USS IDAHO
COMMISSIONING COMMITTEE
NEWSLETTER

SSN799.ORG

Creating a Strong Bond between our Great State and a Great Ship
Esto Perpetua

Issue 14 | 2023 Summer | July 5, 2023

The Strategic Importance of Submarines

By David Miskimens (SES) ret
USS IDAHO Commissioning Advisory Board

The United States Navy builds, operates, and maintains three types of submarines—nuclear-powered attack submarines (SSNs), nuclear-powered cruise missile submarines (SSGNs), and nuclear-powered ballistic missile submarines (SSBNs).

The SSNs and SSGNs are multi-mission ships that perform a variety of peacetime and wartime missions. They carry only conventional weapons, primarily MK 48 torpedoes and tomahawk land attack missiles (TLAM).

During the Cold War, Anti-Submarine Warfare (ASW) against Russian submarines was the primary stated mission of U.S. SSNs. However, Intelligence, Surveillance and Reconnaissance (ISR) and covert SOF insertion/recovery operations are mission areas as well.

In the post-Cold War era, although ASW remained a mission, the SSN force focused on training and developing proficiency in additional areas including:

- Covert insertion and recovery of Special Operations Forces (SOF) on a smaller scale from the capability of the SSGNs;
- Covert strikes against land targets with the Tomahawk cruise missiles;
- Anti-surface ship warfare;
- Covert offensive and defensive mine warfare.

While older SSN 688s are being decommissioned and new SSN-774 class boats are being delivered, there are approximately 56 SSNs and SSGNs in service, including the following:

- 28 Los Angeles (SSN-688) class boats;
- 3 Seawolf (SSN-21) class boats;
- 4 SSGN (SSGN-726) class boats and;
- 21 Virginia (SSN-774) class boats.

The SSBNs, in contrast, have a mission of strategic nuclear deterrence. To perform this mission, SSBNs are armed with submarine-launched ballistic missiles (SLBMs), which are long-range missiles armed with multiple nuclear warheads.

The SSBN basic mission is to remain hidden at sea with their SLBMs, to deter a nuclear attack on the United States by another country by demonstrating to other countries that the United States has an assured second-strike capability, meaning a survivable system for carrying out a retaliatory nuclear attack.

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The USS IDAHO Commissioning Foundation Inc. is an Idaho nonprofit corporation with Federal IRC Sec. 501(c)3 tax exempt status EIN 84-5147328

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Like other U.S. Navy submarines, they are also equipped with horizontal torpedo tubes in the bow for firing torpedoes or other torpedo-sized weapons.

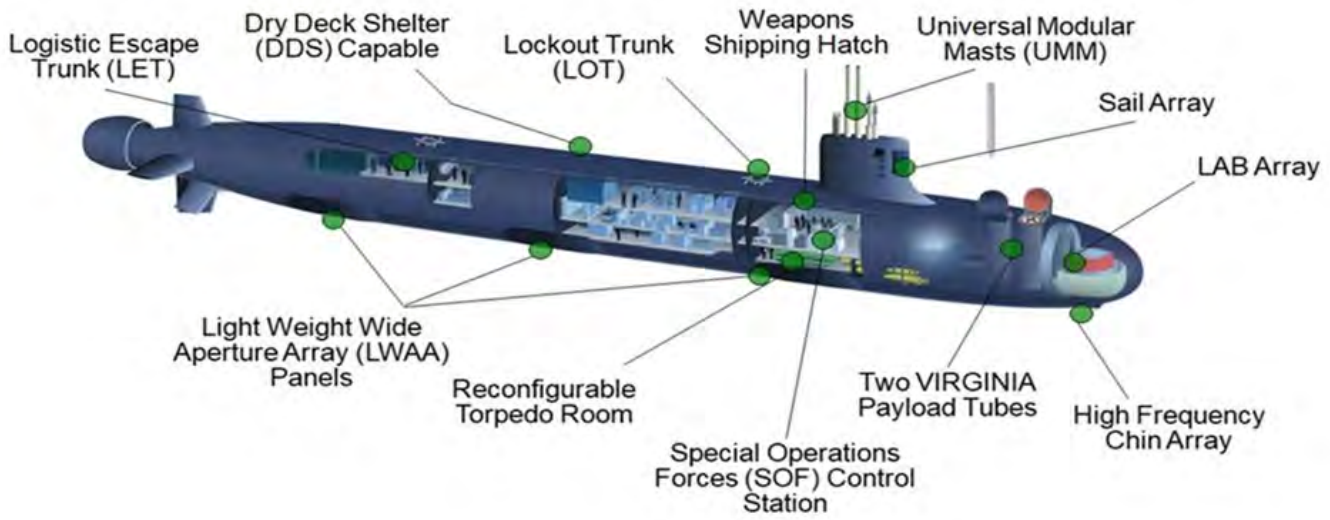
Eight of the 14 Ohio-class SSBNs are homeported at Bangor, Washington, in Puget Sound; the other six are homeported at Kings Bay, Georgia.

The U.S. Navy contracts with two private shipyards capable of building nuclear-powered ships. One, General Dynamics/Electric Boat, is located in Groton, Connecticut. The other shipyard, Virginia Huntington Ingalls Industries/ Newport News Shipbuilding, is in Virginia. The two yards currently are jointly building Virginia-class attack submarines. Sub-assemblies are provided by hundreds of suppliers from nearly all 50 states.

designs of the Seawolf were integrated into the Virginia-class design as well as new capabilities. This helps to ensure our future national security by providing an affordable and flexible multi-mission stealth platform that replaces the aging fleet of Los Angeles-class attack submarines.

The Virginia-class submarine was the first U.S. Navy warship developed using coordinated 3D visualization tools including computer-aided engineering (CAE), design (CAD), manufacturing (CAM), and product lifecycle management (PLM). Having this set of design tools allowed extensive tradeoff analysis between mission, size, sensor, hull, power plan and habitability.

Virginia-class subs are the first class to use a “fly-by-wire” system for ship control and maneuvering. This innovative solution reduced



What Does Virginia Class Technology Bring Over Prior Submarines?

The Virginia-class submarine development started in the 1990s at the end of the Cold War, when the Navy production of the Seawolf class needed to transition to a more affordable platform, but one with many of the retained design features of the Seawolf. Most of the acoustic properties, sensors, and propulsion

the manning required for controlling dive planes, managing ballasting systems and improved shallow-water ship handling for littoral operations. In contrast to a traditional bladed propeller, the Virginia class uses a pump-jet propulsor to significantly reduce the risks of cavitation and allows quieter operation.

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The class has special features to support special operation forces. The torpedo room can be reconfigured to house many special operation forces and all their equipment for prolonged deployments and there is a large lock-in / lock-out chamber for divers.

The Virginia class is the first to utilize photonic sensors instead of a traditional periscope. It is equipped with high-resolution cameras, along with light-intensification and infrared sensors, and an infrared laser rangefinder. With the removal of the barrel periscopes, the ship's control room has been moved down one deck and away from the hull's curvature, providing more room and an improved layout with visual feeds from the masts are displayed on liquid-crystal displays in the command center for enhanced situational awareness.

Virginia-class submarines feature several types of sonar arrays. Starting with the Block III contract (from SSN-784 onward) the sonar sphere array was replaced with the Large Aperture Bow (LAB) sonar array. This design allowed for the 2 large diameter payload tubes (in lieu of VLS) for 12 Tomahawk missiles.

Electronic warfare mast (AN/BLQ-10 Electronic Support Measures) is used to detect, analyze, and identify both radar and communication signals from ships, aircraft, submarines, and land-based transmitters.

The Virginia-class has a wide-aperture, lightweight fiber-optic sonar array, consisting of three flat panels mounted low along either side of the hull. There are two high frequency active sonars mounted in the sail and bow, plus the chin-mounted (below the bow), enabling safer operations in coastal waters, enhancing under-ice navigation, and improving anti-submarine warfare performance.

The sonar, combat systems, imaging, ESM, and weapons control systems aboard Virginia-class submarines have an "Open System Architecture" (OSA) which allows rapid insertion of new hardware and software as they become available. Hardware upgrades (technology insertions) are usually carried out every four years, while software-update builds are carried out every two years.

About the USS IDAHO SSN-799

The USS IDAHO is currently at "pressure hull complete", meaning all four large modules are now welded together and she looks like a submarine! All of the modules were fully outfitted with engine room components, habitability rooms, navigation, sonar, combat systems, reactor compartment, and the torpedo room. The boat will have all the technology and capability of the 25 boats preceding her. All the sensors and subsystems will have the latest hardware and software to make the USS IDAHO the most lethal attack submarine on the date of her commissioning.

USS IDAHO is the eighth of the 10-ship group of Virginia-class submarines known as Block IV. Block IV submarines incorporate design changes to increase the length of time between maintenance stops and increase the number of deployments.

The USS IDAHO will also bring much of the character of the Gem State with murals in the mess hall, pictures near the staterooms, and all the symbols of the great state of Idaho. We look forward to her fleet introduction in 2025 to conduct missions that will safeguard our national security by providing a stealthy platform with a well-trained crew.

Idaho Daughters of the American Revolution Generously Support USS IDAHO Scholarship Endowment

By Laura Barton, USS IDAHO
Marketing & Public Affairs Chair

The Idaho State Society, Daughters of the American Revolution (ISSDAR) presented North Idaho Chair Henry Netzer with a $3,000 contribution to the USS IDAHO Scholarship Endowment at ISSDAR's annual state conference on April 22 in Couer d'Alene, Idaho. In total, ISSDAR has given $5,500 to fund scholarships for the USS IDAHO's crew and families. To date, the total endowment from all donors is $148,300.

Mr. Netzer delivered the keynote address for the conference's National Defense Night. Laura Barton, USS IDAHO Marketing & Public Affairs Chair, followed his remarks by describing the strategic partnership between USS IDAHO and ISSDAR. He highlighted the ways in which DAR members can continue to support the families of USS IDAHO in the months and years to come. Audience members were encouraged to continue to give to the scholarship endowment and collect grommets from retired flags that will be used to form a ceremonial bell for the ship.

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Idaho State Regent Catherine McClintick presented USS IDAHO Commissioning Committee members Henry Netzer and Laura Barton with a $3,000 contribution to the USS IDAHO Scholarship Endowment. (Photo by Alan Griffitts.)

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During the early days of her administration, ISSDAR State Regent Catherine McClintick was searching for an organization with which to partner for the State Regent's Project. At the beginning of her term, each DAR State Regent chooses a project to support throughout the duration of her two-year term. Mrs. McClintick was looking for a project that would unite the DAR chapters across Idaho -- and tie in with the work that DAR does across the country to promote patriotism and education.

During the past two years, Mrs. McClintick and Idaho DAR members have forged a lasting bond with the USS IDAHO that will continue as the submarine is christened, commissioned, and is deployed around the globe to defend our country's freedom.

ABOVE—Idaho State Regent Catherine McClintick has supported and raised awareness of the USS IDAHO Commissioning Committee's scholarship endowment throughout her two-year term as regent of the Idaho Daughters of the American Revolution. (DAR photo)

ABOVE—DAR dinner guests sang a rousing rendition of "Yellow Submarine" in honor of the USS IDAHO. (Photo by Alan Griffitts.)

LEFT—Elegant centerpieces celebrated the USS IDAHO at the annual Idaho DAR State Conference.(Photo by Catherine McClintick.)

IT WAS A GREAT EVENT—to celebrate the United States Submarine Service (with floats for both the USS IDAHO and USS BOISE)

go to the website — www.nampaparadeamerica.com —— to see more parade pictures

By Tom Dale, USS IDAHO
Southwest Regional Committee Chair

There may be some cities in the United States where a parade honoring America wouldn't draw much of a crowd. But in Nampa, Idaho, people believe in America's greatness, and lined the streets in great numbers to celebrate our wonderful country with the annual Nampa Parade America. While the kids love to get the candy that gets spread out along the parade route, the parents are there to enjoy this annual event and show their pride in America. This was the 55th annual Parade America held in Nampa. And it was bigger and better than ever.

This year, the USS IDAHO was represented in the parade by SW Idaho Region Commissioning Committee members Tom Dale, Andy Krivy, Gary Grunewald (pictured below), and new member Suzanne Fuentes, who all walked the parade route passing out candy and USS IDAHO stickers. The center piece was the 1/16th model of the USS IDAHO, built by Don Hulse. The Navy had double impact this year, as the Boise Base with their model of the USS Boise was also in the parade directly in front of the USS IDAHO. Seeing the two submarines going down the street together left a lasting impression on all, and sparked some good conversations.

Upcoming Events

CREW VISIT—The North Idaho Regional Committee is busy planning the next crew visit.
Please mark your calendars and plan on joining us. Details of specific events will follow in the next newsletter and on our website:

17 SEPTEMBER through 24 SEPTEMBER 2023 North Idaho
Visits to the Coeur d'Alene, Post Falls, Sandpoint, Silver Valley, Grangeville and Lewiston areas.
Visit to the University of Idaho,
Farragut State Park & Museum Visit

Here are other public events that you may want to attend. Please mark your calendars and plan on joining us. Details of specific events will follow in the next newsletter and on our website:

24 July - Come out to the Bancroft Pioneer Days Parade at 10am to see the USS IDAHO model submarine float, in Bancroft, ID 83217

13 Aug. - Chubbuck Days Parade at 10 am along Hawthorne Rd, West Chubbuck Rd. and Independence Ave. in Chubbuck.

26 Aug. - Lava Hot Springs Beer Festival Parade in Lava Hot Springs. Parade time will be posted in the Events section of the USS IDAHO Commissioning Committee website.

Explore USS IDAHO Commissioning Committee on Social Media

The USS IDAHO Commissioning Committee has a strong presence across various social media platforms. If you'd like to learn about recent press coverage and upcoming events, please check out the following social media sites and subscribe for updates.

LinkedIn: https://www.linkedin.com/groups/8862129/

Facebook: https://www.facebook.com/USS-Idaho-Commissioning-Committee-110961847853007/

Twitter: https://mobile.twitter.com/ussidaho

Instagram: https://www.instagram.com/ussidaho/

SW Idaho Region Chair Tom Dale tells the Veterans of Foreign Wars and Auxiliary about the USS IDAHO at the 91st Idaho State VFW Convention on June 5, 2023 (Photo by Richard Colburn)

WHITE HOUSE FACT SHEET:
Trilateral Australia-UK-US Partnership on Nuclear-Powered Submarines

(https://www.whitehouse.gov/briefing-room/statements-releases/2023/03/13/fact-sheet-trilateral-australia-uk-us-partnership-on-nuclear-powered-submarines/)

On March 13, 2023, Prime Minister Anthony Albanese of Australia, Prime Minister Rishi Sunak of the United Kingdom, and President Joseph Biden of the United States announced an arrangement for Australia to acquire a conventionally-armed, nuclear-powered submarine (SSN) capability through the Australia-United Kingdom-United States (AUKUS) enhanced security partnership.

On September 15, 2021, our three nations embarked on an 18-month consultation period to identify the optimal pathway for Australia to acquire this capability, while setting the highest nuclear non-proliferation standard. The plan announced today will deliver on that commitment. Further, this plan will lift all three nations' submarine industrial bases and undersea capabilities, enhancing deterrence and promoting stability in the Indo-Pacific.

Australia's future SSN (which we are calling "SSN-AUKUS") will be a state-of-the-art platform designed to leverage the best submarine technology from all three nations. SSN-AUKUS will be based on the United Kingdom's next-generation SSN design while incorporating cutting edge US submarine technologies, and will be built and deployed by both Australia and the United Kingdom.

AUKUS demonstrates our shared commitment to a free and open Indo-Pacific and an international system that respects the rule of law, sovereignty, human rights, and the peaceful resolution of disputes free from coercion. AUKUS partners operating highly capable conventionally-armed, nuclear-powered submarines will provide an assured undersea capability that contributes to stability, peace, and prosperity in the Indo-Pacific and around the world.

A Phased Approach to Build Stewardship and Sustain Australia's Undersea Capability

Our nations have outlined an ambitious approach that will provide Australia with a conventionally-armed, nuclear powered submarine capability at the earliest possible date while ensuring Australia's capacity to safely operate, maintain and regulate this technology, and setting the highest standards for nuclear non-proliferation. Our phased approach includes the following elements, each underwritten by the mutual commitments of each nation:

- Embedded Personnel and Port Visits. Beginning in 2023, Australian military and civilian personnel will embed with the United States Navy, the United Kingdom Royal Navy and, subject to any necessary arrangements, within the United States and United Kingdom submarine industrial bases. This will accelerate the training and development of Australian personnel to ensure our ability to work together and for Australians to take on the responsibilities associated with these programs. The United States plans to increase SSN port visits to Australia beginning in 2023, with Australian sailors joining U.S. crews for training and development; the United Kingdom will increase visits to Australia beginning in 2026.
- Submarine Rotational Forces. As early as 2027, the United Kingdom and the United States plan to establish a rotational presence of one UK Astute class submarine and up to four U.S. Virginia class submarines at HMAS Stirling near Perth, Western Australia – this initiative will be known as 'Submarine Rotational Force-West' (SRF-West). This rotational presence will comply fully with Australia's longstanding position of no foreign bases on its territory. It will put our nations shoulder to shoulder as Australia builds the necessary operational capabilities and skills to steward and operate its own fleet of nuclear-powered submarines. Australia is launching an ambitious national effort to grow its defense and industrial workforce to support this plan.

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- Sale of U.S. Virginia Class Submarines. Beginning in the early 2030s, pending approval from the U.S. Congress, the United States intends to sell Australia three Virginia class submarines, with the potential to sell up to two more if needed. This action is critical to continue growing Australia's ability to own and operate a fleet of SSNs, and to provide Australia with a sovereign capability at the earliest possible date. It also ensures Australia sustains its undersea capabilities until SSN-AUKUS is ready, given the planned retirement of Australia's current fleet of submarines.
- SSN-AUKUS. The combination of United Kingdom submarine design and advanced United States technology is intended to deliver a best-in-class submarine that meets Australia's long-term defense needs while bolstering trilateral industrial cooperation. SSN-AUKUS will be the future attack submarine for both Australia and the United Kingdom. Australia and the United Kingdom intend to start building SSN-AUKUS in their domestic shipyards before the end of this decade. The United Kingdom intends to deliver its first SSN-AUKUS to the UK Royal Navy in the late 2030s. Australia plans to deliver the first Australian-built SSN-AUKUS to the Royal Australian Navy in the early 2040s.

The implementation of this approach will be consistent with the trilateral partners' respective international obligations and domestic law and underpinned by future legal and enabling arrangements for sharing sensitive information, equipment and technology.

Responsible Stewardship of Naval Nuclear Propulsion Technology

All three nations appreciate the enormity of this endeavor and are committed to the principles that have upheld the United Kingdom and United States naval nuclear propulsion programs' unmatched safety records. For over 60 years, the United Kingdom and United States have operated more than 500 naval nuclear reactors that have collectively travelled more than 150 million miles – the equivalent of over 300 trips to the moon and back – without incident or adverse effect on human health or the quality of the environment. Australia is committed to upholding these same standards to safely steward naval nuclear propulsion technology.

As part of this commitment to nuclear stewardship, Australia has committed to managing all radioactive waste generated through its nuclear-powered submarine program, including spent nuclear fuel, in Australia. The United Kingdom and the United States will assist Australia in developing this capability, leveraging Australia's decades of safely and securely managing radioactive waste domestically. Australia will manage these materials in accordance with its nuclear non-proliferation and other international obligations and commitments.

Strengthening the Nuclear Non-Proliferation Regime

When the AUKUS leaders announced this initiative in September 2021, they committed to meeting our countries' respective nuclear non-proliferation obligations, setting the highest non-proliferation standard, and strengthening the non-proliferation regime while protecting classified and controlled information.

Our nations have made clear commitments to meet these objectives, including that:

- As a non-nuclear-weapon state, Australia does not – and will not – seek to acquire nuclear weapons;
- Australia will not enrich uranium or reprocess spent fuel as part of this program;
- Australia will not produce its own nuclear fuel for its SSNs;
- The United Kingdom and United States intend to provide Australia with nuclear material in complete, welded power units that will not require refueling during their lifetime;

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- The nuclear fuel that Australia receives cannot be used in nuclear weapons without further chemical processing, which would require facilities that Australia does not have and will not seek; and
- This initiative will occur within the framework of Australia's Comprehensive Safeguards Agreement (CSA) and Additional Protocol (AP) with the International Atomic Energy Agency (IAEA).

Our nations have consulted regularly with the IAEA over the past year, in support of the IAEA's mandate to uphold the integrity of the global nuclear safeguards regime. The Director General of the IAEA has reported to IAEA Member States that he believes the AUKUS partners "are committed to ensuring the highest non-proliferation and safeguards standards are met," and noted his "satisfaction with the engagement and transparency shown by the three countries thus far." The international community can be confident that our nations will continue to work transparently with the IAEA towards an approach that will strengthen the nuclear non-proliferation regime and set the strongest non-proliferation precedent.

Upgrading Infrastructure and Industrial Capacity

AUKUS submarine cooperation will result in significant benefits to infrastructure and industrial capacity in all three nations.

- Australia: The pathway to Australia acquiring SSN-AUKUS will be a whole-of-nation undertaking. HMAS Stirling in Western Australia will be expanded to support the scale of infrastructure required for nuclear-powered submarines – both for visiting and rotational submarines and for Australia's own nuclear-powered submarines. Australia's SSN-AUKUS submarines will be built at Australia's future Submarine Construction Yard in Adelaide, South Australia – employing thousands of workers onsite at peak. Overall, this enterprise will almost double the previously forecasted demand for personnel in Australia's submarine shipyard, and will be supported by significant investment in Australia's domestic industrial capacity and infrastructure. Australia will establish additional training, skilling and educational programs to achieve this growth for Australia's local submarine and shipbuilding industry.
- United Kingdom: The United Kingdom intends to build on the recent investment it has been making in its submarine delivery, such as the £2.0 billion in BAE Systems, Barrow and Rolls Royce, Derby announced last year. This will deliver thousands of jobs in the United Kingdom, including in the supply chain. Australia has committed to a proportionate financial investment in the United Kingdom submarine industrial base to accelerate production of SSN-AUKUS.
- United States: The United States is investing an additional U.S. $2.4 billion over fiscal years 2023-2027 in the submarine industrial base to increase construction capacity – above and beyond its annual investment in undersea platforms – to meet U.S. national needs. The United States also added $2.2 billion to its submarine maintenance budget over fiscal years 2024-2028 to improve Virginia class SSN maintenance. The U.S. is examining what additional investments are required to accelerate submarine production and maintenance to support both U.S. and AUKUS needs. These investments will support thousands of high-skill jobs in the United States. Australia has committed to a proportionate financial investment in the U.S. submarine industrial base to accelerate delivery of Virginia class submarines.

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Increasingly Integrated Submarine Forces

Incorporating proven, advanced U.S. technologies into SSN-AUKUS will optimize the capability, commonality and interoperability of all three nations' SSN platforms. Trilaterally sharing sophisticated submarine technology is emblematic of the broader integration of our submarine enterprises. For example:

- Australian submariner training in United States and United Kingdom schools: In 2022, the United States accepted its first Royal Australian Navy personnel into nuclear propulsion training programs, with additional personnel slated to join upcoming cohorts. The United States Congress, as part of the Fiscal Year 2023 National Defense Authorization Act, passed a bipartisan provision that establishes the ability for Royal Australian submarine officers to train at the Naval Nuclear Power Training Command and eventually serve on operational U.S. submarines. The United Kingdom has also welcomed Australian submariners into the Royal Navy's nuclear courses.
- Australian personnel on board United States and United Kingdom submarines. Australian submariners already train aboard U.S. and UK submarines. We will increase their numbers and levels of seniority over time as we grow Australia's capacity to operate, maintain and regulate its own sovereign nuclear-powered submarines.
- Training Australia's industrial and technical workforce. Australia intends to send hundreds of workers to United States and United Kingdom shipyards, and scientists and engineers to United States and United Kingdom technical facilities, for specialized skills training and to gain the experience required to build and sustain nuclear-powered submarines.
- Interoperable Infrastructure. As Australia upgrades its infrastructure to support the arrival of SSNs, it will build maintenance and repair capabilities that United States and United Kingdom submarines may also use, increasing our capacity to enhance our forces in peacetime and meet operational needs in times of crisis.

Conclusion

The optimal pathway announced today will enhance the capabilities of AUKUS partners to contribute to security and stability in the Indo-Pacific. It will:

- Increase the number of partner-nation SSNs in the Indo-Pacific, increasing our combined capacity in the undersea domain;
- Create additional production capacity, enabling AUKUS partners to grow the size of our combined submarine forces;
- Strengthen and make more resilient trilateral supply chains, enhancing the industrial bases in all three nations; and
- Enhance the ability of our three nations to deter aggression and contribute to stability in the Indo-Pacific, and globally.

We are committed to open and transparent engagement with partners within and beyond the region as we implement this plan. The initiatives announced today will strengthen deterrence and bolster stability in the Indo-Pacific and beyond for decades to come.

(End of Article)

The Missing U.S. Submarines for Australia

The defense deal is great, but the boats won't arrive for years.

By the Editorial Board, Wall Street Journal—March 14, 2023
(https://www.wsj.com/articles/australia-submarines-president-biden-u-s-military-aukus-deal-pentagon-b9168d37)

Australian Prime Minister Anthony Albanese, President Joe Biden, and British Prime Minister Rishi Sunak at Point Loma naval base in San Diego, March 13.

PHOTO: STEFAN ROUSSEAU/ASSOCIATED PRESS

President Biden in San Diego on Monday announced a deal to help Australia acquire U.S. nuclear-powered submarines, a step forward by a stalwart ally to check Beijing. But Mr. Biden isn't highlighting the dysfunctions in American submarine production, nor the urgent need for a generational effort to expand the U.S. Navy's undersea fleet.

The Pacific and the world are at "an inflection point," that will "affect the prospect of peace for decades to come," as Mr. Biden said on Monday, and the submarine deal is an expansion of Aukus, the 2021 defense pact among the U.S., U.K. and Australia. The agreement has three planks: Putting submarines on station Down Under; offering the Aussies at least three U.S. Virginia-class attack submarines in the early 2030s; and a new, late 2030s submarine that blends British design and U.S. technology.

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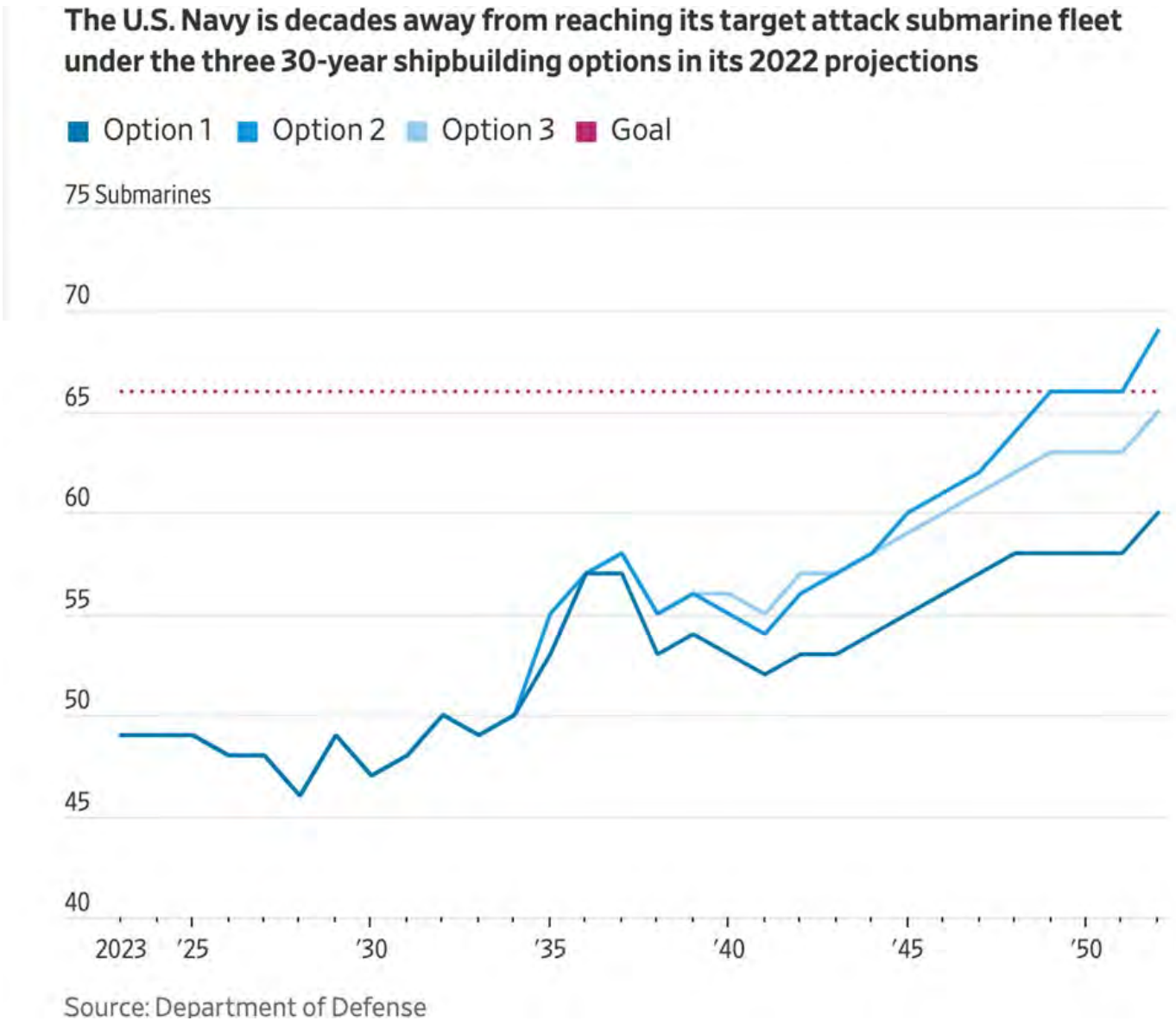
U.S. submarines are making more stops in Australian ports, and Aussie sailors will attend U.S. nuclear-power school as they learn to operate some of the most sophisticated military assets in the world. U.S. submarines are making more stops in Australian ports, and Aussie sailors will attend U.S. nuclear-power school as they learn to operate some of the most sophisticated military assets in the world. Submarines from the U.S. and U.K. will rotate through an Australian naval base, slated to begin in 2027. These are excellent incremental steps to work with friends to put more hard power in the Pacific.

The U.S. will later sell Australia up to five Virginia-class submarines to replace the country's six aging conventionally powered boats. Virginia-class subs can travel vast distances without surfacing, and U.S. undersea ability is "maybe the only true asymmetric advantage we still have against our opponents," as a four-star admiral put it last year.



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Take a potential Chinese assault on Taiwan. In this year's war game by the Center for Strategic and International Studies, U.S. submarines pummeled the Chinese naval fleet in the Taiwan Strait. But as CSIS notes with understatement, "numbers were inadequate," especially with a 20% attrition rate per 3.5 days that increased as the war continued.

The U.S. Navy's official goal is 66 boats, and other analyses suggest the more comfortable number is 70 or even 78. But the sea service now has only 50 and that number may dip as older classes age. The Navy's latest 30-year shipbuilding plan doesn't reach 66 boats until the late 2040s at the earliest.

Congress is buying two Virginia-class boats a year and wants three. But the industrial base has churned out only about 1.2 a year over the past five years. Defense contractors are swamped trying to build two fast attack boats while also producing ballistic missile subs, in the first overhaul of the nuclear deterrent in decades.

The U.S. Navy maintenance backlog is such that in fiscal 2021 the fleet lost 1,500 days waiting for repair. That's the equivalent of having four fewer submarines, the Navy's brass has said. About 3.5 more were out of commission because repairs took longer than planned.

Having Australia contribute to costs and operating these submarines could be a "rising tide that lifts all boats," as House lawmakers said in a letter in January. But the Aussies will have to follow through with billions of dollars, no easy feat in a country with a defense budget of some $30 billion, about 2.1% of GDP.

Mr. Biden says he'll pour $4.6 billion into U.S. submarine development, though that alone can't compensate for decades of under investment, a dearth of skilled labor, supply-chain disruption and a shortage of dry docks. Fixing U.S. submarine disrepair would require sustained focus and presidential leadership, so far not in evidence. Mr. Biden's budget this week again cuts the Pentagon after inflation and shrinks the Navy to 291 ships in 2028.

The Aukus deal is a reminder that the U.S. remains the friend of choice around the world, and it's an opening to launch a national effort to build three attack subs a year. But meeting the defense needs of allies and America will take more than parchment promises.

Appeared in the March 15, 2023, print edition as 'The Missing U.S. Subs for Australia'.

(End of Article)

In the dark depths of the Pacific, US submarines patrol with an eye fixed firmly on China

By Eric Cheung, Will Ripley and John Mees, CNN
Updated 1:14 AM EDT, Thu April 6, 2023

To watch the entire video—go to the below URL:
https://www.cnn.com/2023/04/05/us/us-navy-submarine-pacific-china-intl-hnk-ml

RIGHT—the Control Room, the way it is today, with all of those screens instead of gauges.

ATDM | ACCELERATED TRAINING IN DEFENSE MANUFACTURING

Solving Industrial Base WFD Challenges through NAVSEA and DOD Funded Training Partnership

244 Students

- ATDM has since 2020 accepted and trained ***244*** students.
- ATDM has the capacity to reach 800 - 1,000 graduates on a yearly basis.
- ATDM is on track to reach this goal by FY 2025.

Navy's Shipbuilding/Sustainment Enterprise

- It is Navy's goal to train skilled workers to fill a **CRITICAL** skills gap in the maritime industrial base.
- By becoming a partner you will be become an integral part in ***Building Tomorrow's Navy.***

TRAINING

- ATDM offer the following programs
  - Additive Manufacturing
  - CNC Machining
  - Non-destructive Testing
  - Quality Control Inspection
  - Welding

58 Incumbent Workers

- ATDM has trained and upskilled 58 Incumbent Industry workers from a variety of employers.
- ATDM with its customized curriculum to meet specific training requirments has attracked multiple industry employer who have sent their empoyees for upskilling.

85.4% Graduation Rate

- With a graduation rate of ***85.4%***, ATDM has a set a new standard in Manufacturing training programs.

Time to Talent Shortened

- Our non-industry employed students have been hired by comapnies such as ***BWXT, Newport News Shipbuilding, Norfolk Naval Shipyard*** and many more.
- Due to ATDM's complete program with industry-recognized certifications our students are ready to fill their role in military technology production.

GROW YOUR BUSINESS WITH ATDM SKILLED TECHNICIANS

DEPARTMENT OF THE NAVY
PROGRAM EXECUTIVE OFFICER, STRATEGIC SUBMARINES
614 SICARD STREET SE
WASHINGTON NAVY YARD DC 20376-7004

5000
Ser. SSBN/0014
21 Feb 2023

MEMORANDUM

From: Executive Director, Program Executive Office, Strategic Submarines
To: Submarine Industrial Base/Defense Industrial Base Partners

Subj: **INDUSTRY PARTICIPATION IN THE ACCELERATED TRAINING IN DEFENSE MANUFACTURING PROGRAM**

1. Background: Launched in 2020, the Accelerated Training in Defense Manufacturing (ATDM) program is a collaborative effort between Team Submarine, Submarine Industrial Base Program, and the Office of the Secretary of Defense Industrial Base Analysis and Sustainment (IBAS) Program Office to develop a fast-track program to train skilled workers at scale for the Submarine Industrial Base (SIB). It is a flagship workforce development program to build and train the workforce needed across all levels of the SIB to support construction of COLUMBIA and VIRGINIA class submarines, and sustainment of our current submarine force. The ATDM Regional Training Center prototype in Danville, VA welcomed its first cohort in March 2021 and has since graduated more than 150 students, with 72 enrolled in the current cohort. At scale in 2025, ATDM will train 800-1,000 skilled workers every year, providing students with 600+ hours of rigorous training over 16 weeks in five critical disciplines: welding, computer numerical control machining, metrology/quality control, non-destructive testing (NDT) and additive manufacturing. A significant benefit for the current and near-term program participants is that all training costs are currently funded by the government. In the longer term, there will be a cost share model developed that will continue to provide great value to industry by reducing their training burden.

Attached is a top-level overview of ATDM with additional details on the program and the opportunity it presents to industry for meeting talent acquisition needs. Additional information can be found at https://atdm.org.

2. Purpose: You are receiving this "**call to action**" because of the important role that your company plays in the SIB supply chain. ATDM is an opportunity for you to upskill incumbent workers, train new hires prior to onboarding, and fill jobs by employing ATDM graduates, with costs subsidized by the government. It is a talent acquisition resource that provides an additional pathway to attain the talent you need to successfully operate and grow your business in support of our nation's submarine force. To date, over 50 SIB companies from 25 states, from shipbuilders to many key suppliers, have participated in ATDM by sending employees to receive specialized training in critical maritime trades. Along with NAVSEA and OSD IBAS, our shared objective is to **grow industry participation ten-fold over the next two years and your help is needed**. I invite you to join us in this critical effort.

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3. Our Challenge: In April 2023, ATDM will launch a rapid growth campaign to reach our full training capacity of 1,000 graduates per year by 2025. This is an aggressive goal indeed and a critical imperative to address the skill gaps and worker shortages we face in our industrial base.

Success demands an "All Hands-on Deck" effort to reach our goal. Below I outline an ATDM-Industry Partnership initiative that we will pursue, with your support, to enable the continued development of ATDM over the next two years.

4. Industry Partnership and the Way Forward:

a. Objective. To increase industry participation in the ATDM program, strengthening ATDM's ability to meet industry's talent acquisition, training and employment needs while filling existing skill gaps and shortages in the SIB.

b. Concept of Operations. Establish "working partnerships" with participating companies through standing recruiting, training and employment programs and pathways to enable:

(1) Upskill training for incumbent workers;

(2) Training of candidates for employment and new hires;

(3) Identification of training requirements and competencies to customize curriculum to meet industry needs;

(4) Calibration of the demand for skilled workers and hiring forecast; and

(5) Placement and retention of ATDM graduates in maritime manufacturing jobs.

c. Action Plan and Next Steps. The Submarine Industrial Base (SIB) team is working with the ATDM program at the Institute of Advanced Learning and Research (IALR) in Danville, VA to establish an ATDM-Industry Partnership program focused on: (1) establishing a pipeline of trainees (incumbent workers and new hires) from industry into ATDM, and (2) placing ATDM graduates in manufacturing jobs in the SIB. We aim to have this partnership program in place by April 1, 2023. The IALR ATDM team will be reaching out to you with additional information on how to participate and contribute to this effort in the very near future. In the interim, I ask that you designate a primary point of contact within your organization to lead this important initiative and provide the contact information via email or phone to:

Dr. Debra Holley, ATDM Program Director:
Debra.Holley@ialr.org
(434) 766-6659

The Submarine Dolphin

By David Stroman, MBA, PMP—Military Assistant at NATO Maritime Command #ForwardTheLightBrigade

The topic for this week is the U.S. Navy's oldest warfare insignia device. In the summer of 1923, Commander, Submarine Division Three, Captain Ernest J. King (USNA 1901 and later Fleet Admiral During WWII) proposed that the Navy create a warfare insignia device for qualified submariners. This insignia came to be known as "dolphins" or "fish". The badge distinguishes and identifies the members of the submarine community and is an immense source of pride.

CAPT King submitted his own drawing to the Bureau of Navigation for consideration, included a shield mounted on the beam ends of a submarine, with dolphins forward and aft of the conning tower. The Bureau ultimately hired a Philadelphia jewelry design firm, Baily, Banks & Biddle (BB&B) to create the design.

The final design was approved on 24 March 1924 by Theodore Roosevelt, Jr., Acting SECNAV. It displays a bow view of a surfaced O-class submarine with two dolphins resting their heads on the submarine's bow planes. The dolphins depicted on the insignia are actually dolphinfish, not the marine mammal. As attendants to Poseidon (below center) , they were chosen to represent submariners because of the characteristic way in which they dive and surface.

From 1924–47, qualified enlisted personnel wore an embroidered cloth version of this design on their right sleeve, midway between the wrist and elbow. Officers wore a gold-plated metal pin on their left breast above their ribbons and medals.

In 1947, new regulations dictated that enlisted personnel wear the embroidered insignia on their left breast—the same position as officers. When the Navy began allowing officers to embroider a gold insignia on their uniforms in 1950, enlisted personnel were allowed to wear a silver-plated metal version of the pin.

The device is more than just another addition to the uniform. The process of "qualifying" for dolphins on board a submarine is not optional—it is a requirement for submarine service so that everyone aboard knows they can trust their shipmates to take immediate action when an emergency occurs. This process usually takes twelve months.

#submarines #dolphins #silentservice

One of the earliest designs of the submarine warfare insignia, circa 1924. Enlisted personnel wore this insignia, embroidered in silk, with white silk for blue clothing and blue silk for white clothing. (Photo courtesy of U.S. Naval Undersea Museum)

Submariners under instruction complete a qualification card which lists all the submarine systems, compartments, equipment, damage control, casualty procedures, and watchstanding. They obtain signatures after receiving proper training and demonstrating a thorough understanding of the ship. Upon gaining all their required signatures, they must then pass an oral board before they can be 'awarded' the coveted device. "Such is the tradition of the submarine service, and today another one joins us!"

School of the Boat

The senior enlisted person on a submarine is known as the Chief of the Boat (COB). One of the COB's jobs is to provide training for new personnel. That training is referred to as the "School of the Boat."

This column is intended for newsletter subscribers who may have no military background and those unfamiliar with submarines and Idaho's extensive Naval history.

A Big Stick

By: Rick Gilchrist, Captain, USN (ret)

On December 16, 1907, a fleet of 16 United States battleships and various smaller escort warships got underway from Hampton Roads, Virginia, for a 14-month journey around the globe. All the ships were painted a stark white, which gave the fleet its nickname, "The Great White Fleet." The fleet included five Connecticut-class battleships. All of them had four 12-inch twin turret guns, each of which could launch an 870-pound high explosive shell at targets up to 11 miles away. It was the largest, most powerful fleet to ever undertake such a voyage.

Theodore "Teddy" Roosevelt, at 42 years of age became the youngest U. S. president in history, when William McKinley was assassinated in September 1901. Prior to assuming the presidency, Roosevelt had served as vice president for six months, had been governor of New York from 1899-1900, and served as assistant secretary of the Navy from 1897 to 1898.

The Great White Fleet (U.S. Navy Photograph)

He served as president from 1901 to 1909 and accomplished a variety of things that included establishment of the first national park (Yellowstone), beginning construction of the Panama Canal, pushing Congress to pass the Pure Food and Drug Act, brokering the end of the Russo-Japanese War (for which he was awarded the 1906 Nobel Peace Prize) and expanding the Navy. That latter expansion led him to order the Great White Fleet's around-the-world expedition. It was part of his not-so-subtle foreign policy of "Speak softly and carry a big stick."

To keep up with advances in Soviet submarine technology in the late 1960s, the United States developed a torpedo designed specifically for use by submarines. It was dubbed the "Mk-48". Over the years it has undergone many upgrades and today is carried on all U.S. Navy submarines. They can be guided either by a wire or by use of their own active/passive sonars. They can search for surface ships and acquire and attack them by detonating under the targeted ship(s) and either crippling or sinking them. (Submariners say half-jokingly, "There are only two kinds of ships, submarines and targets.") If the torpedo misses, it can circle back for another attack.

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The Mk-48 is 19 feet long, 21 inches in diameter, has a range greater than five miles, can operate at depths down to 1,200 feet, travels at speeds more than 32 mph, and carries a warhead of about 650 pounds of high explosives plus unused fuel.

The USS IDAHO (SSN-799) will have four torpedo tubes in the bow (the front of the boat) capable of launching Mk-48 torpedoes. She will have 26 of them aboard. The torpedo tubes can also be used to launch Tomahawk missiles, Harpoon anti-ship missiles like the one the Ukrainians used to sink the Russian cruiser Moskva in April 2022, and even mines.

Mk-48 torpedo being loaded aboard USS California (SSN-781) (U.S. Navy photograph)

The Electric Boat Company was founded about the same time as Roosevelt was in office (1899) and built the Holland, the first submarine purchased by the U.S. Navy in 1900. In 1952 they changed their name to General Dynamics Corporation. They are a major supplier of military equipment, having also built the USS Nautilus SSN-571, the F-16 fighter, the F-111 fighter bomber and the M1 main battle tank. General Dynamics is a prime contractor for the Navy's Trident nuclear submarine program and in the 1970's began manufacturing a long range, all weather, subsonic cruise missile known as the Tomahawk Land Attack Missile. Since then, several variations and upgrades have occurred as well as manufacturing contractor changes. Today, the only Tomahawk in production is a non-nuclear, sea-launched version manufactured by Raytheon.

The Tomahawk missile without a booster is slightly over 18 feet in length (the booster adds another couple of feet), it packs a conventional warhead of 1,000 pounds of high explosives, flies at about 570 mph, and can strike targets roughly 1,000 miles away. For perspective, a missile launched from a submarine off the coast of San Francisco could strike a target as far away as Denver or anywhere in the western United States.

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Tomahawk cruise missile launched from the USS La Jolla (SSN-701). (Photograph: National Archives)

Open vertical launch system tubes. (Photograph: Seaforces Online)

The USS IDAHO will have 12 vertical launch system (VLS) tubes capable of launching Tomahawks. When the VLS is used in conjunction with its torpedo tubes, IDAHO will be capable of launching 16 Tomahawks in a single salvo.

Then there's the U.S. Navy Sea, Air, and Land (SEAL) teams. During World War II, the United States recognized that it needed undercover information on beaches and landing sites. That led to the precursor of what officially became the SEALS in 1962. Their mission is simple: Conduct small-unit special operation missions in maritime, jungle, urban, arctic, mountainous, and desert environments. Those missions involve capturing or killing high level targets and/or gathering intelligence behind enemy lines. It's no wonder the SEAL motto is, "The only easy day was yesterday."

SEAL team zodiac rubber boat insertion (U.S. Navy photograph)

The IDAHO can be fitted with a module that can serve as a SEAL Team staging area. This module will provide support for a nine-member SEAL Team for an extended period in the form of berthing, work out areas, planning and equipment storage space. It will also allow the SEALs to deploy while submerged.

As noted in a previous School of the Boat article, the USS IDAHO will be super silent as it prowls under the seas. She will also carry more firepower, and the capability to deliver that firepower at greater distances, than Roosevelt's entire Great White Fleet.

Now that's a BIG STICK!

USS IDAHO Challenge Coin

Below is the current challenge coin designed by members of the crew. It is for sale on the committee website for $30. We encourage every committee member to purchase and display one of these attractive coins. Visit— https://ussidahocommittee.org/products to browse and purchase these commemorative coins.

Hecla Silver Commemorative Coins

This commemorative 1 oz pure sliver coin was minted by Hecla Mining Company using Idaho silver, and offered to the USS IDAHO Commissioning Committee as their donation to help raise money for the USS IDAHO Dolphin Scholarship Endowment. Coins are available on the website for $125. Proceeds provide college scholarships to children of the USS IDAHO crew.

SHIP STORE SPECIALS

Summer sun means that — Everyone needs a hat!

BELOW is the “camo” hat we get from the ship’s store. It includes dolphins.

BELOW is the “common man’s” hat that all of us can wear—even friends and neighbors. When you are in the grocery store, you will be noticed! Please visit — https://ussidahocommittee.org/products to see all of the USS IDAHO items we offer. Show your USS IDAHO pride!