRL initiated the first ever study of submariner epidemiology monitoring the medical impacts of the unique submarine environment.

**Psychological fitness:** NSMRL is conducting psychological screening of prospective submariners for submarine service suitability (SUBSCREEN), prediction of unplanned losses from operational units, individual and team resilience, and integration of mixed gender crews.

**Shipboard health and performance:** NSMRL is studying submarine atmosphere effects for mixed gender crews and submarine atmosphere monitoring (SAHAP) to ensure submariner health. NSMRL is studying circadian rhythm to maximise performance including evaluation of watchstanding cycles and lighting to improve vigilance, and entraining Special Forces.

**Submarine survival and escape:** NSMRL is studying the environmental stresses encountered during submarine escape and survival, evaluating non-invasive biomarkers of pulmonary oxygen toxicity, testing and evaluating oxygen concentrators and survival hydration packs for use under environmental extremes, and developing the Submarine Rescue Manual (Guard Book) for different classes of submarine.

**Underwater bioeffects:** NSMRL is continuing underwater human factors research including high frequency underwater hearing and underwater sound location, assessing non-lethal underwater bioeffects of sound and blast, and studying diving physiology under hyperbaric stress.

**Human systems:** NSMRL is studying human perception and how to display panoramic visual data with

integrated auditory cues. NSMRL is also working with command decision-making processes in submarines and evaluating team performance.

## **Towed-Array Sonar Systems For Navy Submarines**

### **John Keller, Military and Aerospace, July 31**

Undersea sonar designers at L-3 Chesapeake Sciences Corp. in Millersville, Md., are building the U.S. Navy's next-generation towed-array sonar to enable Navy submarines to detect, track, and classify quiet, modern submarine threats in open ocean and littoral waters.

Officials of the Naval Sea Systems Command in Washington announced a \$26.6 million order to L-3 Chesapeake on Monday to build TB-29X towed arrays for Navy submarines.

The TB-29X is the future generation reliability improvement to the TB-29A. It is a 416 channel thin line towed array with an equivalent acoustic performance capability to TB-29A. The TB-29X is a thin line towed array passive sonar receiver that has the same form factor as the TB-29 array, yet offers increased capability, greater reliability and reduced obsolescence.

Towed array sonar uses hydrophones towed on a cable trailing behind a submarine or a surface ship; it can be miles long. It's designed to keep the array's sensors away from tow vessel noise to improve its signal-to-noise ratio and its ability to detect and track faint contacts like quiet nuclear- and diesel-powered submarines and seismic signals.

Effective use of towed array sonar systems limit a vessel's speed, and crews must take care to protect the cable from damage. Current towed-array systems also are complex designs and need to be upgraded to maintain reliability while deployed, while stowed, and while reeling the array in and out of submarines and other marine vessels.

Related: Lockheed Martin to build towed-array sonar systems for Navy undersea surveillance of submarines

Compared with existing towed arrays, the L-3 Chesapeake TB-29X offers significant reduction in sensor power, internal component diameter, bend radius, and production costs.

The TB-29X submarine thin-line array is designed to reduce complexity, lower power, and improve robustness to withstand in-situ operations and stresses of handling systems.

Its performance telemetry, acoustic sensors, and electronics are designed to provide a ubiquitous solution across the spectrum of submarine, surveillance, and unmanned towed arrays. This multi-mission commonality for these high-volume and unique components provides cost savings from procurement to life cycle support.

On this contract L3 Chesapeake Sciences will do the work in Liverpool, N.Y.; Millersville, Md.; and Ashaway, R.I., and should be finished by November 2019.

## **SUBSCOL Instructor Named July SPOM**

### **MC3 Tristan Lotz, Dolphin News, August 2**

**EAST LYME, Conn.** - A weapons instructor at Naval Submarine Base New London (SUBASE)'s Naval Submarine School (SUBSCOL) was honored as Service Person of the Month (SPOM) in a ceremony held in East Lyme, July 25.

Machinist's Mate (Weapons) 2nd Class Jeremy Coleman was presented the award on behalf of the East Connecticut Chamber of Commerce (the Chamber) and the East Lyme Rotary Club of Rotary International. SPOM is an award presented every month to a member of the U.S. military who lives in the Eastern Connecticut area and demonstrates outstanding service not only to their country, but to the local community.

The ceremony was held on a drizzly day at Flanders Fish Market in East Lyme, where Coleman, his wife Liz, and a member of his chain of command were given a warm welcome and free lunch by the Rotary Club.

"Petty Officer Coleman trains 18- and 19-year-olds to go out on submarines and handle weapons," said Machinist's Mate (Auxiliary) Senior Chief Will Collins, the senior enlisted advisor of Coleman's department in SUBSCOL. "Coleman also trained Sailors to put out fires onboard the boats—if any of you have ever heard about the USS Miami, a fire burned on her for only three minutes, and we lost that boat. In the submarine force, firefighting is an important skill we all learn."

Following this, Dara Wicken, a representative of the Chamber, took the floor to present the award to Coleman.

"Petty Officer Coleman is an outstanding instructor at Naval Submarine School," said Wicken. "He rapidly

qualified as an instructor at Machinist's Mate Weapons 'A' School while still instructing and leading at the Fire Fighting Team Trainer allowing for flexibility between the two schoolhouses. As one of the Naval Submarine School's Navy Military Training Instructors, he assists in the Sailorization of over 1,000 initial accession of Sailors annually. His military bearing, professional attitude, and leadership are unparalleled. He is a model Sailor."

Wicken added that as well as his hard work training future submarine Sailors, Coleman has also dedicated himself to helping the hearing-impaired through volunteering.

"Petty Officer Coleman exemplified Navy core values in his community. Since reporting to Naval Submarine School, he has volunteered over 208 hours organizing more than 52 American Sign Language classes bringing awareness and support to the hearing impaired community as well as developing American Sign Language as a second language."

Upon receiving the award, as well as various other goodies from the Chamber, Coleman himself took the floor to express his gratitude at receiving such an honor.

"Thank you to each and every one of you for coming out," said Coleman. "The recognition is awesome and my family appreciates it, I appreciate it. But I couldn't have done it myself. The reason I joined the military was not just to serve my country, but also my community. Thank you for allowing me to serve you and my country. I couldn't have done this job without my wife. We've done everything together. This award is hers just as much as mine."

### **Commander, Submarine Forces Holds Change of Command** **MCC Darryl Wood, Navy.mil, August 3**

Since taking command of the Submarine Force in September 2015, Tofalo played a pivotal role in the future of the force. As Commander, Submarine Forces, he focused his efforts on ensuring the U.S. Navy maintains undersea superiority today and into the future. As Commander, Submarine Force Atlantic, he had operational command of all U.S. submarines home ported on the Atlantic coast, as well as supporting shore activities. As Commander, Allied Submarine Command, he acted as the principal advisor to the North Atlantic Treaty Organization on submarine plans, operations, and doctrine.

Tofalo kicked off remarks by reminding guests that sixty years ago today, 3 August 1958, USS Nautilus (SSN 571) reached the North Pole, and became the first submarine in history to do so.

"This "top of the world" historical reference is certainly fitting," said Tofalo. "Because I'm "on top of the world" today, as it has been the honor of my lifetime to command the greatest Submarine Force the world has ever known. A Force made up of 24,000 outstanding active duty, government civilians and reservists, and their families, who combined are only 4% of the greater Navy, yet operate 25% of the Navy's warships including 70% of Nation's accountable nuclear weapons."

Admiral John Richardson, Chief of Naval Operations, and Admiral Christopher Grady, Commander, U.S. Fleet Forces Command were guest speakers during the ceremony.

Richardson, a former Commander, Submarine Forces himself, recognized the history of the submarine community and described a culture inspired by four generations—the pioneers, the warfighters, the cold warriors, and the innovators.

"Joe has led his team to strengthen the readiness of the fleet, strengthen the bonds of trust and confidence," said Richardson. "He has spent every waking moment thinking about how to make our force stronger, ready to sail under the seas and over the horizon, to face any challenge, and to return stronger than when we left."

In welcoming and recognizing the many distinguished guests at today's ceremony, Grady also lauded Tofalo's leadership, his continued support of excellence, and the elite culture that he established within the submarine community.

A native of upstate New York, Tofalo graduated with distinction from the U.S. Naval Academy in 1983 with a Bachelor of Science in Computer Science. He also holds a Master of Science in Engineering Management from Catholic University of America. His father was a 35-year career naval officer, and his mother was a Navy WAVE, one of the first enlisted women in the Navy.

Tofalo was commanding officer of the Ohio-class ballistic-missile submarine USS Maine (SSBN 741), and was Commander, Submarine Squadron 3, Pearl Harbor, Hawaii. Prior sea assignments include the Permit-class attack submarine USS Flasher (SSN 613), the Ohio-class guided-missile submarine USS Michigan (SSGN 727), and the Los Angeles-class attack submarine USS Montpelier (SSN 765).

His shore assignments include three assignments on Commander, Submarine Forces staff; two

assignments on Commander, U.S. Fleet Forces staff; four assignments on the Chief of Naval Operations staff; U.S. Joint Forces Command; and the Joint Staff.

Selected for Rear Admiral in December 2009, his first flag assignment was as Assistant Deputy Chief of Staff for Global Force Management and Joint Operations (N3B), U.S. Fleet Forces Command. In August 2011, he relieved as Commander, Submarine Group 10, and in December 2013 as Director, Undersea Warfare on the Chief of Naval Operations staff in the Pentagon.

Tofalo retired from active duty as part of the ceremony after more than 35 years of service in the U.S. Navy, and left the Force with one last challenge.

"To the Sailors and the Force, I challenge you to continue our emphasis on competence and character, relentlessly pursuing your theoretical maximum performance as both individuals and teams," he said. "I also challenge you to continue to do everything with honesty and integrity. Revel in hard facts and the certitude of being a standards-based organization."

Upon assuming command, Richard thanked Tofalo for passing on a Force that is "ready to deliver" and reassured Richardson, Grady and Hyten that he understands their strategic guidance and the important role submarines play in the nation's defense.

"The mission of our Submarine Force today is clear, said Richard. "We are back in a world in the midst of major power competition. In that competition our strength undersea is a key advantage that we have," said Richard. "That will not change on my watch. With so much at stake, we cannot let up and must execute our mission with a continued sense of urgency."

To the men and women of the Submarine Force, Richard delivered just one thought, "Prepare for battle! This was Admiral Tofalo's direction, and it is mine as well," said Richard. "It is only by being prepared for battle that we can hope to avoid it. If we cannot, our nation expects and demands victory. We shall not fail!"

A native of Decatur, Alabama, and a graduate of the University of Alabama, Richard has also earned master's degrees with honors from the Catholic University of America and the Naval War College. His flag assignments include command of Submarine Group 10 in Kings Bay, Georgia, and the deputy commander of Joint Functional Component Command for Global Strike at U.S. Strategic Command (USSTRATCOM).

His operational assignments include command of USS Parche (SSN 683) as well as Submarine NR-1, then the U.S. Navy's only nuclear-powered, deep-submergence submarine. He also served aboard USS Portsmouth (SSN 707), USS Asheville (SSN 758) and USS Scranton (SSN 756).

Richard's recent staff assignments include service as the executive assistant and naval aide to the Under Secretary of the Navy; chief of staff, Submarine Force Atlantic; and command of Submarine Squadron (SUBRON) 17 in Bangor, Washington. Other staff assignments include director of resources on the staff of the Under Secretary of Defense (policy); squadron engineer on the staff of SUBRON-8 and duty on the Deputy Chief of Naval Operations (Submarine Warfare) staff. He has also served as a member of Chief of Naval Operations' Strategic Studies Group XXVIII, studying the integration of unmanned systems into naval force structure.

Richard previously served as the director, Undersea Warfare Division (N97) in Washington, D.C., and was responsible for the planning, programming and budgeting for acquisition, operational readiness and modernization of the submarine force and its support. He most recently served as deputy commander of United States Strategic Command.

*To watch the video of the ceremony, visit us on Facebook: <http://www.facebook.com/sublant/>*

## **US Navy's Top Admiral Cites Increased Threat in Ocean Nearest Washington** **Carla Babb, Voice of America, August 6**

Chinese military vessels are now patrolling the Northern Atlantic, and Russian submarines are prowling those same waters at a pace not seen since the end of the Cold War, the Navy's top admiral told VOA in an exclusive interview.

Chief of Naval Operations Adm. John Richardson called China's military presence in the North Atlantic a "new dynamic."

"Even five years ago, we wouldn't have seen anything like this," Richardson said.

According to Richardson, the Chinese navy is a global one that is both "ready and capable" of operating wherever Beijing wants.

"They're certainly a pacing competition for us in terms of the naval threat," he told VOA.

However, Chinese operations near the United States' eastern shore may not be as threatening as Russian

vessels lurking below the ocean's surface. NATO allies from North America to Europe are increasingly concerned about the uptick of Russian submarine activity in the North Atlantic.

"We're talking about more (activity) than we've seen in 25 years," Richardson said.

U.S. officials worry that Moscow may try to use its submarines to cut or tap into undersea cables that connect the two continents.

Due to these increased complexities in the North Atlantic, the United States has recently reactivated a command to secure the ocean on its eastern coast.

U.S. 2nd fleet helps fulfill new guidelines under Secretary of Defense Jim Mattis's National Defense Strategy, which makes great-power competition, rather than terrorism, the primary focus of U.S. national security.

The fleet was deactivated in 2011 because the Navy needed the funds for acquisitions. It was reactivated in Norfolk on July 1.

Richardson will preside over the fleet's formal establishment ceremony aboard an aircraft carrier in Norfolk on August 24.

The 2nd Fleet commander will also head NATO's Joint Forces Command Norfolk. Richardson said the dual-hatted command structure allows the U.S. and its allies to adapt together as they confront the rising Russian challenge.

As the U.S. Navy adjusts its geographic commands, Richardson said it also must stay ahead in the competitive realm of information warfare.

Navy sailors on the high seas are having to defend themselves from Russian electronic jamming devices much like those used against U.S. ground troops operating in Syria.

Richardson said sailors had "absolutely" encountered Russian jamming devices while operating in international waters.

"This is an emerging part of our business now," he told VOA.

Richardson did not elaborate on how the jamming affects the Navy. Electronic warfare attacks have the potential to disturb navigation and communication systems.

"Those disruptive technologies...are really going to be decisive in the future fight, and we've got to make sure that we're investing in those as well," Richardson said.

## **USS Columbia Changes Hands**

### **MCI Daniel Hinton, Navy.mil, August 4**

**PEARL HARBOR** – The Los Angeles-class fast-attack submarine USS Columbia (SSN 771) held a change of command ceremony at the historic Pearl Harbor submarine piers, Aug. 3.

Cmdr. Tyler Forrest relieved Cmdr. Dave Edgerton as the commanding officer of Columbia.

The ceremony's guest speaker, Capt. Paul Davis, commander, Submarine Squadron Seven, praised Edgerton for his leadership of Columbia through multiple deployments.

"The Columbia is the Battle E boat for Squadron Seven, that means they were the best submarine out of the 10 that were in the squadron," said Davis. "Squadron Seven is unique in that it is the largest squadron of Los Angeles class submarines in the world. To stand out in such an outstanding crowd is an impressive achievement and a testament to the crew and their leader."

Edgerton thanked his crew and credited them for the ship's success during his tenure.

"The days when we faced personnel challenges were the days I saw this crew take care of each other and provide support to their shipmates," said Edgerton. "Those were the days we learned humility and we were better as individuals and as a team because of it."

Edgerton ended his remarks by telling the crew he had every confidence that they would continue to be successful in the future.

"While I am happy today is a day to celebrate your successes and recognition of your talents, it is truly heartbreaking for me that today is my last day as a part of your incredible command," said Edgerton. "I will always be incredibly proud to say that I served with you."

During the ceremony, Davis presented Edgerton with a Meritorious Service Medal for outstanding meritorious service as commanding officer of Columbia.

Following his tour aboard Columbia, Edgerton will report to Commander, U.S. 7th Fleet in Yokosuka, Japan.

As Forrest assumed command of Columbia, he thanked Edgerton for turning over such a great warship and



incredible crew.

"To the crew of the Columbia, you are the brightest this nation has to offer," said Forrest. "Recognize that you are the ones that bring the life into Columbia's hull and make her the great warship she is today. I look forward to serving with all of you as we transition to the next phase of Columbia's operations and further cement her incredible legacy."

Commissioned in 1995, Columbia was the last 688-class submarine to be built at Electric Boat Shipyard in Groton, Connecticut. Columbia is one of the most versatile weapons platforms ever placed in the world's oceans, capable of long-range Tomahawk strike operations, anti-submarine and surface shipping operations, surveillance and intelligence gathering, and special forces insertions.

## **Submarine Indiana to make Groton its home sooner than expected**

**Lindsay Boyle, The Day, August 2**

The Navy's newest submarine will make Groton its home after its Sept. 29 commissioning, which U.S. Rep. Joe Courtney, D-2nd District, said is seven months earlier than originally planned.

Electric Boat already won a contract to perform maintenance on the USS Indiana, a Virginia-class, fast-attack submarine, beginning in November. The work will correct any defects found during so-called "shakedown" testing before the submarine is deployed.

Newport News Shipbuilding in Virginia finished and delivered the submarine in June.

Courtney said last month that the maintenance work awarded to EB typically is done at the shipyard that delivers the submarine. If that had been the case, the submarine likely wouldn't have come to the Naval Submarine Base until May 2019.

Courtney said Thursday that he believes the Navy chose EB for the work in part because its schedule in the fall is less busy than that of Newport News, both of which are private shipyards.

"I think it will be a quicker turnaround in Groton," Courtney said.

Courtney said the early "homeporting" of the Indiana means 138 military personnel will come to the area before expected and will be around for maintenance on the submarine.

"Obviously, we want to have that base at the highest level of occupancy," he said. "That's always a good thing for demonstrating the high military value of Groton, and it means we're going to have a crew of sailors and officers that will be part of the community sooner rather than later."

Courtney said using private shipyards for repair work helps ease the workload of the Navy's public yards, which are operating at 20 percent overtime.

"That's why we were so pleased when the Indiana got assigned to Connecticut," he said. "That shows our advocacy is starting to show movement in a positive direction."

Courtney said the maintenance work also will save the jobs of about 300 people — people who were hired to repair the aging USS Montpelier, a Los Angeles-class submarine. Work on the submarine is winding down ahead of the anticipated creation of 12 ballistic missile submarines known as the Columbia class.

"The construction schedule can have gaps," he said. "They don't want to lose these guys and gals right after hiring them."

Going forward, Courtney said he wants to fight for EB to land repair jobs for a couple other older attack submarines.

"It just creates stability at EB in terms of the workforce," he said.

The Indiana will be commissioned in Florida's Port Canaveral and will come to Groton shortly afterward.

## **New Commander of Submarine Forces Tells Sailors 'Prepare for Battle'**

**Ben Werner, USNI News, August 6**

Vice Adm. Charles A. Richard took over as the commander of U.S. submarine forces during a change of command ceremony held aboard the Virginia-class-attack submarine USS Washington (SSN-787) on Saturday.

Richard relieved Vice. Adm. Joseph Tofalo after serving as the deputy commander of U.S. Strategic Command in Nebraska.

"To the men and women of the submarine force, prepare for battle," he during the ceremony, according to a Navy release.

"It is only by being prepared for battle that we can hope to avoid it. If we cannot, our nation expects and

demands victory. We shall not fail.”

Richard, in his new role as the commander of Submarine Forces (COMSUBFOR), is responsible for ensuring the U.S. Navy’s undersea superiority is unmatched. As the commander of Submarine Force Atlantic he has operational command of all U.S. submarines based on the Atlantic coast, while as the commander of Allied Submarine Command he is the principal advisor to NATO submarine plans.

“We are back in a world in the midst of major power competition. In that competition, our strength undersea is a key advantage that we have,” he said.

“That will not change on my watch. With so much at stake, we cannot let up and must execute our mission with a continued sense of urgency.”

Richard becomes COMSUBFOR during a time of change in the Atlantic. The Navy is reestablishing U.S. 2nd Fleet to face a reemerging Russian naval threat in the North Atlantic. Russia has increased submarine activities, with its fleet now operating at a pace last seen during the Cold War, Navy leaders have said.

During the change of command ceremony, Chief of Naval Operations Adm. John Richardson commended Tofalo for his work strengthening submarine readiness, according to a Navy statement. Richardson himself is also a former commander of Submarine Forces.

“He has spent every waking moment thinking about how to make our force stronger, ready to sail under the seas and over the horizon, to face any challenge, and to return stronger than when we left,” Richardson said during the ceremony, according to a Navy release.

Richard is a 1982 University of Alabama graduate and a career submariner whose commands have included USS Parche (SSN-683), Submarine Squadron 17 and the decommissioned nuclear deep diving Submarine NR-1. Ashore he served as the director of undersea warfare (OPNAV N97) on the Chief of Naval Operations staff in the Pentagon. He has served as the STRATCOM deputy since September 2016.

Tofalo, who is from upstate New York and a 1983 graduate of the U.S. Naval Academy, pointed out the change of command occurred on the 60th anniversary of the USS Nautilus (SSN-571) mission to the North Pole.

“This ‘top of the world’ historical reference is certainly fitting,” Tofalo said during the ceremony, according to a Navy release. “Because I’m ‘on top of the world’ today, as it has been the honor of my lifetime to command the greatest submarine force the world has ever known. A force made up of 24,000 outstanding active duty, government civilians and reservists, and their families, who combined are only 4 percent of the greater navy, yet operate 25 percent of the Navy’s warships including 70 percent of Nation’s accountable nuclear weapons.”

Tofalo retired from the Navy after more than 35 years of service, following in his parents footsteps. His father too served for 35 years, and his mother was a Navy WAVE, one of the first women in enlisted Navy service. Tofalo commanded USS Maine (SSBN-741) and Submarine Squadron 3 and served multiple times at U.S. Fleet Forces Command and the Chief of Naval Operations staff.

Before retiring, he issued one last challenge to the submarine force.

“To the Sailors and the Force, I challenge you to continue our emphasis on competence and character, relentlessly pursuing your theoretical maximum performance as both individuals and teams,” he said. “I also challenge you to continue to do everything with honesty and integrity. Revel in hard facts and the certitude of being a standards-based organization.”

## **The US Navy’s Top Acquisition Priority Stumbles Out Of The Gate**

**David B. Larter, Defense News, August 6**

The U.S. Navy’s \$122.3 billion Columbia-class ballistic missile submarine program is off to an inauspicious start after faulty welding was discovered in several missile tubes destined for both the Columbia and Virginia-class programs, as well as the United Kingdom’s follow-on SSBN program.

In all, 12 missile tubes manufactured by BWXT, Inc., are being scrutinized for substandard welds. Seven of the 12 had been delivered to prime contractor General Dynamics Electric Boat and were in various stages of outfitting, and five were still under construction. The Navy and Electric Boat have launched an investigation, according to a statement from Naval Sea Systems Command spokesman Bill Couch.

“All BWXT welding requiring volumetric inspection has been halted until the investigation is complete,” Couch said.

The bad welds came to light after discrepancies were discovered with the equipment BWXT used to test the welds before shipping them to GDEB, according to a source familiar with the issue.

The discovery of a significant quality control issue at the very outset of fabrication of Columbia injects uncertainty in a program that already has little room for delays. The issue is made even more troubling because it arises from a vendor with an excellent reputation, and raises questions about whether the Navy can deliver Columbia on time, something the Navy says is vital to ensuring continuous nuclear deterrent patrols as the Ohio class reaches the end of its service life.

The issue with the missile tubes, part of the common missile compartment to be installed in both Columbia and the UK's Dreadnought submarine program, should not put the Columbia program behind schedule, Couch said. The impact on Royal Navy's Dreadnought program is less clear, Couch said.

"Impacts to the delivery of missile tubes to the UK will be assessed upon completion of GDEB's efforts to define and scope next steps," Couch said.

BWXT is one of three vendors sub-contracted to deliver tubes for Columbia and Dreadnought and one of two on contract for Virginia class, Couch said. The quality control issue not only impacts the U.S. and U.K. ballistic missile submarine programs, but might also impact the schedule for the Navy's next iteration of the Virginia class, Virginia Block V, which incorporates additional vertical-launch missile cells, known as the Virginia Payload Module.

"The Navy is assessing the potential impact to Virginia-class submarines with VPM," Couch said.

Early indications are the issue is contained to just tubes fabricated by BWXT, Couch said.

"The Navy/GDEB team is working to bound the scope of the problem and engineering assessments are ongoing to assess and determine remediation for the identified issues," Couch said. "Initial reports indicate that the other vendors do not have the same issue, and they continue to produce missile and payload tubes."

The Navy awarded General Dynamics a \$101 million contract for SSBN missile tubes back in 2016. Design work for the common missile compartment goes back nearly a decade. In September, the Navy awarded a \$5.1 billion contract to General Dynamics Electric Boat to finish design work for the boat ahead of beginning construction in 2021.

What impact the faulty welds will have on the cost of either Columbia class, already among the most expensive programs in Defense Department history, or Virginia class is unclear, said a Navy official familiar with the details speaking on background. A July Congressional Research Service report put the cost of acquiring the 12-ship Columbia class at \$122.3 billion.

"It's not a good sign for a program that has had a lot of attention, it's the Navy's number one acquisition priority," said Bryan Clark, an analyst with the Center for Strategic and Budgetary Assessments and a retired submarine officer. "It's an early and pretty significant failure in a major component from a manufacturer with stellar reputation."

In a statement, General Dynamics said the company was committed to limiting the impact on the U.S. and U.K. sub programs.

"General Dynamics Electric Boat is investigating a weld issue identified by one of its subcontractors on missile tubes delivered to GDEB for use in the U.S. COLUMBIA and UK DREADNOUGHT SSBN programs and payload tubes for the VIRGINIA Class SSN program," the statement reads. "GDEB is working closely with the subcontractor and the Navy to mitigate any potential impacts to these programs. As our customers expect the best from us, safety and quality are central to the culture at General Dynamics Electric Boat."

The Navy needs to start construction on Columbia in 2021 to have the boat out on patrol by 2031, a schedule NAVSEA still thinks its on track to meet.

"The Navy purposely planned for early construction of the Common Missile Compartment including missile tubes and first article quad pack, to mitigate risks such as these, and construction start for Columbia remains on schedule in FY2021," Couch said.

Ultimately, however, it is probably too early to tell if there will be any significant impact to the Columbia schedule, said Clark, the CSBA analyst.

"The problem is that this causes challenges down the line," he said. "The missile tubes get delayed, what are the cascading effects of other components down the line? It's a pretty intricate dance at Electric Boat when it's building two other fast attack boats at the same time so what the impact of a delay here will be might not be clear."

The question of whether the Navy can recover from the setback is still an open one, said Thomas Callender, also a retired submarine officer and analyst with the Heritage Foundation.

"The Navy does not have a lot of margin in the time-frame for the class, especially in the first hull, so that is a worry."



## **USS Ohio (SSGN 726) Gold Crew Welcomes New Commanding Officer** **SUBRON 9 Public Affairs, Navy.mil, August 7**

**KEYPORT, Wash.** - The Gold crew of the guided-missile submarine USS Ohio (SSGN 726) conducted a change of command ceremony in the Jack Murdock auditorium at the Naval Undersea Museum, Aug. 6.

Capt. William Johnson relieved Capt. Gerald Miranda and assumed the duties and responsibilities of the Ohio Gold crew during the ceremony.

Guest speaker, Rear Adm. Daryl Caudle, Commander, Submarine Force, U.S. Pacific Fleet acknowledged the outstanding performance and leadership of Capt. Miranda.

"Capt. Miranda, as you head off to your next assignment, rest assured that your caring and visionary leadership, coupled with your genuine concern for the men and women of Ohio Gold were significant, meaningful, and effective. You not only contributed deeply to keeping our nation safe, you changed the lives of the Sailors within your charge."

Miranda assumed command of the Ohio Gold crew April 21, 2016. Through the guidance of his leadership, the crew completed one six-month Western Pacific deployment completing two missions vital to national security. They also received the Personnel Readiness White "P", Information Technologies White "I", and Deck Seamanship White "D" for 2016 and the Medical "M", Personnel "P", Weapons "W", Battle "E", and the Retention Excellence Award for 2017.

"There are two men up here who are smiling the most, me and Capt. William Johnson," said Miranda. "But we are smiling for different reasons. I am smiling because I have had an incredibly successful and rewarding tour on Ohio. I am smiling because I will now have more time to devote to my wife and kids. I have given Ohio every ounce of energy I had. Capt. Johnson is smiling because he is about to become the next commanding officer of the most powerful and capable submarine in the nation's arsenal. He has an awesome crew too."

Miranda's next duty station will be Washington D.C., where he will be the Chief of Staff for the assessment division in the office of the Chief of Naval Operations.

Johnson comes to Ohio Gold from Strategic Systems Programs in Washington D.C.

"I am so blessed and so fortunate to stand before you today," said Johnson. "As you have heard throughout this ceremony, Ohio has excelled in all facets of submarining and has served as one of the Navy's cornerstones for nearly 40 years. I am grateful for the opportunity to become a part of the rich legacy that the boat has already established. Forged from steel, equipped with impressive technology and powered by nuclear energy, she is capable of taking the fight to the enemy. However, the capabilities and performance of this ship are not based on the engineering design and physical attributes, but on the skill and professionalism of the crew. The 165 warriors of Ohio are what gives the ship it's fighting spirit and what has forged her success. Shipmates, I consider it the highest privilege to be given the opportunity to lead you, and I eagerly look forward to sailing beneath the waves with you."

Armed with tactical missiles and equipped with superior communications capabilities, Ohio has the ability to conduct large-volume, short-notice strike missions and covertly deploy special operations forces.

Ohio and its sister ship, USS Michigan (SSGN 727), are both homeported at Naval Base Kitsap-Bangor.

## **The USS Delaware Is Almost Ready For Training** **Joe Irizarry, The Courier Express, August 9**

Even though it won't be in commission for about a year, a Navy submarine named for the First State is almost completed.

"It's going to be one of our nation's attack submarines," said USS Delaware Commander Brian Hogan. "The attack submarine is really kind of the battle wagon of the fleet."

The USS Delaware is about 90 percent complete according to Hogan.

Hogan estimates the submarine, which he said is about as long as a football field, will hit pier side in a couple of months followed by six months of testing. He believes it will be delivered to the full fleet in by this time next year, give or take a couple of months.

As for submarines in general, they provide a distinct advantage for the Navy.

"Tracking submarines, tracking ships, sustained under sea presence off of others coasts to collect information. There's all sorts of things that we're able to do, it's a great national asset, and I'm very proud to

command a crew of 135 sailors onboard the Delaware."

Senator Tom Carper worked with the congressional delegation to get a Navy ship named for the state of Delaware even contacting the secretary of the Navy.

Carper is thrilled with the USS Delaware, and he wants as many Delawareans as possible to share in the experience.

"We're going to make sure going forward over the next less than a year that as many people in the state will be able to participate, particularly next year with the commissioning of the submarine," said Carper.

Once commissioned, the USS Delaware will officially join the Navy's fleet.

The submarine is expected to be christened next month in Virginia, where it's currently being built.

### **Russian Submarine Activity Largest Since Cold War: top US Navy admiral Lucas Tomlinson, Fox News, August 8**

Pentagon and NATO brass have issued fresh warnings about increased Russian naval activity in the North Atlantic and Mediterranean Sea, with the top U.S. Navy admiral saying this week Russian submarine operations are currently at levels not seen since the Cold War.

That's one reason the Navy plans to stand up a new command later this month to deal with the return of an old foe.

Tuesday night provided the latest example of Russia's new show of force. A British Type 45 guided-missile destroyer escorted two Russian warships through the English Channel.

The Royal Navy posted video of HMS Diamond alongside the Russian destroyer Severomorsk and cruiser Marshal Ustinov in the English Channel. Interactions like this have become so common, the Royal Navy has warships standing 24-hour alert in port.

The incident took place one day after Defense Secretary Jim Mattis met with his British counterpart, Gavin Williamson, at the Pentagon. It marked the second time the same British warship had responded to approaching Russian Navy warships, according to the warship's commanding officer.

This week, the U.S. Navy's highest ranking officer, Adm. John Richardson, chief of naval operations, told VOA Russian submarine activity in the North Atlantic is "more than we've seen in 25 years."

But a day later, Mattis downplayed the perceived threat from the Russian Navy.

"We always keep an eye on the submarines at sea and I prefer not to say any more than that," Mattis told reporters on the Pentagon steps ahead of Williamson's visit.

A recent Russian missile test provided another example of Russia's resurgence at sea.

Two months before the Helsinki summit, a Russian ballistic missile submarine launched four long-range nuclear missiles in rapid succession from off the coast of Russia in the White Sea, each with a range of 6,000 miles – putting Washington, D.C. in range. U.S. spy satellites took note of the test, which marked the first time Russia had fired this many missiles at once from its newest class of ballistic missile submarine.

Observers said tensions are high right now between Moscow and Washington, despite the summit in Helsinki last month. On Wednesday, the U.S. said it would impose sanctions on Russia over a nerve agent attack.

"I think Russia is signaling to us that the Bear is back. We are likely to see more of this intimidating, threatening operations on the part of the Russian fleet," said Peter Brookes, a senior fellow for national security affairs at the Heritage Foundation. "This is an expression of President Putin's foreign policy and it's directed towards the United States."

U.S. officials are concerned special Russian submarines can tap into undersea cables.

Days ahead of the landmark summit between Cold War foes, President Trump signaled a willingness to ease tensions despite his top intelligence officials accusing Russia of meddling in the 2016 election.

"Maybe we will get along with Russia," the president said at a news conference on July 12. "I think we probably will be able to."

A week after the Helsinki summit, Trump told CNBC if things didn't work out, "I'll be the worst enemy he's ever had," speaking about Russian President Vladimir Putin.

Since Russian forces deployed to Syria three years ago, Russian submarines in the Mediterranean have at times launched missiles to help crush the rebellion battling the Assad regime.

The increased Russian threat is one of the reasons the U.S. Navy is bringing back the 2nd Fleet later this month in Norfolk, Va. to keep tabs on the Russians in the Atlantic.

It had been deactivated in 2011.

## **USS Batfish Celebrates 75th Anniversary With World War II Reenactment** **Staff, News On 6, August 8**

**MUSKOGEE, Oklahoma** - The USS Batfish will relive the days of World War II with a living history tour Saturday, August 18. In honor of the 75th anniversary of the submarine's commissioning, volunteers will re-enact the days of active service with a live crew.

"On a typical visit, the USS Batfish is an artifact that the public walks through and hears stories of great feats, but on Living History Day, the USS Batfish is a living breathing vessel," said Johnny Childress, Museum Coordinator of the Muskogee War Memorial Park.

"Watching the Batfish Living History Association transform the quiet submarine into a reflection of its busy past is quite the feat to see."

In tours that run from 10 a.m. through 6 p.m., visitors can tour the nine compartments of the sub while a crew relives the past. Crew members have prepared several new simulations of submarine actions like submerging and surfacing - even sinking enemy submarines.

There will be special activities for children to create souvenirs to take home like periscopes and floating subs.

## **Commander, Submarine Forces Earns Meritorious Unit Commendation** **COMSUBLANT Public Affairs, Navy.mil, August 10**

**NORFOLK, Va.** – Chief of Naval Operations (CNO) awarded the Meritorious Unit Commendation (MUC) to Commander, Submarine Forces Aug. 3. during the change of command ceremony held at Naval Station Norfolk.

The command was presented the MUC for its efforts to deliver combat-ready forces, leadership of the Diesel-Electric Submarine Initiative program, its innovation in providing rapid-capability initiatives, and commitment to personnel improvement programs.

In his remarks at the ceremony, CNO highlighted the command's many accomplishments and dedication to service exhibited by the entire Submarine Force team of Sailors and civilians. He also lauded the leadership of Vice Adm. Joseph Tofalo prior to presenting the award to Tofalo, Capt. Rob Gaucher, chief of staff, and Force Master Chief John Perryman.

"The Submarine Force headquarters staff is, in my opinion, the best TYCOM staff in the entire Navy," said Tofalo. "CNO, thank you for honoring this staff's incredible performance with the presentation of the Meritorious Unit Commendation today."

In the citation, signed by CNO, the command was recognized for employing 14 ballistic missile nuclear submarines, which carry 70 percent of the nation's accountable nuclear warheads, and directing the "flawless execution of 101 strategic deterrence patrols and 14 successful ballistic missile test firings." In addition, COMSUBFOR planned and integrated submarines, maritime reconnaissance patrol aircraft, integrated undersea surveillance systems, and surface theater assets, and the first expeditionary, distributed and netted undersea sensor system.

"This award highlights the tremendous effort made every single day by our staff to deliver a battle-ready force," said Master Chief John Perryman, the Submarine Force Master Chief. "Our Submarine Force, from our personnel on staff to those standing watch at sea, have tirelessly worked to ensure we maintain our undersea advantage. This simply does not happen without every member of our team consistently putting forth an amazing amount of effort. I'm truly proud of them all."

The command was also recognized for their "consistent commitment to people-centeredness," for efforts to improve and formalize Sailor resiliency programs and personnel readiness. COMSUBFOR dismantled long-standing cultural norms, which drove reductions in across the board unplanned losses of up to 20 percent, and improvements in actual personnel readiness by more than seven percent per unit resulting in the best waterfront submarine personnel readiness in corporate memory.

"This award is a credit to the hard work of the Sailors and Navy civilians on our staff who tenaciously executed the CNO and fleet designs," said Gaucher. "Most importantly, this award also recognizes the value our Navy and our nation place on undersea superiority. We are thankful for the superb work of every submariner that enabled the staff to earn this award."

COMSUBFOR service members are authorized to wear the ribbon for service from September 11, 2015 to August 3, 2018.

The MUC is given for valorous or meritorious achievement by a unit. Former Secretary of the Navy John T. McNaughton established the award in 1967.

## **Columbia Construction Still Slated To Start On Schedule Despite Tube-Welding Issues**

**Michael Fabey, Jane's Navy International, August 9**

Despite welding defects discovered in missile tubes slated for the US Navy's (USN's) attack and ballistic-missile submarine forces, the service says its Columbia-class submarines meant to replace the Ohio-class ballistic-missile fleet is still on schedule to start construction in fiscal year (FY) 2021.

The affected tubes are part of the planned Virginia Payload Module (VPM) for the USN's attack submarine force and the Common Missile Compartment, which is being jointly developed for both the Columbia- and UK Dreadnought-class vessels.

"The navy purposely planned for early construction of the Common Missile Compartment, including missile tubes and first-article quad pack, to mitigate risks such as these, and construction start for Columbia remains on schedule in FY 2021," US Naval Sea Systems Command spokesman William Couch said.

"The navy is working closely with the UK to evaluate impacts to Dreadnought."

Regarding the Columbia programme, Couch said, "We are in the long-lead-time procurement phase. The navy purposely planned for early construction prototyping." He noted that the missile tube industrial base has been dormant since the early 1990s. "The specific impact will be known following additional review," he said.

The USN is assessing the potential impact to Virginia-class submarines with VPM - SSN 803 and future ships, beginning in Block V, he said.

BWX Technologies (BWXT), a subcontractor to General Dynamics Electric Boat (GDEB), identified a welding issue on subcontracted missile tubes that have been delivered to GDEB for the submarine programmes, Couch said.

The issue concerned non-destructive testing (NDT) affecting BWXT missile tubes and payload tubes. The navy and GDEB team are working to determine the scope of the problem and engineering assessments are ongoing to determine remediation for the identified issues.

BWXT CEO Rex Geveden told defence investment analysts during a quarterly results call on 7 August, "That's a problem that we self-identified to our clients, our customers at General Dynamics Electric Boat, and then ultimately to the navy. We are working very closely with those customers to try to resolve this problem. Weld quality is a core value in our business and this concerns some welded components."

He added, "We have self-suspended some welding operations in this area until we get the problem resolved. It's early in the game as to what we'll need to do there in terms of rework, but we are working daily with our client to get that worked out."

BWXT is one of three vendors providing missile tubes for the Columbia Dreadnought programmes and one of two vendors for the Virginia programme. All BWXT welding requiring volumetric inspection has been halted until the investigation is complete, Couch said. Initial reports indicate that the other vendors do not have the same issue, and they continue to produce missile and payload tubes.

Some of the affected BWXT missile tubes have been delivered to the builder's yard and are in various stages of outfitting but have not been installed on any submarines. The USN is closely overseeing GDEB's efforts to define, scope, and mitigate any potential impact to the schedule of all programmes, Couch said, and the service is working aggressively with the shipbuilder to mitigate any resulting schedule impacts associated with resolution of this issue, and working with the UK to ensure commitments made under the Polaris sales agreement are met.

During this long-lead-time procurement phase, the navy is procuring and GDEB is assembling the missile tubes. There are multiple missile tube vendors and work is continuing with the other vendors.

The Columbia class is expected to cost the USN about USD88.2 billion for procurement and another USD12.9 billion for research and development, with an average per-unit cost of about USD8.4 billion for each submarine, according to the US Government Accountability Office.

## **Electric Boat to Relocate Hundreds of Employees** **Staff, NBC Connecticut, August 10**

Electric Boat, the Groton-based shipbuilder, has struck a five-year deal to relocate hundreds of employees

to a facility owned by the Mashantucket-Pequot Tribe in North Stonington.

Straddling the North Stonington-Stonington line, Eagle Park is a 125,000 square-foot facility.

"It's exciting when we have buildings that already exist, we want to bring life into them, so it's an exciting thing for the town and the tribe," said Mike Urgo, North Stonington's First Selectman.

According to Electric Boat and tribal officials, the space will be repurposed over the coming months as the company moves in, relocating 400 designers and engineers from the Fort Trumbull facility in New London.

"It's in line with what we've been trying to do and also what we kind of expected to happen," Urgo explained. "There's a lot of activity in the area and this certainly (is) one of the first catalysts to help, I think, attract more to the area."

Urgo said the five-year deal makes sense given Eagle Park's key location on Route 2, off the Interstate 95 corridor.

"It's a really perfect location for a lot of potential businesses to call home, very convenient for people who want to work here," he said.

The move could also translate to more business for local eateries, such as Goodies Family Restaurant, which is less than two miles away.

"I would really like a really busy lunch hour," said owner Cheryl Pelchat. "We're not too busy here for lunch, breakfast extremely busy, so it would be very nice to get more clientele for the lunch. I'll be sure to send them my takeout menus."

### **'You're one beer away from Navy Times!' Inside a legendary submariner bar. Geoff Ziezulewicz, Navy Times, August 11**

**BREMERTON, Wash.** — What happens to the things they carried?

The memories, the stories, the mementoes that submariners collect during their long months under the sea? Things only fellow shipmates would consider priceless?

For retired Torpedoman 1st Class Larry Timby, the personal and unit items shared — and sometimes pocketed along the way — follow a certain theme.

"When you first get out of the military, you have your plaques and your awards, and you hang them in your house," Timby said. "They call it their 'I Love Me' wall."

But over the years, he said, things change.

"The wife or the girlfriend doesn't want to see it on the wall anymore," he said. "And when you downsize or move, what do you do with it?"

Sure, some stuff gets packed in a box and forgotten. But over the years, many submariners have opted to send their stuff to the Horse & Cow, perhaps the most legendary submariner bar on the planet.

Part cozy dive, part museum, the Horse & Cow's location in downtown Bremerton stands as an homage to the silent service, a monument that you can drink in.

On the bar's bukhheads swim the history of the American submariner, through items meaningful not only to the sailors who donated them but also the crews that recognize the artifacts when they spot them.

On one wall hangs what's believed to be the original canvas banner from the Nautilus, America's first nuclear-powered submarine launched in 1954, four years before she dove under the North Pole.

Another wall features a box of three military-issue knives, given to the tavern by a retired Navy SEAL who'd rather have them displayed here than languish in an attic trunk.

Overhead, attached to a USS Horse & Cow (SSN 333 1/3) sail, the eyes find a pair of Texas longhorns. They went underway aboard the now-decommissioned submarine Houston.

The tattered American flag that flew on the sub's final tour is framed on another wall, a present from the boat's last commander.

Walls are pocked in plaques and original World War II Walt Disney drawings of submarine insignia. Everywhere are banners and sideboards and probes and engine room throttle wheels, gadgets and gear looted by submariners over the years that ended up here.

When Navy Times visited, Timby proudly showed off their latest trophy: a sideboard from the submarine Bremerton, a boat on its way to being decommissioned after 37 years of service.

And then there's a plaque from the Scorpion, a sub that sank under mysterious circumstances in 1968, killing 99 crewmen. A POW-MIA flag is draped nearby to remember them.

"I think it was a Cold War incident," said Timby, disputing the semi-official explanation that an accidental torpedo explosion crushed the boat's hull.



He thinks the Soviets sank her.

A yellowing bar biography on the wall explains that the name “Horse & Cow” stems from Poseidon, the Greek god of the sea, who’s often portrayed accompanied by a small horse and a small cow, or bull.

During the world wars, “merchant sailors, terrified of being sunk by submarines, tattooed a horse on one ankle, a cow on the other, in hopes of ensuring safe passage,” the bio states.

It might be an architectural homage to the silent service, but the bar and restaurant also brims with sailors, Puget Sound Naval Shipyard hands, military veterans of all stripes and assorted Bremerton regulars.

One recent Friday night, waitresses passed out shots of “Nuke Waste,” a schnapps-like drink invented by Mike Looby, the founder and owner of the Horse & Cow’s Bremerton outpost.

When everyone has a shot of the bright green victual in front of them, the girls sound a klaxon behind the bar and everyone drinks.

Earlier this year, Attorney General Jeff Sessions gingerly sipped a shot while visiting the Horse & Cow with his son-in-law, a Navy submariner.

Looby said he had to gently goad the Alabama Republican into taking a sip.

“A lot of these old guys come in off the old boats, the diesel boats,” said Timby, who became co-owner of the bar a few years ago after spending years as one of Looby’s most loyal customers. “They have their reunions here. They see stuff and they light up.”

That’s because at the Horse & Cow, submariners, their boats and their buddies are never forgotten.

“There’s a lot of things that just fade away,” Timby said. “But as long as we’re here, we’ll always be remembered.”

#### **“It wasn’t about the money”**

Sipping a cocktail, Looby is decidedly coy about how his watering hole came to hold so many submarine treasures.

“How we acquired everything is a mystery,” Looby said.

But he’s acquired a lot. His 5,000-square-foot Horse & Cow in Guam, another U.S. submarine hub, displays other keepsakes. Spillover collectibles are stored away, perhaps destined one day for outlets in Groton, Connecticut, and Pearl Harbor.

“Everything’s original, we never paid for anything,” he said. “Some of the stuff came under the cuff, some of the stuff by captains.”

Some of it first landed in the hands of his father, the late Jimmy “The Godfather” Looby. An Army vet, he founded the first Horse & Cow in 1953 with his brothers in San Francisco.

Back then, surface warfare guys or civilians risked their butts daring to enter a submariner bar, but times have changed.

“If you brought something of value from the submarine and we put it up in the bar, it was open tap,” Looby recalled. “Beer, booze, food, whatever was available, and it was just given to the guys, and it wasn’t just a onetime thing.”

Pier 39 actually had boats tied up there. After a Defense Department round of base closures shuttered the waterfront, Jimmy Looby moved his operation to an area near Hunters Point Naval Shipyard in San Francisco.

When another round of consolidations scuppered that location, The Godfather relocated to Mare Island Naval Shipyard in Vallejo, northeast of San Francisco.

“You’re there to make money, but it wasn’t about the money,” Looby said. “In Vallejo, when I was working for my father, I know for a fact we gave away more booze than most bars in that town sold.”

When that base shut down, the Looby operation again shifted, this time to Bremerton, but The Godfather was done by then and his son had taken the helm, launching the Puget Sound outpost in 2000.

#### **“Things I shouldn’t have”**

Timby and Looby have an obvious affection for the submariner artifacts sailors have entrusted to them over the years. And some of the items submariners have smuggled to them are borderline bonkers.

Once while working with his dad in Vallejo, “we had non-charged reactor rods,” Looby said.

They also have an undisclosed number of primary valve cap covers from submarines, known in their post-service lives as the “Horse & Cow chalice.”

If you don’t know what a primary valve cap cover is, you’re probably not a submariner.

But after a primary valve cap cover’s retirement, barkeeps will pour a bottle of Nuke Waste into one of the caps and pass it around.

“Back in the nuke room, somewhere back aft, near the nuke room, they have this in the engine room,”

Timby said. "That's all I'm gonna say about it."

"Those are highly controlled," Looby added. "I've got quite a few of those, and when those come to me...I don't know where it came from. I don't ask questions. I don't care."

Sometimes, buttoned-up officers come into the bar, demanding to know who gave Looby his latest memento, but he said he'll always protect his sources from the squares.

"There's some officers out there that everything is by the book," he said. "Things show up and they're out of their mind when they see it here."

Sometimes they raise hell, Looby said, but nothing comes of it.

"If it ends up at the Horse & Cow, it's at the Horse & Cow," he said. "You can come look at it anytime, but it's at the Horse & Cow."

Sometimes things even move through official channels. The guys recently acquired two seats off the fast-attack submarine Albuquerque, which was decommissioned last year.

"Official paperwork and everything," Timby said.

"For the most part, it's drama free, but there are some things I get that I don't want to boast about," Looby said.

"You're one beer away from Navy Times!"

Looby is sometimes wistful for the old Navy days, when everything wasn't so sanitized and politically correct. At the same time, he doesn't swab up as much puke or stop as many fights as he did back in the day. In fact, today's junior enlisted kids look out for each other.

"There's always at least one designated driver and they're always making sure everybody has a ride home," Timby said.

If some of the younger guys are really putting them back, Looby asks how they're getting home, and the designated driver always raises his hand.

"He's the one sitting there going, 'I gotta sit here with all these drunk bastards and deal with them?'" Looby said.

From Guam to Bremerton and at several points in between, Looby has tipped back too many drinks to count, sipping with every rank from seaman to admiral.

He's even gotten straight twisted with some flag officers, and recounted stories not fit for print.

"I always remind them, 'Hey man, you're one beer away from Navy Times!'" Looby said.

One sea story starts "in a land far, far away, in an undisclosed location" outside the United States.

"There was this admiral friend of mine," Looby recalled. "We were hosting a boat from another country. It becomes a challenge to get them drunk. The foreign dignitary's going to drink us under the table, or we're going to drink them under the table."

The battle commenced at about 4 p.m., and by 2 a.m., everyone was legless.

"I don't want to hang anybody, but by that time, he was speaking 'drunkanese,'" Looby said of the anonymous admiral. "I don't think he even knew his own name, snot running from his nose."

Eventually, the duty drivers for the foreign commanders arrived.

"Their captain and their commodore finally staggered out the door and that's how it ended," Looby said. "And we staggered out ourselves."

Looby knows all the boats, and all the crews, even submariners who arrive in Bremerton years after they got out, just to belly up again at the bar.

"We picked up where we left off, like we haven't missed a single day or a single story," Looby said. "The rumors. He thought I was dead, I thought he was dead. But we're sitting here, drinking beer."

## **Nebraska Blue Conducts Change of Command Ceremony** **MC1 Amanda Gray, Navy.mil, August 10**

**BANGOR, Wash.** – The blue crew of Ohio-class ballistic missile submarine USS Nebraska (SSBN 739) welcomed a new commanding officer during a change of command ceremony, Aug. 9.

Cmdr. James Lembo, from Mesa, Arizona, relieved Cmdr. Jason Geddes, from Indianapolis, during the ceremony at Deterrent Park.

"To my crew, my warriors, I want you to know that to me you are not just my crew; you have also been like my second family," said Geddes. "You were the stars in this story. Your hard work and dedication throughout these four years did not go unnoticed. I recognized it every single day. You never let me down. Never. Your pride in the ship and our crew runs deep, but even deeper are the successes and accolades that

await you if you continue your amazing efforts.”

Geddes assumed command of a combined Nebraska green crew Oct. 18, 2014. During his extended commanding officer tour, the boat completed a 41-month engineered refueling overhaul (ERO) to extend the life of the submarine for another 20 years. He led the combined crew for two years until the crew split in 2016. As blue crew commanding officer, the crew successfully launched two Trident II D5 missiles off the coast of San Diego during demonstration and shakedown operations (DASO), and completed the boat’s first strategic patrol since 2013. The crew also earned Commander, U.S. Pacific Fleet Retention Excellence Awards for the past three years.

Geddes’ next duty station will be Groton, Connecticut, where he will serve as the deputy for Submarine Squadron 4.

“I have had the opportunity to spend some time with Commander Lembo, and I am more than confident that he is just the right guy for the job and will take this crew and the ship to achieve great success in the years to come,” said Geddes. “I wish you the best on your journey.”

Lembo comes to Nebraska blue from the Israeli National Defense College.

“To the Nebraska crew, thank you to you and your families for your service and sacrifice,” said Lembo. “We are privileged to be among the thousands of Sailors who have sailed on her and have been safeguarding our freedom and way of life since she entered strategic service in 1993. We have the awesome responsibility of continuing Nebraska’s legacy of excellence, and I know we are up to the task.”

Nebraska is one of eight Ohio-class ballistic missile submarines homeported at Naval Base Kitsap-Bangor, providing the most survivable leg of the nation’s strategic deterrent forces.

## **Navy Announces Rating Modernization Progress Update** **Chief of Naval Personnel, Navy.mil, August 13**

**WASHINGTON** – Navy released an update on the Sailor 2025 Rating Modernization’s four lines of effort (LOE): Career Fields, Marketplace Force Management, Advancement, and Credentialing in NAVADMIN 196/18, Aug. 13.

The updates listed below provide a summary on the current status and way ahead of the four LOEs, but all personnel are strongly encouraged to read the NAVADMIN for greater detail on each topic.

### **Career Fields**

The alignment of Navy ratings into 23 career fields and 12 broad communities has provided a foundation for future development of more flexible and sustainable career paths for Sailors. In October 2017, and March and June of this year, three groups of over 850 Navy Enlisted Classification (NEC) codes were successfully converted to a new construct. More information about the revised NEC construct and communities and career fields can be found at <http://www.public.navy.mil/bupers-npc/reference/nec/Pages/default.aspx>.

### **Marketplace Force Management**

Driven by the urgent requirement to update and modernize personnel systems, the Navy began to expand career fields, in order to transform enlisted force community and career management in the future.

A new “Navy Detailing Marketplace” is currently under development, through which the foundational elements of an automated personnel management system will tie Sailor enlistment directly to negotiations for a billet, which will then allow Sailors to reenlist or extend for that billet assignment. The marketplace will be a single system that uses the new NEC construct to better represent Sailors’ qualifications, experience, and performance in the form of a resume. The “Sailor Resume” function will be available in the future under “My Record” on MyNavy Portal (MNP). Starting in Fiscal Year 2019, Sailors will be able to view all advertised billets for which they are qualified and to then submit a resume that includes: ASVAB scores, security clearance status, worldwide deployability, qualifications, evaluations, NECs earned, education degrees and training certifications. Ultimately, the resume function will provide the ability to better match Sailors to billets.

### **Advancement Process**

Late in 2017, Navy senior enlisted leaders completed the first phase of the Advancement Exam Readiness Review (AERR) testing bank improvement plan by drafting advancement exam questions that match current and relevant rating-specific technical requirements with the hands-on, real-world knowledge and experience needed in the Fleet.

The establishment of the Professional Military Knowledge Eligibility Exam (PMK-EE) focuses the Navy Wide Advancement Exam (NWAE) on occupational knowledge and will serve as an eligibility requirement for



advancement to paygrades E4/5/6/7. PMK-EE will be delivered electronically, and will be available via the MyNavyPortal (MNP) website beginning in October 2018.

The online Enlisted Advancement Worksheet (EAW), will automate the manual advancement processes and enable Sailors to review their worksheets before the exam and take charge of their advancement records. An EAW pilot, available through the Navy Standard Integrated Personnel System (NSIPS), will be implemented with the Active Duty and Reserve spring 2019 advancement cycles.

The Senior Enlisted Advancement to Vacancy (A2V) pilot was announced in June and will fill senior chief petty officer and master chief petty officer priority billets using a spot advancement incentive, and will lead enlisted advancement modernization for exceptional Sailors in all paygrades with critical NECs in the future.

### **Credentialing**

Navy Credentialing Opportunities On-Line (COOL) currently funds over 2,700 certificates/licenses with opportunities for Sailors in every rating. Navy COOL recently reduced the minimum service remaining on a Sailor's enlistment contract to earn credentials from 12 to six months, and expanded opportunity for Sailors to earn credentials mapped to an academic degree or technical education certificate. Additionally, there are more opportunities for Sailors to maximize their Navy training and qualifications toward attainment of U.S. Coast Guard (USCG) licenses, to include funding the Transportation Worker Identification Card. These opportunities are highlighted in a dedicated "USCG National Maritime Center (NMC) Credentialing" tab for ratings with applicable USCG license alignment on the Navy COOL website.

Sailors will be able to convert their military training records, billet assignment history and other credentialing data to a compatible civilian resume by the end of fiscal year 2019. Using those standardized data, Sailors can easily research information on civilian and federal occupations mapped to their ratings at <https://www.cool.navy.mil/usn> or via the Navy COOL app available on the Google Play store or iTunes.

The goals for Rating Modernization are to provide greater choice and flexibility for our Sailors with respect to detailing and training, to provide greater flexibility for the Navy in assigning highly trained personnel, and to increase professional alignment with civilian employers.

Rating Modernization supports Sailor 2025 initiatives through the goals of redefining career fields, improving talent management and the detailing process, offering more career choices, and expanding professional development opportunities. These initiatives are intended to increase Fleet readiness, sustainability, and fit.

## **Senator John Warner Shares Fundamentals of Military Service at USS John Warner Change of Command MCC Darryl Wood, Navy.mil, August 15**

**NORFOLK, Va.** – Cmdr. Burt Canfield was relieved by Cmdr. William Wiley as commanding officer of the Virginia-class fast-attack submarine USS John Warner (SSN 785) during a change of command ceremony held on Naval Station Norfolk, August 15.

Senator John Warner, the submarine's namesake, and Vice Adm. Frederick J. Roegge, President, National Defense University, were the guest speakers at the ceremony.

"I owe my thanks to the United States of America," said Warner. "When I wore that white hat, it was the most important chapter of my life. It was literally the beginning of my life. I hope that those among you proudly wearing that hat today can take from my remarks, a sense of your own accomplishment and the future that rests ahead of you."

As Warner recalled his first memories of military service, he spoke of the pier where the submarine John Warner was moored and specifically the pylons that held the pier in place. His path in life was the pier and the fundamental lessons were the pylons supporting and protecting that path.

"It was the Fall of 1944, and our nation had withstood the toughest battles of World War II in terms of casualties. More Americans were killed in one battle, the Battle of the Bulge, right there in that Fall, that's when I and thousands of young seventeen-year-old kids all got their parent's consent and joined the services. We couldn't wait to get in and try and pull on the oar and do our bit," Warner explained. "I was sworn in the first week of January 1945, sixteen million men and women were in uniform and back here, on the home front, they were entirely united, steadfast behind our mission."

Warner described the wakeup call that the Battle of the Bulge had provided, and how he learned of the details while in boot camp.

"I remember so vividly. They would bring the raw footage of the battles back, they put us in an auditorium

and we would watch that raw footage. It wasn't edited, it was raw, just as they would pick up the bodies, the wounded, everything else, and then after the film was over, the lights would go on and an officer would walk out and he very solemnly would say, you saw that. You're the next to be, you're in line and you have got to pay attention to what you're being taught here and learn it."

To the crew of John Warner, he said, "Learn the trade of the military. Tattooed in your heart forever should be that phrase; Duty, Honor, Country."

That was the first lesson Warner would carry with him throughout his military service and life. The second lesson he shared with crew was about respect. "Gain respect for that man on your left, the man on your right, or woman. Respect them, learn to respect and trust them, because at some time, maybe in the future, your life is going to be dependent on them stepping forward and doing their duty. To do what they have been trained to do, to save both of you, and that is a fundamental," said Warner.

I say to each of you white hats, if a high school dropout, like me, a badly disciplined kid like me can make it, can go through all the steps from being a white hat to Secretary of the Navy to Chairman of the military committee. Each and every one of you can do that and maybe do better. So I commend you wherever you are on this dock today, or throughout our naval forces don't forget that it's up to you to learn those fundamental lessons," said Warner, "to carry that tattoo on your heart and to feel proud and brave for what you have done. And look them squarely in the eye and say Duty, Honor, Country is my code."

As Roegge took the podium, he welcomed all in attendance, reminded all of why such ceremonies are held, and spoke to the importance of the submarine force.

"The Navy's responsibility is to prevent challengers from using the sea to threaten the interests of the U.S. and our allies; but within this maritime decade lies preponderantly a submarine decade. Because as potential adversaries develop capabilities to counter the U.S. military, the risk to ground forces, aircraft and ships grows daily," said Roegge. "Our submarine force retains the unique ability to go undetected, anywhere in the world, and to hold at risk the things that potential adversaries hold most dear."

"Attack submarines like John Warner are able to do this because they are the world's most capable submarines and they are operated by the world's most capable crews," said Roegge.

Capt. Martin Muckian, Commander, Submarine Squadron Six, presented Canfield with the Legion of Merit Medal (LOM) for his exceptionally meritorious conduct in performance of outstanding service as commanding officer of USS John Warner, from 2015 to 2018 and specifically for inspiring his team with brilliance in all areas and demonstrating exceptional leadership he led his team to sustain warfighting, mission readiness, excellence establishing John Warner as one of the top performing commands in the Atlantic Fleet.

Canfield assumed command of John Warner in September 2015. A native of Damascus, Pa., Canfield graduated with honors from New York Maritime College in 1998 with a Bachelors of Engineering in Electrical Engineering. He later earned a Master's Degree in Aerospace Engineering from the Naval Postgraduate School in 2005.

After greeting friends and family in attendance, Canfield offered a special thanks to Senator John Warner and his wife, Jeanne.

"Your relationship to the boat is very important and you are both an inspiration to us all," said Canfield, who presented flowers as an expression of gratitude for all Jeanne and Senator Warner have done, and continue to do, in support of the sailors and our nation."

Canfield attributed his successes to his mentors and the Sailors of John Warner, including Roegge, his first CO on board USS Connecticut (SSN 22), Capt. Bob Clark, his second CO on Connecticut. "I will never forget the confidence you placed in me, standing watch in the most sensitive operations a submarine can do, and you let me drive the ship. I have never forgotten the freedom of decision and action you gave to me and I have tried to model my leadership style after what you showed me."

Canfield finished his remarks with thanks to his crew, "To the crew of the Sledgehammer of Freedom, well done! I always tell people I have been blessed with a great crew. I really have. Success doesn't happen in spite of individuals; it happens because of individuals. Individuals working together as a team of driven yet humble warriors. Take pride in your accomplishments and know that it wasn't me, it was you. You have made this ship into what it is today and I know you will continue to outperform well after I am gone."

Canfield's next assignment will be to the U.S. Fleet Forces Nuclear Propulsion Examination Board in Norfolk, Va.

Canfield and Wiley approached the center of the dias exchanged salutes, and reported to Capt. Martin Muckian, Commander, Submarine Squadron Six, as Canfield relinquished command and Wiley assumed

command.

Wiley, a native of Elberton, Ga., graduated from the U.S. Naval Academy in 2000. His last duty assignment was a Federal Executive Fellowship at The Atlantic Council where he served as the U.S. Navy Senior Fellow. After thanking shipmates from previous submarines, friends inside and outside the Navy, and his supportive family, Wiley addressed the Sailors of John Warner.

"To the crew of the great warship John Warner, it is an honor to stand before you today as your Commanding Officer," said Wiley. "I have enjoyed the short time we've had together and I am impressed with what each one of you has to offer this ship, the Navy, and the Nation."

"There is no better time to be a Submarine," Wiley said. "I'm sure you've heard that before, but as we stand here today, that statement is most certainly true. I look forward to what lies ahead for this ship and I stand ready to pursue excellence on a daily basis with you so that we can maximize the lethality of this amazing warship."

John Warner is the first submarine in the class to be named after a person, the five-term U.S. Senator, John W. Warner, the 61st Secretary of the Navy, and the President of the National Defense University. Built by the Huntington Ingalls Industries Newport News Shipbuilding, the John Warner was commissioned August 1, 2015. John Warner was the first Virginia-class submarine to launch Tomahawk cruise missiles in targeted strikes against Syrian military facilities. The submarine has a crew complement of 15 officers and 117 enlisted, is 377-feet long, and can travel in excess of 25 knots.

Fast-attack submarines like John Warner have multi-faceted missions. They are designed to seek and destroy enemy submarines and surface ships; project power ashore with Tomahawk cruise missiles and Special Operation Forces (SOF); carry out Intelligence, Surveillance and Reconnaissance (ISR) missions; support battle group operations; and engage in mine warfare.

## **The U.S. Navy Has A Critically Important Submarine Test Base Tucked Away In Alaska**

### **Tyler Rogoway, The Drive, August 15**

If you venture just north of Ketchikan, Alaska, around the picturesque Behm Canal, you may stumble upon something very unexpected—the sinister black silhouette of a nuclear fast attack or ballistic missile submarine.

The waterway is the home of the United States Navy's Southeast Alaska Acoustic Measurement Facility, more commonly known as SEAFAC. Built in 1991, it's located roughly 675 miles from the major submarine bases in Washington State. For years it seems its existence was kept relatively hush-hush, although locals clearly knew a major submarine testing facility had been established. But to this very day, the place catches people off-guard. I have received roughly a half-dozen emails over the years from various individuals, from pilots to visitors to the area, who wondered why they saw a huge submarine plowing the waters in a fjord near Ketchikan.

SEAFAC is where new technologies and equipment configurations are tested aboard multi-billion dollar American nuclear submarines and where their acoustic signature is measured while underway.

Acoustic signature—literally the noise something makes—is the primary survivability factor of a modern submarine. Every aspect and component of a submarine's construction takes this reality into account. And it's not just about quieter mechanical systems, pump-jets, or coatings on a submarine's hull, but also about how systems are mounted inside a submarine to isolate vibrations and sound waves as well. Even the shape of a submarine and the water flowing around it can be a noise factor.

Just like how the military aerospace research and development community has a vast array of facilities related to signature management—including radar cross-section test facilities, flying infrared and radar signature evaluation testbeds, anechoic chambers, live-flight radar signature evaluation ranges, infrared signature live-fire ranges, and even soundstage-like facilities used to test various forms of sensor engagement technology—submarines have a similar, albeit less well-known test and evaluation infrastructure.

This includes a key submarine test facility in Idaho that I profiled in this story from four years ago. Other testing installations can be found in the eastern United States and in the Bahamas, each with various capabilities and missions, but SEAFAC focuses exclusively on the most critical element of a submarine's survivability.

Behm Canal is an ideal setting for an underwater acoustic test range because it is shielded from the ocean and from large amounts of vessel traffic, and thus from ambient noise. Its basin is also ideal, with a smooth

tub-like contour that provides as close to lab-like acoustic conditions as possible. It can also be cordoned off relatively easily when tests are underway.

The facility allows for static and dynamic acoustic tests, the latter of which can take place throughout the submarine's performance envelope. Two acoustic arrays are attached to the seafloor, which has a depth of roughly 1250 feet, to capture a submarine's audible signature as it travels back and forth across the canal while executing various test profiles.

The Navy describes this range as such:

"The Underway Measurement Site acquires the signature of the ship while it is moving through the water. Measurements during movement ensure that propulsion and flow noises can be captured. The measurement process is slow and takes about 30 minutes to conduct 6 minutes of data acquisition for every single measurement. The remainder of the time is spent repositioning the ship for the next measurement. Typically, a submarine will spend two to five days conducting underway testing."

You can read more about the range's acoustic arrays, which were upgraded in 2006 and are called High Gain Measurement Systems (HGMS), as well as how they are installed, [here](#).

There is also a pair of custom barges that provides support for static tests. These tests can include an entire submarine or components of a submarine being submerged while suspended on cables between two hydrophone arrays at various depths. The barges can provide external power to the submarine so that all but the systems being evaluated can be turned off while testing occurs.

In some cases, a full submarine isn't needed for these evaluations and just a unique piece of machinery or mounting concept can be tested on its own before being installed aboard a submarine and evaluated in an integrated manner.

The Navy explains how the static site works in some detail:

"At the Static Site, suspension barges lower the submarine on cables to hold it in a stable position. The submarine can be suspended at various depths to evaluate how sea pressure affects the acoustic signature. The Static Site primarily measures the signature of rotating equipment onboard the vessel. The vessel does not have to maneuver so the testing can be conducted more rapidly. Also, better communication lines exist between the vessel and the Operations Center, therefore, the testing is more controlled and efficiently conducted. Typically, the submarine will spend one to seven days conducting Static Site testing."

A data analysis site and general base of operations is located on Back Island which sits on the eastern edge of the restricted test area.

From data collected at SEAFAC, the performance of new components and submarines both new and old can be evaluated and signature control practices and methods can be developed, validated, and improved upon. There also is a validation aspect to SEAFAC's mission, wherein submarines that have undergone overhauls or major work can have their acoustic signature thoroughly checked before heading out on patrols. The facility also does some work with surface vessels as well and continues to receive upgrades as America realigns its naval forces for high-end peer-state naval combat in the future.

With all this in mind, and considering that U.S. Navy submarines carry the country's second-strike nuclear deterrent and provide critical intelligence-gathering abilities in addition to some of their more traditional tactical purposes, this unassuming test range north of Ketchikan is an incredibly valuable tool for U.S. Navy.

The submarine can fight where no other vessel can—as long as it remains undetected. With SEAFAC's help, the future of American underwater stealth technology is better assured.

## **[Next steps for Hackensack submarine USS Ling unclear, as 10 feet of water sits inside](#)**

### **[Melsanie Anzidei, Rodrigo Torrejon, The North Jersey Record, August 15](#)**

The damage caused by vandals to the USS Ling, a World War II-era submarine berthed in the Hackensack River, may be beyond repair.

Sometime in the past four days, vandals apparently climbed aboard the 312-foot-long submarine, cut locks and opened hatches to flood the submarine with Hackensack River water. The inside of the 2,500-ton vessel is inundated with as much as 10 feet of water, said Les Altschuler, vice president of the Submarine Memorial Association, and may not be salvageable, and the artifacts aboard the sub are probably destroyed.

"This boat is filled with water," Altschuler said. "If this boat was on the surface now, it would sink. That's how much water is in there. Enough to dive the boat."

But as local police search for the vandals, the future of the USS Ling remains unclear. Museum officials

say they have their hands tied with how to move forward.

Museum officials are waiting for word from the U.S. Navy. But until then, the water is mixing with lubricants inside the vessel, which could cause some environmental damage.

"There are still some oils in the boat, and anything other than water can't be pumped in the river," Altschuler said. "That's why the Fire Department yesterday couldn't pump the water out, because of environmental reasons. You can't put it back in the river because of anything that might be in it."

Environmental experts, however, say the vessel should have been cleared of any damaging fluids inside years ago.

Hugh Carola, program director with the Hackensack Riverkeeper, said he did not expect the flooded vessel to be an environmental concern — so long as most of the mechanical fluids inside the vessel were removed.

"The main question will be: What is in the water?" Carola said. "From my understanding, all of the mechanical fluids were removed years ago. If there were any mechanical fluids in the boat, that would be my main concern."

If all fluids were removed, any residual oils or lubricants still in the vessel could be easily contained, said Carola. Residual fluids would likely float above the water, where they can be sucked off and transported to a hazardous waste site for disposal, he explained.

The ship was donated by the U.S. Navy to the museum, which is responsible for the vessel. The Navy still oversees what happens to the ship, and also inspects it annually, Altschuler said. The Navy, however, does not provide funds to maintain the ship.

A spokesperson for the Naval Sea Systems Command, which is in charge of vessels donated or loaned to organizations, did not return calls for comment.

Longtime city fixture

City officials on Wednesday condemned the vandalism against the submarine, which has been a fixture in the community for decades.

"On behalf of Hackensack Mayor John Labrosse and the Hackensack council, we are outraged someone would commit such a crime and show such utter disrespect for our Armed Forces — especially to veterans who have paid the ultimate sacrifice for our country," Thomas Tauchert of Vision Media Marketing, the public relations firm that represents the city, said in a statement. "We have faith in our city's police department and look forward to their investigation leading to the apprehension and prosecution of those responsible."

Councilman Leonardo Battaglia echoed the sentiments, saying he hoped the vandals would be found and punished.

"I'm really concerned, because it's something historic, related to the war and so many people who lost their lives," Battaglia said. "It's a shame."

But other city officials did not immediately respond to questions about the future of the USS Ling.

Messages to Labrosse, Deputy Mayor Kathleen Canestrino and Deputy Mayor David Sims went unanswered. Councilwoman Stephanie Von Rudenborg deferred questions to City Manager Ted Ehrenburg, who did not respond for comment.

The 312-foot, 2,500-ton, World War II-era submarine was the featured exhibit of the New Jersey Naval Museum, which occupied a trailer on land that was once headquarters of North Jersey Media Group, which was sold to Gannett in 2016 and publishes The Record. The Ling has been anchored off the riverbank behind the newspaper's former headquarters for decades.

The museum, which was closed in 2012 after floodwaters from Superstorm Sandy washed out the gangplank to the Ling, has been housed on that parcel since 1974, when the Borg family, which owned the newspaper, negotiated a deal to lease land to the museum for \$1 a year.

Jack Brown, a trustee of the New Jersey Naval Museum in Hackensack, home to the the USS Ling SS-297, boards the body of the submarine with members of the Hackensack police department to check out the damage on the submarine after it was recently vandalized. The hatches on the sub were opened allowing water to flood into the sub.

Museum officials, whose lease was terminated in 2016, agreed to vacate the property by Tuesday, after being served an eviction notice. But they say they have nowhere else to go. That is also true for the USS Ling.

The city does not have the financial means to step in and remove the vessel without help from other government entities, Battaglia said. When his children were younger, he said, he would take them to the Ling, and he doesn't want to see the vessel go to waste.

"I don't know if the city is in the position to spend millions of dollars to do something. The city doesn't

have the money. We're trying to get tax relief for residents," Battaglia said. He added, "It should be everybody's effort. It's a shame."

Moving the Ling would be difficult, because the anatomy of the river has changed, said Carola, making it difficult for any tugboats or barges to get near the submarine to remove it. For that reason, the vessel is virtually stuck in the mud until an alternative solution is found.

Before this week, officials estimated that removing the vessel from the river could cost millions — an expense too steep for the volunteers in charge of the ship. Since news of the incident broke, some donations have trickled in for a GoFundMe campaign to collect funds to relocate or restore it.

"As an environmental advocate and student of history, this hits me two-fold. There is concern for the ecological health of the river. I don't expect there to be an environmental impact — I hope not," Carola said. "But the question remains: What happens now [with the submarine]? What were they thinking in 1973?"

### **Capt. Timothy J. Poe Takes Command Of Submarine Squadron 15** **Staff, Pacific Daily News, August 17**

Capt. Timothy J. Poe relieved Capt. David G. Schappert as commander, Submarine Squadron 15, during a ceremony at the Naval Base Guam theater Aug. 17.

Rear Adm. Daryl Caudle, commander of the Submarine Force, U.S. Pacific Fleet, was the guest speaker, according to a news release from the squadron.

"I rely daily on the submarines here in Guam to maintain their warfighting skills at peak readiness, capable of deploying at a moment's notice," said Caudle.

Caudle also spoke on the role of commodore of the squadron.

"Being the commodore of (Submarine Squadron 15) may be the best major command assignment in the Navy — certainly one of the most challenging," said Caudle. "I know that (Tim is) ready to take Dave's accomplishments to the next level.

Caudle presented Schappert with a Legion of Merit, the news release stated.

"Rest assured that your service to the men and women of Submarine Squadron 15 was both significant, meaningful, and effective," said Caudle. "You not only contributed deeply to keeping our nation safe, you changed the lives of the Sailors within your charge. You have the deep gratitude of myself, our Navy, and our nation."

Poe praised Schappert for the squadron's success and thanked him for turning over a great command, the news release stated.

"I'm excited to take the helm and lead the great submariners of Team 15," said Poe. "My goal is for Team 15 to be the pinnacle of warfighting excellence in the Submarine Force, and I promise to bring motivation and passion every day to ensure we meet that goal."

### **The Navy Is Building a New Ballistic Missile Submarine That Is Truly Stealth** **Kris Osborn, The National Interest, August 19**

The Columbia-Class, to be operational by the 2028, is a new generation of technically advanced submarines intended to quietly patrol the undersea realm around the world to ensure second-strike ability should the U.S. be hit with a catastrophic nuclear attack.

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The Navy has now issued at least one-fourth of the design work and begun further advancing work on systems such as a stealthy "electric drive" propulsion system for the emerging nuclear-armed Columbia-Class ballistic missile submarines by 2021.

"Of the required design disclosures (drawings), 26-percent have been issued, and the program is on a path to have 83-percent issued by construction start," Bill Couch, spokesman for Naval Sea Systems Command, told Warrior Maven.

The Columbia class is to be equipped with an electric-drive propulsion train, as opposed to the mechanical-drive propulsion train used on other Navy submarines.

In today's Ohio-class submarines, a reactor plant generates heat which creates steam, Navy officials explained. The steam then turns turbines which produce electricity and also propel the ship forward through "reduction gears" which are able to translate the high-speed energy from a turbine into the shaft RPMs needed



to move a boat propeller.

“The electric-drive system is expected to be quieter (i.e., stealthier) than a mechanical-drive system,” a Congressional Research Service report on Columbia-Class submarines from earlier this year states.

Designed to be 560-feet– long and house 16 Trident II D5 missiles fired from 44-foot-long missile tubes, Columbia-Class submarines will use a quieting X-shaped stern configuration.

The “X”-shaped stern will restore maneuverability to submarines; as submarine designs progressed from using a propeller to using a propulsor to improve quieting, submarines lost some surface maneuverability, Navy officials explained.

Navy developers explain that electric-drive propulsion technology still relies on a nuclear reactor to generate heat and create steam to power turbines. However, the electricity produced is transferred to an electric motor rather than so-called reduction gears to spin the boat's propellers.

The use of an electric motor brings other advantages as well, according to an MIT essay written years ago when electric drive was being evaluated for submarine propulsion.

Using an electric motor optimizes use of installed reactor power in a more efficient way compared with mechanical drive submarines, making more on-board power available for other uses, according to an essay called “Evaluation and Comparison of Electric Propulsion Motors for Submarines.” Author Joel Harbour says that on mechanical drive submarine, 80-percent of the total reactor power is used exclusively for propulsion.

“With an electric drive submarine, the installed reactor power of the submarine is first converted into electrical power and then delivered to an electric propulsion motor. The now available electrical potential not being used for propulsion could easily be tapped into for other uses,” he writes.

Research, science and technology work and initial missile tube construction on Columbia-Class submarines has been underway for several years. One key exercise, called tube-and-hull forging, involves building four-packs of missile tubes to assess welding and construction methods. These structures are intended to load into the boat’s modules as construction advances.

“Early procurement of missile tubes and prototyping of the first assembly of four missile tubes are supporting the proving out of production planning,” Couch said.

While the Columbia-Class is intended to replace the existing fleet of Ohio-Class ballistic missile submarines, the new boats include a number of not-yet-seen technologies as well as different configurations when compared with the Ohio-Class. The Columbia-Class will have 16 launch tubes rather than the 24 tubes current on Ohio boats, yet the Columbias will also be about 2-tons larger, according to Navy information.

The Columbia-Class, to be operational by the 2028, is a new generation of technically advanced submarines intended to quietly patrol the undersea realm around the world to ensure second-strike ability should the US be hit with a catastrophic nuclear attack.

Formal production is scheduled for 2021 as a key step toward fielding of a new generation of nuclear-armed submarines to serve all the way into and beyond the 2080s.

General Dynamics Electric Boat has begun acquiring long-lead items in anticipation of beginning construction; the process involves acquiring metals, electronics, sonar arrays and other key components necessary to build the submarines.

Both the Pentagon and the Navy are approaching this program with a sense of urgency, given the escalation of the current global threat environment. Many senior DoD officials have called the Columbia-Class program as a number one priority across all the services.

“The Columbia-Class submarine program is leveraging enhanced acquisition authorities provided by Congress such as advanced procurement, advanced construction and multi-year continuous production of missile tubes,” Couch added.

## **Wireless Communication Breaks Through Water-Air Barrier**

### **Matt Matheson, MIT News Office, August 22**

MIT researchers have taken a step toward solving a longstanding challenge with wireless communication: direct data transmission between underwater and airborne devices.

Today, underwater sensors cannot share data with those on land, as both use different wireless signals that only work in their respective mediums. Radio signals that travel through air die very rapidly in water. Acoustic signals, or sonar, sent by underwater devices mostly reflect off the surface without ever breaking through. This causes inefficiencies and other issues for a variety of applications, such as ocean exploration and submarine-to-plane communication.

In a paper being presented at this week's SIGCOMM conference, MIT Media Lab researchers have designed a system that tackles this problem in a novel way. An underwater transmitter directs a sonar signal to the water's surface, causing tiny vibrations that correspond to the 1s and 0s transmitted. Above the surface, a highly sensitive receiver reads these minute disturbances and decodes the sonar signal.

"Trying to cross the air-water boundary with wireless signals has been an obstacle. Our idea is to transform the obstacle itself into a medium through which to communicate," says Fadel Adib, an assistant professor in the Media Lab, who is leading this research. He co-authored the paper with his graduate student Francesco Tonolini.

The system, called "translational acoustic-RF communication" (TARF), is still in its early stages, Adib says. But it represents a "milestone," he says, that could open new capabilities in water-air communications. Using the system, military submarines, for instance, wouldn't need to surface to communicate with airplanes, compromising their location. And underwater drones that monitor marine life wouldn't need to constantly resurface from deep dives to send data to researchers.

Another promising application is aiding searches for planes that go missing underwater. "Acoustic transmitting beacons can be implemented in, say, a plane's black box," Adib says. "If it transmits a signal every once in a while, you'd be able to use the system to pick up that signal."

### **Decoding vibrations**

Today's technological workarounds to this wireless communication issue suffer from various drawbacks. Buoys, for instance, have been designed to pick up sonar waves, process the data, and shoot radio signals to airborne receivers. But these can drift away and get lost. Many are also required to cover large areas, making them impracticable for, say, submarine-to-surface communications.

TARF includes an underwater acoustic transmitter that sends sonar signals using a standard acoustic speaker. The signals travel as pressure waves of different frequencies corresponding to different data bits. For example, when the transmitter wants to send a 0, it can transmit a wave traveling at 100 hertz; for a 1, it can transmit a 200-hertz wave. When the signal hits the surface, it causes tiny ripples in the water, only a few micrometers in height, corresponding to those frequencies.

To achieve high data rates, the system transmits multiple frequencies at the same time, building on a modulation scheme used in wireless communication, called orthogonal frequency-division multiplexing. This lets the researchers transmit hundreds of bits at once.

Positioned in the air above the transmitter is a new type of extremely-high-frequency radar that processes signals in the millimeter wave spectrum of wireless transmission, between 30 and 300 gigahertz. (That's the band where the upcoming high-frequency 5G wireless network will operate.)

The radar, which looks like a pair of cones, transmits a radio signal that reflects off the vibrating surface and rebounds back to the radar. Due to the way the signal collides with the surface vibrations, the signal returns with a slightly modulated angle that corresponds exactly to the data bit sent by the sonar signal. A vibration on the water surface representing a 0 bit, for instance, will cause the reflected signal's angle to vibrate at 100 hertz.

"The radar reflection is going to vary a little bit whenever you have any form of displacement like on the surface of the water," Adib says. "By picking up these tiny angle changes, we can pick up these variations that correspond to the sonar signal."

### **Listening to "the whisper"**

A key challenge was helping the radar detect the water surface. To do so, the researchers employed a technology that detects reflections in an environment and organizes them by distance and power. As water has the most powerful reflection in the new system's environment, the radar knows the distance to the surface. Once that's established, it zooms in on the vibrations at that distance, ignoring all other nearby disturbances.

The next major challenge was capturing micrometer waves surrounded by much larger, natural waves. The smallest ocean ripples on calm days, called capillary waves, are only about 2 centimeters tall, but that's 100,000 times larger than the vibrations. Rougher seas can create waves 1 million times larger. "This interferes with the tiny acoustic vibrations at the water surface," Adib says. "It's as if someone's screaming and you're trying to hear someone whispering at the same time."

To solve this, the researchers developed sophisticated signal-processing algorithms. Natural waves occur at about 1 or 2 hertz — or, a wave or two moving over the signal area every second. The sonar vibrations of 100 to 200 hertz, however, are a hundred times faster. Because of this frequency differential, the algorithm zeroes in on the fast-moving waves while ignoring the slower ones.



### **Testing the waters**

The researchers took TARF through 500 test runs in a water tank and in two different swimming pools on MIT's campus.

In the tank, the radar was placed at ranges from 20 centimeters to 40 centimeters above the surface, and the sonar transmitter was placed from 5 centimeters to 70 centimeters below the surface. In the pools, the radar was positioned about 30 centimeters above surface, while the transmitter was immersed about 3.5 meters below. In these experiments, the researchers also had swimmers creating waves that rose to about 16 centimeters.

In both settings, TARF was able to accurately decode various data — such as the sentence, “Hello! from underwater” — at hundreds of bits per second, similar to standard data rates for underwater communications. “Even while there were swimmers swimming around and causing disturbances and water currents, we were able to decode these signals quickly and accurately,” Adib says.

In waves higher than 16 centimeters, however, the system isn't able to decode signals. The next steps are, among other things, refining the system to work in rougher waters. “It can deal with calm days and deal with certain water disturbances. But [to make it practical] we need this to work on all days and all weathers,” Adib says.

The researchers also hope that their system could eventually enable an airborne drone or plane flying across a water's surface to constantly pick up and decode the sonar signals as it zooms by.

The research was supported, in part, by the National Science Foundation.

### **Goggins Assumes Command As Program Executive Officer For Submarines Team Submarine Public Affairs, NAVSEA, August 21**

Rear Adm. David A. Goggins relieved Rear Adm. Michael E. Jabaley as Program Executive Officer (PEO) for Submarines during a change of office ceremony at the Washington Navy Yard Aug. 17.

As PEO, Goggins is responsible for developing, acquiring and modernizing the U.S. Navy's submarines and undersea systems.

"We've been charged with growing the submarine force for the Navy the nation needs," said Goggins. "Ensuring reliability in our submarines and undersea systems is the key to success."

Goggins's most recent assignment was as program director, Columbia Class Submarine program office (PMS-397). Under his command, the Columbia program achieved Milestone B and began construction of the first common missile compartment.

Goggins's previous tours include assignments aboard USS Tecumseh (SSN 628); Supervisor of Shipbuilding, Conversion and Repair (SUPSHIP) Groton, Connecticut; and the Undersea Warfare division of the office of the Chief of Naval Operations (N97).

From 2012 to June 2015, he served as the Virginia Class Submarine program manager. Under his leadership, the Virginia program delivered three submarines to the fleet, started the initial design work on the Virginia Payload Module and acoustic superiority, and won the Department of Defense Value Engineering Award and the David A. Packard Award for Acquisition Excellence.

Jabaley had served as PEO since October 2015. He is retiring after 34 years of service that included assignments aboard USS Drum (SSN 677), USS Ohio (SSBN 726), USS City of Corpus Christi (SSN 705) and command of USS Louisville (SSN 724). His ashore assignments included Naval Sea Systems Command vice commander, Virginia Class Submarine Program Manager and Naval Undersea Warfare Center commander.

PEO Submarines focuses on the design, construction, delivery and conversion of submarines and advanced undersea and anti-submarine systems including torpedoes; towed acoustics sensors; and unique submarine sonar, control, imaging and electronic warfare systems.

### **Navy Starts Giving Waivers To Enlisted Sailors Who Want To Serve More Than 30 Years**

#### **Scott Maucione, Federal News Radio, August 21**

Military officers will see some of the biggest changes to the promotion system in years due to provisions in the 2019 defense authorization act. But enlisted Navy sailors can expect new developments as well.

The Navy is trying to fill some of its less popular sea duty billets by waiving the limitations on how many years senior enlisted sailors can serve, according to a message to the fleet Vice Adm. Robert Burke, the chief

of Naval Personnel.

The program offers high year tenure waivers to chiefs, senior chiefs and chief petty officers willing to go out to sea. The waivers allow those sailors to serve more than the maximum 24, 26 or 30 years for those respective ranks.

“We need sailors who are personally engaged in the success of our Navy as well as their own personal success,” Burke stated in the memo. “Similarly, we need leaders who encourage and enable this. This initiative to provide increased opportunity for our senior enlisted leaders to stay Navy will help us maintain the leadership experience and technical acumen we need at sea as we grow the force. It also allows our senior enlisted leaders to continue to perform and compete for advancement.”

The new program isn’t the only way the Navy is trying to keep some of its older sailors in the force.

Earlier this year, the Navy announced its targeted reentry program.

The program gives golden and silver tickets to sailors leaving the military. The golden ticket allows sailors to return to active duty within a year of their release. Silver ticket holders will get two years to decide if they want a streamlined path back into active duty.

“The program is designed to take folks that are top performers in the Navy. We tried to talk them into staying, they made up their mind, we respect their decision. They’re going to leave, but we’ve earmarked them, they were top performers, if they change their mind within one year or two years of their decision they’ve got a fast track to come back in,” Burke told Federal News Radio in March.

That program goes after petty officer third class to petty officer first class enlisted ranks who attained community qualifications, demonstrated superior performance in fitness reports and passed their most recent fitness assignment.

The Navy plans to grow by about 21,000 in the next five years, so it will be pushed to recruit and retain its members as it expands.