

# TORPEDO ALLEY



Vol. 13 No. 2

February 2017

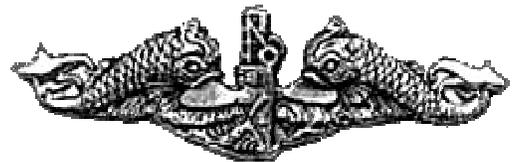
**Newsletter of Charleston Base, United States Submarine Veterans, Inc.**

**Base Meeting:**

BOD: February 2 1800  
 Membership: February 9 1900

**Location:**

FRA Branch 269  
 Low Country Home  
 99 Wisteria Rd.  
 Goose Creek, SC



Base Commander	Rick Wise	843.875.5559 (H) 843.276.0899 (C)
Vice Com- mander	Mike Knaub	843.795.6665 (H) 843.696.7555(C)
Secretary	Mike Ciesielko	843.324.0011
Treasurer	Mike Welch	843.300.9022

Chief of the Boat	Ken Hutchison	843.553.0935
Veterans Affairs	Ken Curtis	843.797.1268
Membership	Larry Knutson	843.553.5594
Scholarship	George Scharf	843.873.3318
Storekeeper	Ron Chambers	843.821.2268
Historian	George Scharf	843.873.3318
Public Affairs	Ronnie Kerstetter	843-367-1026
Chaplain	Nick Nichols	843.452.3189
Holland Club	Bill Freligh	843.553.1115
Newsletter	Rick Wise	843.875.5559 (H) 843.276.0899 (C)
Webmaster	Nick Nichols	843.452.3189
Kaps for Kids	Bill Kennedy	843.875.3109





## From USSVI National

Normal message traffic from USSVI will be published each month in the newsletter. If the message is of immediate interest to the membership it will be sent out by the Base Secretary.

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Subvets News 2017-5: 2017 Vol.1 of the American Submariner is now posted on the USSVI website.

Submitted by: Alfred H Singleman Jr on 1/31/2017  
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Shipmates,

The electronic version of the latest issue of the "American Submariner" magazine is now available through the USSVI.org website.

Log onto the USSVI.org website with your member signon and get to the Home Page'.

On the 'Home Page' click on the second bright blue button along the left edge near the middle of the page to bring up the 'American Submariner' web page.

On the 'American Submariner' web page click on the top red button on the left edge of the page to bring up the current (new)issue of the magazine.

To make it easier to work with the magazine is broken into two sections and near the top of the current issue web page, in the center of the page there are links to each of the two sections.

Clicking on either of these two links will open a new browser tab to display the Adobe (.pdf) version of that half of the magazine.

You can also bring up any back issue (back through 2005) of the "American Submariner" for review by using the buttons along the left edge of the 'American Submariner' web page.

If you are still getting a hard copy the "American Submariner" magazine through the mail and are willing to forego it to see the electronic version of the magazine only, thus saving our organization the postage fee, please e-mail the National Office [ASOptOut@ussvi.org](mailto:ASOptOut@ussvi.org)

Al Singleman, Jr. IPNC

Subvets News 2017-6: Back on line

Submitted by: William C. Andrea on 2/13/2017  
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Shipmates: Please direct issues for NJVC back to Bill Andrea again. I am back in commission. I want to thank IPNC Al Singleman for filling in for me while I was incapacitated and all the well wishes from my shipmates.

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## USSVI Charleston Base Meeting Minutes

9 February 2017

The attendance for the February 2017 meeting was 82 members.

**Opening Ceremonies:** The meeting was called to order by Base Commander Rick Wise. A quorum was present and the meeting started at 1900. Following the Pledge of Allegiance, the Invocation and the Tolling of the Boats lost in February was given by Base Chaplain Nick Nichols. The USSVI Creed was read by Base Secretary Michael Ciesielko. Rick welcomed the members and guests to the meeting.

**Introductions:** The following introduced themselves at the meeting: ET1 (SS/DV) Thomas S. Perez, Qual Boat: USS Salt Lake City SSN 716

**Secretary:** Base Secretary Mike Ciesielko reported that the January meeting minutes had been published in the newsletter and on the base website. Mike asked the group for a motion to accept the minutes as written. Butch Bryar made a motion to approve the meeting minutes as published. The motion was seconded by Ken Curtis.

**Treasurer:** Base Treasurer Mike Welch gave his report on the Charleston Base finances. The base financial report is now located as a password protected file on the base website under Documents and Resources. The password is the same as needed for the Sailing List

### Chaplains February Report

#### Highlighted boat of the month:

USS BARBEL (SS-316) was lost on Feb 4, 1945 with 81 officers and men on her 4th war patrol. Based on Japanese records, she was bombed near the southern entrance to the Palawan Passage. The day before, she reported she survived 3 depth charge attacks.

- **Richard S. Erb** of Ladson departed on Eternal Patrol on January 10, 2017 at Veterans Victory House, Walterboro. His memorial service was on Saturday, February 4, 2017. He was a 20 year submarine veteran. Richard was not a member of USSVI.
- **Larry Cox** had throat surgery last Thursday. He is now home recovering.
- Luke Murphy** is at the VA 3<sup>rd</sup> floor rm 5 3B North. Luke's son, Tommy, took him to the ER Saturday night where he was diagnosed with very bad pneumonia. He had a bad evening on Sunday. Luke was just moved from MICU to a room this afternoon.
- **Judy Murphy**, Luke's wife, had back surgery on 27 January. She is doing well and went home on 29 January.
- **Don Heinle** was in the Colleton County MC for about a week and went home on 27 January.
- **Brian Woodley**, Fred's son, made it through his surgery on both feet and is doing well.
- **Don Meadows** has a bacterial infection around his heart but it is responding to medication. His older son has to lose a couple more pounds before the transplant to Andrew.
- **David Wood** had his prostate removed last Thursday, 2 February. He's home but is limited with what he can do for about three weeks.
- **Rodney McKanna** had minor surgery on his stump and will be in a wheelchair for a couple of weeks. He's already back at work and here tonight.
- **Bill Freligh's** had a house fire on Sunday, 29 January. Both Bill & Mary are ok and they are staying with son Scott.
- **Sonny Rash** had hernia surgery yesterday Feb. 8<sup>th</sup> at the VA. It took 6 hours to complete. Expects to be home early next week. He is on the 4<sup>th</sup> floor bed 7. Visitors will be welcome.
- **Ava Daughtery**, Fred's wife, will be having major surgery on her ear on February 14<sup>th</sup>.
- **James Graham** will be having thyroid surgery on February 14<sup>th</sup>
- **Lee Young** will be having surgery on March 6<sup>th</sup>.
- **Beetle Bailey's** daughter, **Diane**, has had a recurrence of her cancer. They found a 1.5 centimeter growth on her liver and she will be starting radiation soon.
- **Cards & Checks received** from condolences placed online at Legacy.com. All checks presented to Scholarship Fund IAW Standing Policy:
  - Card from Ruth Elmer in appreciation for condolence for son, Lawrence Elmer.

- o Card & \$50 check from Mary McMahon in memory of CPO(SS) William Martin Lindler.
- Card & \$50 check from Betty Stokes in memory of her husband, William M. Lindler.

Follow-ups were made on those who've had surgery or illnesses in the last couple of months along with the base sending additional cards.

#### **WEBMASTER NOTES:**

- **BE CAREFUL NOT TO ANSWER ANY CALLS WITH YES OR IN ANY WAY IN THE AFFIRMATIVE.** Many of the news agencies are warning of a telephone scam on cell and home phone. Your phone rings, could possibly be from a person on your phone list and a pause then someone says, "can you hear me now?" Would your answer be, "Yes" or something of this nature? If so, you might just have been had, agreeing to whatever, but they do have you saying, YES, which they then use to obligate you to some agreement. Make sure you know them before you pass anything along or **JUST HANG UP**

- Currently there are 6 ads on the Web site. I would like to encourage anyone that has a business to consider advertising through the base website and newsletter. The cost for an ad is \$25 for 12 months. If you would like to know more please see me or the Base Commander.

- Website is constantly updated.

Make use of the EVENTS page on the Charleston Base website. All events that are put out to the membership via email will be listed and updated on the events page.

**Membership:** Larry Knutson reported that there are 73 members that have not paid base dues. Membership is now 322 members.

**Holland Club:** Bill Freligh reported that the Holland Club will have 10 inductees in April.

**Kaps for Kids:** Bill Kennedy reported that Kaps for Kids will be heading up to Florence on the 21<sup>st</sup> of February. Meet at Bills by 8am. They are scheduled for 10 am at the Hospital. Bill is telling everyone to bring their wives as well.

**Veterans Affairs:** Reported that there is a new VA telephone number for customer service. 1-844-698-2311. Jan 12<sup>th</sup> Senator Dean Hiller introduced a bill that will allow disabled veterans to travel on a space available basis just like retired personnel.

**Special Events:** Rick reported that we will be participating (Pulling the Float) in the See Saw Days Parade in Harleyville on 12 May. Rick mentioned that we donated the Trophy from the Elloree Parade to Stump Hole Landing. They are proudly displaying it for us.

**FRA:** Rick Sparger reported that the FRA will be having a Valentines Steak Dinner. 1800 on 18 Feb 2017. \$25 per couple.

**Election Coordinator:** Joe Lund asked the membership if anyone would like to run for the offices of Base Commander and Treasurer. Neither the Base Commander nor Treasurer wish to run again for office.

**District Commander:** Ed commented that next Tuesday he will make a visit to the Victory House.

**CRAMA:** Butch Bryar commented on the people wanting to turn the Clamagore into a reef. It's not happening. Butch has been talking with the Patriots point Foundation.

**Submarine Veterans of World War II:** George Scharf reminded us we have 1 WWII vet attending tonight's meeting. George gave us a report on Willy Jones status. Next Luncheon is at the FRA on 16 February.

**Scholarship:** George reported that the Scholarship applications need to be in by April 15<sup>th</sup>.

**Storekeeper:** Ron Chambers has challenge coins.

**Rec Committee:** No Report

**Public Affairs:** No Report

**Chief of the Boat:** Hunley memorial 17 Feb. We need Volunteers.

Paul Viering reported that we still need volunteers for the Hunley Housatonic Memorial. The memorial consists of just the Church Ceremony.

**Base Commander:** Talked about having to take back over the Little David Project. We will have a working party in April or May.

**Old Business:** None

**New Business:** Rick Sparger made a motion to donate \$500.00 to the FRA towards the purchase of a portable AED

defibrillator. Ken Hutchison seconded. The vote was unanimous.

**Good of the Order:** Gordon Long relayed to the base that his group is doing the singing Valentines. They will be performing all day Monday and Tuesday.

Rodney McKanna made a motion that we donate \$150.00 for a brick for the Charleston 9 Memorial. George Scharf seconded. The motion passed.

**The After Battery:** Buddha reported that the After Battery annual week long Hog roast will be 16<sup>th</sup> April. Any donations or Raffle Baskets are much appreciated.

**Nuclear Historian:** Ed Stank reported: **Remembering the "good old days"**

1. Sleep on the shelf in your closet. Replace the closet door with a curtain. Two to three hours after you fall asleep, have your wife whip open the curtain, shine a flashlight in your eyes, and mumble "Sorry, wrong rack".
2. Repeat back everything anyone says to you.
3. Spend as much time as possible indoors and avoid sun light. Only view the world through the peep hole on your front door.
4. Renovate your bathroom. Build a wall across the middle of your bathtub and move the shower head down to chest level. Shower once a week. Use no more than 2 gallons of water per shower.
5. Buy a trash compactor and use it once a week. Store garbage in the other side of your bathtub. Freeze your garbage when the trash man goes on strike (GDU/TDU breaks)
6. Sit in your car for six hours a day with your hands on the wheel and the motor running, but don't go anywhere. Install 200 extra pressure, temperature and Level gauges. Take logs on all gages and indicators every 30 minutes.
7. Convert your pantry to a storage room and fill it with condensed, dehydrated, and powdered foods. Think that dehydrated shrimp is a great meal.
8. Share a bunk with your little brother who has incontinence . Hot racking is fun.
9. Have only one bathroom in your house with 25 people sharing it. Win the golden flapper award.
10. Close up your house from outside air and use O2 Candles for oxygen, Lithium hydroxide to remove Carbon Dioxide and when you finally get to bring in some outside air how foul it smells.
11. Drill for 2 weeks in addition to the other 10 weeks preparing for an NTPI, ORSE or TRE.
12. Stand port and starboard duty in port while refitting in Holy Loch or Rota.

Our sub was on station somewhere in the Pacific, and I was standing AEA watch. One of the things we do as AEA while on station is to man the Time-Range plot in Control, a job that requires me to endlessly record every fishing vessel and whale that happens to cross our sonar. The night watch was going very slowly, so we decided to take advantage of the free time to start on housekeeping routines a bit early. The COW called the forward auxiliaryman (A-ganger) to line up sanitary tanks 1 and 2 to blow overboard. He never actually stated to blow them overboard - and for good reason, we were still at "400" feet. This apparently was missed by the mechanic (we were all pretty out of it), and he dutifully went below to the 18-man berthing compartment to accomplish his task.

About five minutes later, those of us in Control began to hear a strange hissing noise, followed by a rather sharp pop and a much louder hiss. The COW and OOD were quick to make a 1MC - "Report the source of the abnormal noise to Control". We needed no report. About ten seconds later we began to smell what could only be described as the most foul sewage ever known to man. It was quickly decided to handle this as a legitimate casualty, as we were all becoming nauseous from the smell, and the officers were concerned about the crew becoming completely overcome by the odor.

We all donned EAB's and waited as reports began to filter in, and the truth of the casualty became clear. The A-ganger had lined up SAN2 to blow overboard, but forgot to wait for the boat to come to PD. He pressurized the tank and began blowing overboard, unfortunately, he did not notice that the pressure was much higher this time due to the ship's depth. Well, the pressure gauge for this tank happens to be in one of the bunks (occupied by one of the ship's cooks) and it was the source of the 'pop' we all heard. When that gauge let go, the bunk (and the cook) were instantly covered in our forgotten meals. The A-ganger quickly isolated the hull valves, but there wasn't much he could do about the influx of crap that was blowing all over the berthing compartment. Men fell out of their bunks and ran for their lives, and the mechanic jumped into the bunk with the broken gauge and tried to plug the leak, to no avail.

When it was all over, and believe me - it was, the ship was emergency ventilated, and a decontamination area (fit to make any Radcon officer proud) was established in the torpedo room. We went through a couple dozen tetanus shots for those directly exposed to the mess. Needless to say, we were all hot-racking afterwards, as the mattresses in the

berthing area were unfit to sleep on, not that anyone really wanted anywhere near the stubbornly lingering odor.

Mike Ciesielko announced that the Charleston Base Gun club meeting will be 13 February at 5 PM

The red FRA ticket was won by John Lookabill

The depth charge was won by Tom Clark.

**Benediction:** Chaplain Nick Nichols gave the benediction.

**Meeting Adjourned:** Following the benediction by Nick Nichols, the Base Commander adjourned the meeting at 2031.

## SUBMARINERS' LEGACY AWARDS FOR CLASS 1606

The Charleston Base Submariners' Legacy Awards for Nuclear Power School Class 1606 were presented to LTJG Alec McGlaughlin GPA 3.80 and ETN3 Ian Karraker GPA 3.83.



**New VA Telephone Number One Number to Call to Reach VA** When VA evaluated business and customer service practices to improve the Veteran experience, the need for a revamped phone system was clear. Instead of navigating dozens of automated phone trees with no guarantee of success, Veterans needed one place to call to get connected to the right place quickly.

VA introduced 1-844-MyVA311 (1-844-698-2311) as a go-to source for veterans and their families who don't know what number to call. This national toll-free number will help eliminate the feeling of frustration and confusion that Veterans and their families have expressed when navigating the 1000-plus phone numbers that currently exist.

With 1-844-MyVA311, Veterans, families, and caregivers can access information about VA services like disability, pension, healthcare eligibility, enrollment, and burial benefits, in addition to a self-service locator to find the nearest VA facility. The future vision is that 1-844-MyVA311 will become a 24/7 one-stop information service platform for all VA services.

### **BBB Clears Wounded Warrior Project**

After months of investigation, the Better Business Bureau has cleared the Wounded Warrior Project, one of the nation's largest veterans charities, of "lavish spending," and gave the nonprofit organization its seal of approval. The bureau's Wise Giving Alliance report found that Warrior Project spending has been "consistent with its programs and missions." Last March, the Wounded Warrior Project fired its top administrators amid news reports that the charity was spending millions in donations intended for veterans on a swanky convention in a five-star hotel along with other parties and employee perks and high salaries. At the time, two of the organization's leaders, who were let go, were making \$473,015 and \$369,030, respectively, in 2013, the last year for which tax documents are readily available.

The Better Business Bureau's Wise Giving Alliance suspended the charity's seal designation, and donations fell off with donors uncertain about how their money would be spent. About 85 employees were laid off in September from the organization, which now has 500 employees. One source of contention was over media reports that said the organization had spent \$3 million on that "all-hands" Colorado conference, but Wounded Warrior said last March that the expense was less than \$1 million. Likewise, the Better Business Bureau said its review found that the cost was less than \$1 million. The investigations found that based on the 415 staff members, the cost was about \$440 per day per employee for the five-day conference, including hotel rooms, food, travel and conference space, according to Stars and Stripes, which first reported the news.

Retired Army Lt. Gen. Michael S. Linnington, who took over the Wounded Warrior Project in July, said in an emailed statement that he is "pleased to see the Better Business Bureau's report validating our impact and commitment." In a previous interview, he said he understood how the Colorado conference appeared from the outside. The Wounded Warrior Project no longer holds such events

and already has increased the scrutiny on spending for travel and all expenses, he said, adding that he would be paid less than those before him, with his salary at \$280,000. "This year the non-profit WWP will hit a milestone by providing meaningful resources to our 100,000th wounded warrior," he wrote. "And we are humbled and honored to provide continued support to these warriors and their families for many years to come." [Source: The Washington Post | Emily Wax-Thibodeaux | February 8, 2017 ++]



**Charleston Base contingent at FRA Valentine Dinner and Dance**

### **Kap(SS) 4 Kid(SS) Visit**

Charleston Base Kap(SS) 4 Kid(SS) Program Coordinator Bill Kennedy led a group from Charleston Base the McLeod Childrens Hospital in Florence. Also attending were Ed Stank, Mike Emerson, Rick Wise, Rick Sparger, Bill's wife June.



## 2017 H.L. Hunley-USS Housatonic Memorial Ceremony

Charleston Base participated in the ceremony on Friday, February 17 at the Sunrise Presbyterian Church, Sullivan's Island, SC. Base Commander Rick Wise gave a speech. Presenting the white Roses to the Lady Mourners were Paul Viering, Ed Stank, Ken Hutchison, Ken Curtis, Gary Williams, Charlie Hudson, Theron Irving, Rodney McKanna, Dave Taylor, Mike Emerson, Don Donofrio, Ray Sparks and Denizens of the Deep member Wayne Phillips. Also attending was Frank Zeigler.

### Thank You

Sunrise Presbyterian Church  
 Rev. Dr. Vance Polley  
 Music by Mr. Stan Clardy  
 Sullivan's Island Police Department  
 Logistics – Fred Tetor  
 The Blue Light – Mark Dangerfield  
 Family Representatives & Escorts – Lynn Charles  
 Soldier's March – Fred Polston  
 10<sup>th</sup> SC Volunteer Infantry  
 27<sup>th</sup> SC Volunteer Infantry  
 Santee Light Artillery  
 Committee Co-Chairs: Gene Patrick & Chris Houke

*Sponsored by:*



**Confederate Heritage Trust, Inc.**  
<http://www.csatrust.org>

### MEMORIAL SERVICES

*153rd Anniversary*

**HUNLEY/HOUSATONIC**

*To call to remembrance of the brave men in their dedication of the mission and sacrifice of their lives on February 17, 1864*

**February 17<sup>th</sup>, 7:00 PM**  
**SUNRISE PRESBYTERIAN CHURCH**  
**SULLIVAN'S ISLAND, SC**



**The Hunley Crew at Magnolia Cemetery**  
 (Photo by Pat Blitch)

### The H. L. Hunley Crew

Lieutenant George E. Dixon  
 Seaman Arnold Becker  
 Corporal J. F. Carlsen  
 Seaman Frank G. Collins  
 Private J. Miller  
 Quartermaster Joseph Ridgaway  
 Quartermaster C. Lumpkin  
 Boatswain Mate James A. Wicks

### The USS Housatonic Crew

Ensign Edward Hazeltine  
 Yeoman Charles Muzzey  
 Quartermaster John Williams  
 Fireman 2<sup>nd</sup> Class John Walsh  
 Landsman Theodore Parker

### MEMORIAL SERVICES

Prelude	Mr. Stan Clardy
Family Representatives and Escorts Enter	
Welcome	Mr. Gene Patrick President, CHT
Invocation	Rev. Dr. Vance Polley
"That's Why We're Here"	Mr. Stan Clardy
Sub-Vets	Cdr. Rick Wise Charleston Base Sub Vets
"Amazing Grace"	Congregation
Memorial Address	Mr. Gene Patrick, President Confederate Heritage Trust
Roll of Honor	Dr. Lee Wilson
Tolling of the Bell	Rev. Dr. Vance Polley
Rose Presentation	Submarine Vets
Special Presentation	Mr. Gene Patrick
"Hunley Shine On"	Mr. Stan Clardy
Benediction	Rev. Dr. Vance Polley
Postlude	Mr. Stan Clardy
Wreaths	Submarine Vets

## US Navy Ships That Served Off Vietnam 1962— 1975

ABNAKI	ATF-96
ACME	MSO-508
AGERHOLM	DD-826
AJAX	AR-6
ALAMO	LSD-33
ALBATROSS	MSC-289
ALBERT DAVID	DE-1050
ALDEBARAN	AF-10
ALFRED E. CUNNINGHAM	DD-752
ALLEN M. SUMNER	DD-692
ALUDRA	AF-55
ALVIN C. COCKBELL	DE-366
AMERICA	CVA-66
ANCHORAGE	LSD-36
ALVIN C. COCKBELL	DE-366
ANNAPOLIS	AGMR-1
ANTELOPE	PG-86
APACHE	ATF-67
ARIKARA	ATF-98
ARLINGTON	AGMR-2
ARNOLD J. ISBELL	DD-869
ASHEVILLE	PG-84
ASHTABULA	AO-51
ASKARI	ARL-30
ASPRO	SSN-648
AULT	DD-698
BACHE	DD-470
BADGER	DE-1071
BAINBRIDGE	DLGN-25
BARB	SSN-596
BARBEL	SS-580
BARNEY	DDG-6
BARRY	DDG-933
BASHAW	AGSS-241
BASILONE	DD-824
BAUER	DE-1025
BAUSELL	DD-845
BAYA	AGSS-318
BAYFIELD	APA-33
BEALE	DD-471
BELKNAP	DLG-26
BELLETRIX	AF-62
BELLE GROVE	LSD-2
BENEWAH	APB-35
BENJAMIN STODDERT	DDG-22
BENNER	DD-807
BENNINGTON	CVS-20
BERKELEY	DDG-15
BEXAR	APA-237
BIDDLE	DLG-34
BIGELOW	DDG-942
BLACK	DD-666

BLACKFIN	SS-322
BLAKELY	DE-1072
BLANCO COUNTY	LST-344
BLANDY	DD-943
BLUE	DD-744
BLUE RIDGE	LCC-19
BLUEBACK	SS-581
BLUEGILL	AGSS/SSK-242
BOLSTER	ARS-38
BON HOMME RICHARD	CVA-31
BONEFISH	SS-582
BORDELON	DD-881
BORIE	DD-704
BOSTON	CA-69/CAG-1
BOXER	LPH-4
BOYD	DD-544
BRADLEY	DE-1041
BRAINE	DD-630
BRANNON	DE-446
BREAM	AGSS-243
BRIDGET	DE-1024
BRINKLEY BASS	DD-887
BRISTER	DER-327
BRONSTEIN	DE-1037
BROOKE	DEG-1
BROWNSON	DD-868
BRULE	AKL-28
BRUSH	DD-743
BUCHANAN	DDG-14
BUCK	DD-761
BUGARA	SS-331
BULLOCH COUNTY	LST-509
BUTTE	AE-27
CABILDO	LSD-16
CACAPON	AO-52
CADDO PARRISH	LST-515
CAIMAN	SS-323
CALIENTE	AO-53
CALVERT	APA-32
CAMDEN	AOE-2
CAMP	DER-251
CANBERRA	CAG-2
CANON	PG-90
CAPITAINE	AGSS-336
CARBONERO	SS-337
CAROLINE COUNTY	LST-525
CARPENTER	DD-825
CARRONADE	IFS-1
CARTER HALL	LSD-3
CASTOR	AKS-1
CATAMOUNT	LSD-17
CATFISH	SS-339

CATSKILL	MSC-1
CAVALIER	APA-37
CAYUGA	LST-1186
CHANTICLEER	ASR-7
CHARA	AE-31
CHARLES BERRY	DE-1035
CHARLES E. BRANNON	DE-446
CHARLES H. ROAN	DD-853
CHARLES P. CECIL	DD-835
CHARLES R. WARE	DD-865
CHARLES S. SPERRY	DD-697
CHARLESTON	LKA-113
CHARR	SS-328
CHASE COUNTY	LST-532
CHEMUNG	AO-30
CHESTERFIELD COUNTY	LST-551
CHEVALIER	DD-805
CHICAGO	CG-11
CHIPOLA	AO-63
CHOWONOC	ATF-100
CIMARRON	AO-22
CLARION RIVER	LFR/LSMR-409
CLARKE COUNTY	LST-601
CLAUD JONES	DE-1033
CLEVELAND	LPD-7
COCHRANE	DDG-21
COCHINO COUNTY	LST-603
COCOPA	ATF-101
COGSWELL	DD-651
COHOES	ANL-78
COLAHAN	DD-658
COLLETON	APB-36
COLLETT	DD-730
COLONIAL	LSD-18
COLUMBUS	CG-12
COMSTOCK	LSD-19
CONE	DD-866
CONFLICT	MSO-426
CONQUEST	MSO-488
CONSERVER	ARS-39
CONSTANT	MSO-489
CONSTELLATION	CVA-64
CONWAY	DD-507
CONY	DD-508
COOK	APD-130
COONTZ	DLG-9
CORAL SEA	CVA-43
CORRY	DD-817
COUCAL	ASR-8
COWELL	DD-547
CREE	ATF-84
CROCKETT	PG-88
FECHTELER	DD-870
FINCH	DER-328
FIREDRAKE	AE-14

CURRENT	ARS-22
CURRITUCK	AV-7
CUSK	SS-348
DAHLGREN	DLG-12
DALE	DLG-19
DAMATO	DDE-871
DAVIDSON	DE-1045
DAVIS	DD-937
DECATUR	DDG-31
DEHAVEN	DD-727
DELIVER	ARS-23
DELTA	AR-9
DENNIS J. BUCKLEY	DD-808
DENVER	LPD-9
DESOTO COUNTY	LST-1171
DEWEY	DLG-14
DIACHENCKO	APD-123
DIAMOND HEAD	AE-19
DIODON	SS-340
DIXIE	AD-14
DOUGLAS H. FOX	DD-779
DUBUQUE	LPD-8
DULUTH	LPD-6
DUNCAN	DDR-874
DUPONT	DD-941
DURHAM	LKA-114
DYESS	DDR-880
DYNAMIC	MSO-432
EATON	DD-510
EDMONDS	DE-406
EDSON	DD-946
ELDORADO	AGC-11
ELKHORN	AOG-7
EMBATTLE	MSO-434
ENDURANCE	MSO-435
ENERGY	MSO-436
ENGAGE	MSO-433
ENGLAND	DLG-22
ENHANCE	MSO-437
ENTERPRISE	CVAN-65
EPPERSON	DD-719
EPPING FOREST	LSD-4
ERNEST J. SMALL	DDR-838
ESTEEM	MSO-438
ESTES	AGC-12
EUGENE A. GREENE	DD-711
EVANS	DE-1023
EVERETT F. LARSON	DD-830
EVERSOLE	DD-789
EXCEL	MSO-439
FALGOUT	DER-324
FANNING	DD-1076
GURNARD	SS-662
HADDOCK	SS-621
HALEAKALA	AE-25

FIRM	MSO-444
FISKE	DD-842
FLASHER	SS-249
FLETCHER	DDE-445
FLINT	AE-32
FLORIKAN	ASR-9
FLOYD B. PARKS	DD-884
FLOYD COUNTY	LST-762
FORCE	MSO-445
FORREST ROYAL	DD-872
FORRESTAL	CVA-59
FORSTER	DFR-334
FORT MARION	LSD-22
FORTIFY	MSO-446
FOX	DLG-33
FRANCIS HAMMOND	DE-1067
FRANK E. EVANS	DD-754
FRANK KNOX	DD/DDR-742
FRANKLIN D. ROOSEVELT	CVA-42
FRED T. BERRY	DD-858
FREDERICK	LST-1184
FRESNO	LST-1182
FURSE	DD-882
GALLANT	MSO-489
GALLUP	PG-85
GALVESTON	CLG-3
GANNET	MSC-290
GARRETT COUNTY	LST-786
GENESSEE	AOG-8
GEORGE CLYMER	APA-27
GEORGE K. MACKENZIE	DD-836
GLENNON	DD-840
GOLDSBOROUGH	DDG-20
GRAFFIAS	AF-29
GRAPPLE	ARS-7
GRASP	ARS-24
GRAY	DE-1054
GRAYBACK	SS-574
GREAT SITKIN	AE-17
GREENFISH	SS-351
GREENLET	SS-213
GREGORY	DD-802
GRIDLEY	DLG-21
GUADALUPE	AO-32
GUARDFISH	SS-612
GUDGEON	SS-567
GUIDE	MSO-447
GUNSTON HALL	LSD-5
GURKE	DD-783
ISLE ROYAL	AD-29
IWO JIMA	LPH-2
JAMES C. OWENS	DD-776
JAMES E. KYES	DD-787
JAMESTOWN	AGTR-3
JASON	AR-8

HALSEY	DLG-23
HAMNER	DD-718
HAMPSHIRE COUNTY	LST-819
HANCOCK	CVA-19
HANSON	DD-832
HARDER	SS-568
HARNETT COUNTY	LST-821
HAROLD E. HOLT	DE-1074
HAROLD J. ELLISON	DD-864
HARRY E. HUBBARD	DD-748
HARWOOD	DD-861
HASSAYAMPA	AO-145
HAVERFIELD	DER-393
HAWKINS	DD-873
HECTOR	AR-7
HENDERSON	DD-785
HENRICO	APA-45
HENRY B. WILSON	DDG-7
HENRY COUNTY	LST-824
HENRY W. TUCKER	DD-875
HEPBURN	DE-1055
HERBERT J. THOMAS	DD-833
HERMITAGE	LSD-34
HICKMAN COUNTY	LST-825
HIGBEE	DD-806
HISSEM	DER-400
HITCHITI	ATF-103
HOEL	DDG-13
HOLDER	DD-819
HOLLISTER	DD-788
HOLMES COUNTY	LST-836
HOOPER	DE-1026
HOPEWELL	DD-681
HORNE	DLG-30
HORNET	CVS-12
HUGH PURVIS	DD-709
HULL	DD-945
HUNTERDON COUNTY	LST-838
ILLUSIVE	MSO-448
IMPERVIOUS	MSO-449
IMPLICIT	MSO-445
INCHON	LPH-12
INDEPENDENCE	CVA-62
INDRA	ARL-37
INFLICT	MSO-456
INGERSOLL	DD-652
INGRAHAM	DD-694
INTREPID	CVS-11
IREDELL COUNTY	LST-839
LOCKWOOD	DE-1064
LOFBERG	DD-759
LONG BEACH	CGN-9
LOWE	DER-325
LOWRY	DD-770
LOYALTY	MSO-457

JENKINS	DD/E-447
JENNINGS COUNTY	LST-846
JEROME COUNTY	LST-848
JOHN A. BOLE	DD-755
JOHN KING	DDG-3
JOHN PAUL JONES	DDG-32
JOHN R. CRAIG	DD-885
JOHN R. PERRY	DE-1034
JOHN S. MCCAIN	DDG-36
JOHN W. THOMASON	DD-760
JOHN W. WEEKS	DD-701
JOHNSTON	DD-821
JOSEPH HEWES	DE-1078
JOSEPH STRAUSS	DDG-16
JOSPEHUS DANIELS	DLG-27
JOUETT	DLG-29
JUNEAU	LPD-10
JUPITER	AVS-8
KANSAS CITY	AOR-3
KAWISHIWI	AO-146
KEARSARGE	CVS-33
KEMPER COUNTY	LST-854
KENNEBEC	AO-36
KEPPLER	DD-765
KILAUEA	AE-26
KING	DLG-10
KIRK	FF-1087
KISHWAUKEE	AOG-9
KISKA	AE-35
KITTY HAWK	CVA-63
KLONDIKE	AR-22
KNOX	DE-1052
KOINER	DER-331
KRETCHMER	DER-329
KRISHNA	ARL-38
LANG	DE-1060
LAWRENCE	DDG-4
LAWS	DD-558
LEADER	MSO-490
LEARY	DD/R-879
LENAWEE	APA-195
LEONARD F. MASON	DD-852
LEXINGTON	CVA-16
LIPAN	ATF-85
LITCHFIELD COUNTY	LST-901
LLOYD THOMAS	DD-764
MONTICELLO	LSD-35
MONTROSE	APA-212
MOORE	DD-741
MORTON	DD-948
MOUNT BAKER	AE-4
MOUNT HOOD	AE-29
MOUNT KATAMAI	AE-16
MOUNT MCKINLEY	AGC-7
MULLANY	DD-528

LUCID	MSO-458
LUZERNE COUNTY	LST-902
LYNDE MCCORMICK	DDG-8
MADDOX	DD-731
MADERA COUNTY	LST-905
MAGOFFIN	APA-199
MAHAN	DLG-11
MAHNOMEN COUNTY	LST-912
MAHOPAC	ATA-196
MANATEE	AO-58
MANITOWOC	LST-1180
MANLEY	DD-940
MANSFIELD	DD-728
MARATHON	PG-89
MARIAS	AO-57
MARK	AKL-12
MARKAB	AR-23
MARS	AFS-1
MARSH	DE-699
MARVIN SHIELDS	DE-1066
MASSEY	DD-778
MATACO	ATF-86
MATHEWS	AKA-96
MATTAPONI	AO-41
MAUNA KEA	AE-22
MAURY	AGS-16
MAZAMA	AE-9
MCCAFFERY	DD-860
MCDERMUT	DD-677
MCGINTY	DE-365
MCKEAN	DD-784
MCMORRIS	DE-1036
MEDREGAL	SS-480
MEEKER COUNTY	LST-980
MENHADEN	SS-377
MERCER	AFB-39
MEREDITH	DD-890
MERRICK	AKA-97
MEYERKORD	DE-1058
MIDWAY	CVA-41
MILWAUKEE	AOR-2
MISPILLION	AO-105
MOBILE	LKA-115
MOCTOBI	ATF-105
MOLALA	ATF-106
MONMOUTH COUNTY	LST-1032
PAUL	DE-1080
PAUL REVERE	APA-248
PEACOCK	MSC-198
PEORIA	LST-1183
PERCH	SS-313
PERKINS	DD-877
PERMIT	SSN-594
PERRY	DD-844
PERSISTENT	MSO-491

MULLINIX	DD-944
MUNSEE	ATF-107
MYLES C FOX	DD-829
NAVARRO	APA-215
NAVASOTA	AO-106
NECHES	AO-47
NEW	DD-818
NEW JERSEY	BB-62
NEW LONDON COUNTY	LST-1066
NEW ORLEANS	LPH-11
NEWELL	DER-322
NEWMAN K PERRY	DD-883
NEWPORT NEWS	CA-148
NIAGARA FALLS	AFS-3
NICHOLAS	FFG-47
NITRO	AE-23
NOA	DD-841
NORRIS	DD-859
NOXUBEE	AOG-56
NUECES	APB-40
NYE COUNTY	LST-1067
O'BANNON	DD-450
O'BRIEN	DD-725
O'CALLAHAN	DE-1051
O'HARE	DD-889
OAK HILL	LSD-7
OGDEN	LPD-5
OKANOGAN	APA-220
OKINAWA	LPH-3
OKLAHOMA CITY	CLG-5
OPPORTUNE	ARS-41
ORISKANY	CVA-34
ORLECK	DD-856
OUELLET	DE-1077
OUTAGAMIE COUNTY	LST-1073
OXFORD	AGTR-1
OZBOURN	DD-846
PAGE COUNTY	LST-1076
PARICUTIN	AE-18
PARK COUNTY	LST-1077
PARSONS	DD-949/DDG-33
PASSUMPSIC	AO-107
PATAPSCO	AOG-1
RAZORBACK	SS-394
READY	PG-87
REAPER	MSO-467
REASONER	FF-1063
RECLAIMER	ARS-42
REDFISH	SS-395
REEVES	DLG-24
REGULUS	AP-57
REHOBOTH	AGS-50
REMORA	SS-487
RENSHAW	DD-499
RENVILLE	APA-227

PHILIP	DD-498
PHOEBE	MSC-199
PICKAWAY	APA-222
PICKEREL	SS-524
PICKING	DD-685
PICTOR	AF-54
PIEDMONT	AD-17
PINE ISLAND	AV-12
PITKIN COUNTY	LST-1082
PIVOT	MSO-463
PLATTE	AO-24
PLEDGE	MSO-402
PLUCK	MSO-464
PLUNGER	SSN-595
POGY	SSN-647
POINT DEFIANCE	LSD-31
POLK COUNTY	LST-1084
POLLUX	AKS-4
POMFRET	SS-301
PONCHATOULA	AO-148
PORTERFIELD	DD-682
POWER	DD-839
PRAIRIE	AD-15
PREBLE	DLG-15
PRESTON	DD-795
PRICHETT	DD-561
PRIME	MSO-466
PRINCETON	LPH-5
PROCYON	AF-61
PROVIDENCE	CLG-6
PUFFER	SSN-652
PULASKI COUNTY	LST-1088
PYRO	AE-24
QUAPAW	ATF-110
QUEENFISH	SS-393
RACINE	LST-1191
RADFORD	DD-446
RAINIER	AE-5
RAMSEY	DEG-2
RANGER	CVA-61
RASHER	SS-269
RATHBURNE	DE-1057
RATON	AGSS-270
SCULPIN	SSN-590
SEADRAGON	SSN-584
SEAFOX	SS-402
SEDGWICK COUNTY	LST-1123
SEGUNDO	SS-398
SEMINOLE	AKA-104
SERRANO	AGS-24
SHAKORI	ATF-162
SHANGRI-LA	CVA-38
SHARK	SSN-591
SHASTA	AE-6
SHELDRAKE	AGS-19

REPOSE	AH-16
RICH	DD-820
RICHARD B ANDERSON	DD-786
RICHARD E KRAUS	DD-849
RICHARD S EDWARDS	DD-950
RICHMOND K TURNER	DLG-20
ROARK	DE-1053
ROBERT H MCCARD	DD-822
ROBERT K HUNTINGTON	DD-781
ROBERT L WILSON	DD-847
ROBISON	DDG-12
ROCK	AGSS-274
ROGERS	DD-876
RONQUIL	SS-396
ROWAN	DD-782
RUPERTUS	DD-851
SABALO	SS-302
SACRAMENTO	AOE-1
SAFEGUARD	ARS-25
SAILFISH	SS-572
SALISBURY SOUND	AV-13
SALMON	SS-573
SAMPLE	DE-1048
SAMUEL B ROBERTS	DD-823
SAMUEL GOMPERS	AD-37
SAMUEL N MOORE	DD-747
SAN BERNARDINO	LST-1189
SAN JOAQUIN COUNTY	LST-1122
SAN JOSE	AFS-7
SANCTUARY	AH-17
SANTA BARBARA	AE-28
SARATOGA	CVA-60
SARGO	SS-583
SARSFIELD	DD-837
SATYR	ARL-23
SAVAGE	DER-386
SAVANNAH	AOR-4
SCAMP	SSN-588
SCHENECTADY	LST-1185
SCHOFIELD	DEG-3
TAWASA	ATF-92
TAYLOR	DD-468
TECUMSEH	SSBN-628
TERRELL COUNTY	LST-1157
THEODORE E CHANDLER	DD-717
THOMASTON	LSD-28
THUBAN	AKA-19
TICONDEROGA	CVA-14
TILLAMOOK	ATA-192
TINGEY	DD-539
TIOGA COUNTY	LST-1158
TIRU	SS-416
TOLOVANA	AO-64
TOM GREEN COUNTY	LST-1159
TOMBIGBEE	AOG-11

SHELTON	DD-790
SIOUX	ATF-75
SKAGIT	AKA-105
SNOHOMISH COUNTY	LST-1126
SNOOK	SSN-592
SOMERS	DD-947/DDG-34
SOUTHERLAND	DD-743
SPHINX	ARL-24
SPINAX	SS-489
SPROSTON	DD-577
ST CLAIR COUNTY	LST-1096
ST FRANCIS RIVER	LSMR/LFR-525
ST LOUIS	LKA-116
ST PAUL	CA-73
STEINAKER	DD-863
STERETT	DLG-31
STERLET	SS-392
STICKELL	DDR-888
STODDARD	DD-566
STONE COUNTY	LST-1141
STORMES	DD-780
STRIBLING	DD-867
STRONG	DD-758
SUMMIT COUNTY	LST-1146
SUMNER COUNTY	LST-1148
SUMTER	LST-1181
SUNNADIN	ATA-197
SURFBIRD	ADG-383
SURIBACHI	AE-21
SUTTER COUNTY	LST-1150
SWORDFISH	SSN-579
TACOMA	PG-92
TALLADEGA	APA-208
TALUGA	AO-62
TANG	SS-563
TANNER	AGS-15
TAPPAHANNOCK	AO-43
TAUSSIG	DD-746
TAUTOG	SS-639
TAWAKONI	ATF-114
WALLACE L LIND	DD-703
WALLER	DD-466
WALTON	DE-361
WANDANK	ATA-204
WARBLER	MSC-206
WARRINGTON	DD-843
WASHBURN	AKA-108
WASHOE COUNTY	LST-1165
WASHTENAW COUNTY	LST-1166
WEDDERBURN	DD-684
WEISS	APD-135
WELCH	PG-93
WESTCHESTER COUNTY	LST-1167
WEXFORD COUNTY	LST-1168
WHETSTONE	LSD-27



## Military exchanges will be open to honorably discharged veterans

Jeff Martin, jmartin@waaytv.com Feb 19, 2017 Updated Feb 20, 2017



Starting in November, honorably discharged veterans will be able to access the online stores of military exchanges like the one on Redstone Arsenal. The new benefit will not apply to the actual brick-and-mortar stores, but veterans will be able to shop at any service's exchange website. The online benefit will be available on Veterans Day, November 11.

"AAFES is honored to offer this well-deserved benefit to those who raised their right hands, took the oath and served our Nation with honor," said AAFES Director/CEO Tom Shull. "There are many generations of service members who have not been properly recognized for their sacrifices. The Veterans Online Shopping Benefit (VOSB) acknowledges their service and welcomes them home."

The exchanges will use information provided by the Defense Manpower Data Center to verify whether or not a veteran is eligible. According to AAFES, if a veterans records are incomplete, they will need to register through the VA.

While an honorably discharged veteran will be able to use the benefit, there are no plans to extend it to their dependents. The benefit was the proposal of AAFES Director/CEO Tom Shull in 2014.

"AAFES, along with its sister exchanges, is ensuring America's veterans are honored for their service and recognized as Soldiers, Airmen, Marines and Sailors for life," he said in a statement. "We look forward to welcoming our veterans home this Veterans Day and every day thereafter."

## **Navy Establishes Four New Ratings**

**Chief of Naval Personnel Public Affairs, Navy.mil, February 1**

**WASHINGTON** -- The Navy announced Wednesday the establishment of four new ratings for active duty Sailors, yeoman submarine (YNS), logistics specialist submarine (LSS), culinary specialist submarine (CSS) and fire controlman Aegis (FCA) in NAVADMIN 021/17.

This realignment was made to improve management of ship manning and personnel inventory for both the Surface and Submarine ratings.

The new ratings will be effective:

- Sept. 2, 2017, for E-6
- Oct. 17, 2017, for E-7 through E-9
- Nov. 28, 2017, for E-1 through E-5

Sailors serving as Aegis fire controlman and yeoman, logistics specialist, culinary specialist submarine Sailors will be converted to their applicable service ratings by enlisted community managers with no action needed from the member.

The new ratings are for active duty Sailors and billets and will not be applied to the reserve component. Additionally, there will be no changes to Sea/Shore flow resulting from the new ratings.

An advancement exam will be created for each new service rating. The first E-7 exam for these ratings will be given in January 2018. For E-4, E-5 and E-6 exams for these new ratings will be given in March 2018.

More information and complete details can be found in NAVADMIN 021/17 found at [www.npc.navy.mil](http://www.npc.navy.mil).

## **Trump Names Businessman As Navy Secretary**

**Tom Vanden Brook, USA Today, January 25**

**WASHINGTON** — Philip Bilden will be nominated as Secretary of the Navy, the White House announced Wednesday.

Bilden, who served in the Army as an intelligence officer, co-founded HarbourVest Partners, a private equity investment management firm. Bilden graduated from the Georgetown University in 1986 and holds an MBA from Harvard Business School. He worked in Asia for HarbourVest for several years.

“As Secretary of the Navy, Philip Bilden will apply his terrific judgement and top-notch management skills to the task of rebuilding our unparalleled Navy,” President Trump said in a statement released by the White House.

Bilden’s most direct connection to the Navy are his two sons, who are sailors. He also has served on boards for the Naval Academy Foundation and the Naval War College.

“I am deeply humbled and honored to serve as Secretary of the Navy,” Bilden in the statement. “Maintaining the strength, readiness, and capabilities of our maritime force is critical to our national security.”

Trump has vowed to increase the size of the Navy's fleet. During his campaign, he set a goal of 350 ships from its current strength of 274. Such a buildup could be enormously costly. The Navy's USS Gerald R. Ford has a price tag of \$13 billion.

Bilden's nomination will require Senate confirmation.

## **Navy Says More Money Needed To Address Submarine Maintenance Shortfall**

**Julia Bergman, The New London Day, February 9**

Five attack submarines could be decertified this year if Congress fails to provide more money to the Navy to address maintenance and readiness shortfalls. The Navy did not immediately respond to a request for comment on which submarines are at risk of decertification.

Top officials with the Navy, Army, Air Force and Marine Corps said that budget constraints and uncertainty has forced them to make tough choices between addressing immediate operation needs and ensuring long-term readiness.

The officials were making the case for Congress to pass a supplemental defense spending bill at a House Armed Services Committee hearing on the "state of the military" earlier this week.

"If we do not see some kind of supplemental come for this fiscal year ... within a month we're going to have to shut down air wings. We're going to have to defer maintenance on several availabilities for surface ships and submarine maintenance facilities. We would be just flat out of money to be able to do that," Vice Chief of Naval Operations Adm. Bill Moran said at the hearing.

Estimates for the additional funding are as high as \$50 billion, according to U.S. Rep. Joe Courtney, D-2nd District, a member of the House Armed Services Committee. But, Courtney said, it's hard to say for sure what the number might be, and how the funding would be distributed to the various services.

"The administration and Pentagon will get the first crack, then it will come over to us," Courtney said referring to the Seapower and Projection Forces Subcommittee, which has oversight over the military's air and sea programs and is where vital

discussions about funding for shipbuilding occur. Courtney retained his seat as ranking member of the committee.

The government currently is operating on a stopgap funding measure known as a continuing resolution until April 28. Even if Congress passes a budget to cover the second half of the fiscal year, budget caps put in place under the Budget Control Act of 2011 mean the Navy would receive about \$5 billion less than it did last fiscal year. Combine that with the increase in spending by the Navy at the start of the year, and the Navy will run out of money for ship and submarine maintenance unless additional funding is approved by Congress.

"In '17 the Navy took a \$5 billion cut in its topline. If that comes to fruition, that's \$2 billion of readiness cuts we're going to have to take, which is immediately applied to things like ship avails," Moran said. "We've had cases in the recent past where we've had to decertify a submarine from being able to dive because we cannot get it into the nuclear maintenance that is needed."

The SUBSAFE certification program, developed in response to the loss of the USS Thresher in 1963, requires that audits be performed at the end of major depot maintenance periods to maintain certification.

Ryan Alexander, president of the nonpartisan budget watchdog Taxpayers for Common Sense, said any additional funding should be provided through the normal appropriations process.

"Of course we should be concerned about readiness. There are real needs for military spending. But to go through the emergency appropriations process to address readiness is putting the cart before the horse," Alexander said.

While she acknowledged "we are living in an era of restrained spending," Alexander said if Congress wants to lift caps put in place under the Budget Control Act, it can do that through the normal legislative process. Spending needs to be based on available resources, priorities and strategy, she added.

While the Navy, following sequestration and furloughs in 2013, has hired back its civilian workforce in fairly substantial numbers, "they're young, they're inexperienced," Moran said.

"Today in our public shipyards, roughly 50 percent of all of our civilian workforce there has less than five years' experience," he added.

He also pointed to maintenance backlogs at public shipyards. The backlog has resulted in more maintenance and repair work being shifted to private shipyards like Electric Boat, which currently is working on the largest and most complex maintenance and modernization in the company's history with the overhaul of the USS Montpelier (SSN 765).

An average of 700 employees are assigned to the Montpelier, with surges of up to 900 people, according to EB spokesman Dan Barrett. Work is scheduled for completion in February 2018, Barrett said.

Courtney sees more opportunity for this type of work at EB in the future. And he said he remains confident that the Navy can continue its uptick in shipbuilding while simultaneously addressing maintenance shortfalls.

## **Launching a Missile From a Submarine Is Harder Than You Think**

**David Hambling, Popular Mechanics, February 13**

Launching a missile from a submarine isn't as easy as pressing a big red button. It takes a lot of engineering and rocket science to ensure a missile gets from an underwater launch tube to streaking through low-Earth orbit at more than 13,000 mph—and sometimes, that delicate dance of physics can go wrong.

As these missiles increase in lethality, like today's Trident II D-5 missile, so do emotions surrounding the ethics of using such a weapon in the first place. But knowing Trident's future, and the future of other nuclear missiles, requires a trip to the past and an exploration of how you even launch a missile from under the sea. Here's how a missile makes it way through the water, into the air, and on its way to a target.

### ***How We Got Here***

Submarines couldn't always launch airborne missiles from under the sea, of course. During both World Wars, submarines were armed with torpedoes and deck-mounted guns—heavy cannons for engaging surface ships and lighter anti-aircraft weapons. Mine-laying submarines also terrorized the sea in the first half of the 20th century.

But at the dawn of the Cold War, it became clear that nuclear missiles would decide future world conflicts. The earliest versions of this technology—such as what went into the Nazi V-1 and V-2s, proto-cruise missiles used to bomb London—were used as a design starting point. These missiles had a range of just a few hundred miles, which meant you needed an aircraft or ship to carry them within range. A submarine with a capable missile carrier would be the perfect weapon, able to get weapons of mass destruction within incredibly close range of the enemy without being detected.

In 1947, the United States launched a JB-2 Loon, a direct copy of the German V-1, was launched from the deck of the submarine USS Cusk. This test proved it could be done, but the Cusk used an unpolished, jerry-rigged system. By 1953 the USS Tunny had been adapted into a true missile submarine, but firing the Regulus cruise missile was still an awkward process. The submarine had to surface, then the missile was manually loaded from storage onto a launch rail on the submarine's deck before it could fire. During the whole process, the surfaced submarine was visible and vulnerable to attack by enemy aircraft. The Grayback class of submarines were subsequently built to launch missiles from the surface.

At the end of the 1950s, weapons systems still had yet to master the tricky science of shooting a rocket through water. But technology was progressing quickly, and at the turn of the decade, the Navy developed the Polaris A1 Fleet ballistic mis-

missile. Successfully launched by the USS George Washington, this missile was a revolutionary development because it allowed a boomer, another name for a ballistic missile submarine, to remain submerged. Subsequent missiles have all been refinements of the same basic design, invisible and unstoppable.

Decades later, the ballistic missile submarine is still considered the most secure leg of the nuclear triad (land-, air-, and sea-launched nukes). And sub-borne missiles have only increased in range, power and accuracy. The original Polaris had a range of about a thousand miles and delivered a single 600-kiloton warhead with an accuracy of around a mile. In 1972 a new version entered service (originally known as the Polaris B3 but then renamed Poseidon C3) with had a range of almost 3,000 miles, and carried up to twelve warheads. In 1979 came the sea god's most trusted weapon—the Trident C4, which carried the same payload to a distance of 4,600 miles. It meant a sub in the Pacific could hit any target in the Soviet Union.

Today, American Ohio-class and British Vanguard-class submarines are equipped with a sixth-generation Trident weapons system. But perhaps more impressive than its awesome destructive capability is the mechanical process that launches the missile in the first place.

### *The Physics of a Launch*

Made by Lockheed Martin, the current Trident II D-5 missile is a squat, blunt-nosed, 44-foot-long cylinder weighing nearly 120,000 pounds. It's fired by a steam cannon. First, an explosive charge flash-vaporizes a tank of water into steam. As the pressure of the expanding steam drives the missile out of its launch tube, it provides enough momentum for the weapon to clear the water's surface. This cocktail of high pressure and dangerous explosives is a crucial phase of every launch. Multiple safety mechanisms are in place to deactivate the missile if it fails to get away from the sub.

The missile slows down as it leaves the water and gravity tries to pull it back down. Motion sensors monitor the changes as the missiles hang in the air for a brief moment before the first of three rocket stages ignites.

Here, things can go spectacularly wrong if you're unlucky. Trident's first test launch from the USS Tennessee in 1989 failed because the plume of water trailing behind the missile interfered with a rocket nozzle. The resulting asymmetric thrust sent the missile spiraling in a spectacular pinwheel lasting four seconds before ending in a shower of flaming debris.

If all goes well, though, the first stage rocket burns for 65 seconds. During this phase, the missile extends an aerodynamic spike to smooth the airflow over the blunt-nosed cylinder. Without this spike, the missile can't survive its brief, high-speed transit through the atmosphere.

### *Finding Its Target*

During this first minute, the missile should now be well on its way. It will eventually reach 600 miles above sea level. The remaining rocket stages still need to ignite, separate, and remain on the correct trajectory.

Again, this isn't so easy sometimes. According to a recent leaked report, a British Trident missile launched off the coast of Florida in June 2016 as part of a testing program was supposed to head east toward a target site near Africa. Instead, the missile allegedly veered east toward the U.S. before it was destroyed.

If the missile stays on the correct path, Trident then navigates with an inertial guidance system, based on a set of sensitive accelerometers measuring precisely how much the missile accelerated and for how long. An onboard computer uses this data to calculate speed and position of the missile. In most military technologies, inertial guidance has been replaced by GPS because the older way is expensive and has a tendency lose position over time. But that's not such a huge problem when your flight is only a few minutes long. The U.S. Navy has never fired a GPS-equipped Trident, largely out of fear of possible GPS tampering.

Because of the internal guidance system's limits, Trident also has a star sighting navigation system. Like an old-time sailor, this sensor gets a location fix by measuring the position of the stars to provide fine detail correction. This correction may be needed because the orientation of the submarine may not be precisely known at launch. A compass can be thrown by magnetic disturbances, and conditions at Earth's poles (where subs sometimes operate) don't help things either. Even odd gravitational anomalies may be great enough to throw the missile miles off course, so missiles—as well as Navy seamen—are well-versed in reading the stars.

Once all those stars align, the missile finally streaks toward its deadly destination.

### *Coming In For a (Destructive) Landing*

As the missile approaches, it ejects twelve independent warheads at different targets. Each warhead has a yield of 100 kilotons—six times greater than the Hiroshima bomb. The missile's accuracy is quoted as less than 400 feet Circular Error Probable (CEP), meaning there is a 50 percent chance it will land less than 400 feet from the target.

But everything has to function perfectly for the missile to hit a target, and a glitch at any stage can be disastrous. There is also the new hazard of cyber sabotage of nuclear delivery systems. Malicious software, or even hardware which interferes with the missile controls, is a cheap way of disabling a nuclear deterrent. Although it sounds unlikely, such an attack wouldn't be without precedent.

The Royal Navy's latest botched test has only renewed calls from nuclear opponents who would like to see these destructive monsters of the deep retired completely. But as long as nuclear weapons exist, it's likely that that the Trident is going anywhere anytime soon.

## **USS New Hampshire arrives at Portsmouth Naval Shipyard**

**Staff, Fosters.com, February 8**

The Virginia-class nuclear-powered attack submarine USS New Hampshire arrived at Portsmouth Naval Shipyard Wednesday.

While at the shipyard, USS New Hampshire (SSN 778) will complete scheduled maintenance work and several system upgrades. PNSY is the Navy's center of excellence for submarine overhaul, repair and modernization. New Hampshire is the first Virginia-class major maintenance availability for the shipyard since completing the inaugural availability on USS Virginia (SSN 774) in 2012.

The submarine has a crew of 15 officers and 117 enlisted personnel. The city of Portsmouth will serve as the host community for USS New Hampshire. New Hampshire is the fifth Virginia-class submarine and third U.S. Navy ship to be named in honor of the Granite State.

USS New Hampshire is designed to excel in anti-submarine warfare; anti-ship warfare; strike warfare; special operations; intelligence, surveillance and reconnaissance; irregular warfare and mine warfare - from open ocean anti-submarine warfare to intelligence, surveillance and reconnaissance, to projecting power ashore with special operation forces and tomahawk cruise missiles in the prevention or preparation of regional crises.

Assigned to the Atlantic Fleet, New Hampshire was commissioned Oct. 25, 2008, at PNSY and is homeported in Groton, Connecticut.

New Hampshire returned from deployment to the U.S. European Command area of responsibility Nov. 9, 2016, where the sub executed the Chief of Naval Operations' maritime strategy in supporting national security interests and maritime security operations. During the deployment, New Hampshire steamed approximately 40,000 nautical miles - equal to approximately 1.84 trips around the world at the equator. New Hampshire's crew supported diplomatic relationships by conducting port visits in Haakonsværn, Norway; Faslane, Scotland; and Brest, France.

New Hampshire's commanding officer, Cmdr. Jason Weed, enlisted in the Navy in 1990 and was later selected to attend the Naval Academy Preparatory School in Newport, Rhode Island. He graduated from the U.S. Naval Academy in 1998 with a bachelor of science in systems engineering. He also holds a master of science in engineering management from Old Dominion University. Weed assumed command of New Hampshire April 13, 2015.

## **April Showers Bring Legislative Flowers For Defense**

**Scott Maucione, Federal News Radio, February 16**

April is shaping up to be a pivotal month for Congress, especially for the House Armed Services Committee and the 2018 defense authorization bill.

House Armed Services Chairman Mac Thornberry (R-Texas) said he's hopeful Congress can actually appropriate 2017 funds to the Defense Department before April 1.

The government is now operating in its fifth month at 2016 spending levels due to a continuing resolution and Congress' inability to come to an agreement on how funds should be spent.

"The fiscal year is marching ahead and so to have any hope of spending the money efficiently we need to get [the appropriations] done quickly, and secondly, 2018 is backing up here," Thornberry told reporters during a Feb. 16 briefing.

Money to fund the government writ large is set to expire in April when the continuing resolution runs out. Congress will either have to pass the appropriations bills or sign on for a longer period of time under 2016 funding. One option would be for Congress to pass 2016 funding levels until the end of fiscal 2017. That is something Thornberry said he is not willing to swallow.

"I do not believe the people who sat in this room would support a yearlong CR," Thornberry said in the House Armed Services Committee hearing room. "My bottom line is we can't wait to do what is right for the country."

DoD still might get an injection of funds even if Congress is unable to pass appropriations bills for 2017. The Pentagon is sending a supplemental budget to Congress by March 1.

Thornberry said he hopes the items in the budget will look like the \$15 billion Congress had to scrap from the 2017 defense authorization act in order to get it into law.

"The place where I have suggested the administration start [with the supplemental] is look at the items that were in the House passed NDAA last year and that ultimately did not make it into the final conference report that was signed into law," Thornberry said on Feb. 6. "I think in my view they ought to be at the top of the list, especially some modernization items."

The House bill called for 10 carrier wings, instead of the nine President Barack Obama requested. It would have procured 15 F-18s instead of two, 72 Blackhawk helicopters instead of 36 and 74 F-35s instead of 63.

The bill called for other aircraft procurements and a larger Navy, increasing battleships by three and Virginia Class Submarines by one.

The bill also increased funding for the Missile Defense Agency and the National Nuclear Security Agency.

Thornberry said the supplemental is needed to turn the corner on the readiness.

Acquisition and NDAA

April may bring Thornberry's annual defense acquisition reforms as well. Since taking the gavel two years ago, he has made acquisition reform a top priority in the defense authorization bills.

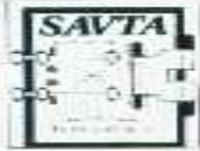
Thornberry said he plans to repeat his previous practice of releasing his acquisition reforms as a separate bill before the NDAA comes out, that way lawmakers and other stakeholders can look at the provisions and make comments on them before they are folded into the larger NDAA.

Thornberry said he'd like to release the draft bill in April.

"I've been having meetings with my staff about provisions in it. I don't know if they have legislative language yet," Thornberry said.

He added, in the best case scenario, the House version of the NDAA markup will be in May.

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