

DON Authorizes Attendance at Sea-Air-Space 2025 for Military, Civilian Personnel



FOR IMMEDIATE RELEASE

March 25, 2025

ARLINGTON, Va. – Travel for the Navy League’s Sea-Air-Space Symposium has been authorized for all Department of Navy military speakers, moderators, and panelists, and attendance at the event has been approved for all National Capital Region (local) Navy federal civilian employees and uniformed military personnel.

A memo released by acting Under Secretary of the Navy Terrence Emmert, dated 20 March 2025, says, “I approve the Department of the Navy’s attendance at the Navy League’s Sea-Air-Space Symposium, 6-9 April 2025, at National Harbor, Maryland.”

Sea-Air-Space, the nation's largest maritime national security symposium, is critical, as it "provides a platform for the professional development of Department of the Navy personnel on the latest developments in naval warfare, as well as an opportunity for Navy engagement with representatives from a broad cross-section of government, industry, academia, and the international community." (GENADMIN released 24 MARCH 2025).

The Navy League of the United States, the host for Sea-Air-Space, is offering federal active-duty and civilian employees admission and transportation to the event, as well as one complimentary meal event. The Navy League also offers them discounted parking and meals for purchase at a discounted rate. Local bus services to and from the Gaylord National Harbor is also available for all federal civilian employees and uniformed military. Please see website, www.seaairspace.org for further details. Attendees not opting for these services are responsible for their own commuting costs to the event.

Newly confirmed 79th Secretary of the Navy, the Honorable John C. Phelan, will address Sea-Air-Space attendees on his priorities for the Department, including ways to revitalize U.S. shipbuilding, strengthen warfighting culture, and recruit America's best and brightest. Top speakers also include acting Commandant of the United States Coast Guard Admiral Kevin Lunday, Acting Chief of Naval Operations Admiral Jim Kilby, and Commandant of the Marine Corps General Eric Smith.

To register for Sea-Air-Space, click [here](#).

Nimitz Carrier Strike Group Departs Bremerton for Regularly Scheduled Indo- Pacific Deployment



Sailors man the rails on the flight deck of the aircraft carrier USS Nimitz (CVN 68) in the Puget Sound after getting underway for a regularly scheduled Indo-Pacific deployment, March 21, 2025. (U.S. Navy photo by MCSN Japeth Carter)

From Commander, U.S. 3rd Fleet Public Affairs, March 24, 2025

The Nimitz Carrier Strike Group (NIMCSG) departed Naval Base Kitsap in Bremerton, Washington, for a regularly scheduled deployment to the Western Pacific, March 21. For five decades, the Nimitz Carrier Strike Group has upheld the U.S. Navy's commitment to a forward presence while ensuring maritime security, deterring aggression, and protecting the American way of life. Nimitz, in its 50th year of service, continues

and celebrates its legacy of strengthening alliances and partnerships, demonstrating the power of teamwork and cooperation in maintaining peace and security.

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The strike group's deployment will focus on protecting security, freedom, and prosperity for the United States, our allies and partners, and demonstrating the U.S. Navy's unwavering commitment to a free and open Indo-Pacific.

NIMCSG consists of the Nimitz-class aircraft carrier USS Nimitz (CVN 68), Carrier Air Wing (CVW) 17, and Destroyer Squadron (DESRON) 9.

The embarked air wing consists of nine squadrons flying F/A-18C/E/F Super Hornets, EA-18G Growler, E-2D Hawkeyes, C-2A Greyhounds, and MH-60R/S Sea Hawks; Squadrons are the "Fighting Redcocks" of Strike Fighter Squadron (VFA) 22, "Mighty Shrikes" of VFA-94, "Kestrels" of VFA-137, "Blue Diamonds" of Strike Fighter Squadron (VFA) 146, "Cougars" of VAQ-139, "Indians" of Helicopter Sea Combat Squadron (HSC) 6, "Bluetails" of Carrier Airborne Early Warning Squadron (VAW) 121, "BattleCats" of Helicopter Maritime Strike Squadron (HSM) 73, and the "Rawhides" of Fleet Logistics Support Squadron (VRC) 40.

DESRON 9 consists of the Arleigh Burke-class guided-missile destroyers USS Curtis Wilbur (DDG 54), USS Gridley (DDG 101),

USS Wayne E. Meyer (DDG 108) and USS Lenah Sutcliffe Higbee (DDG 123).

An integral part of U.S. Pacific Fleet, U.S. 3rd Fleet operates naval forces in the Indo-Pacific and provides the realistic and relevant training to ensure the readiness necessary to execute the U.S. Navy's timeless role across the full spectrum of military operations. U.S. 3rd Fleet works together with our allies and partners to advance a shared vision of a free, open, and secure Indo-Pacific in which all nations are secure in their sovereignty and free from coercion.

Coast Guard Teams Deploy to American Samoa to Patrol Border, Conduct Boardings



A U.S. Coast Guardsman assigned to a Coast Guard Sector Honolulu boarding team, National Oceanic and Atmospheric Administration Office of Law Enforcement officer and American Samoa Department of Marine and Wildlife Resources officer speak to the master of a foreign-flagged fishing vessel during a boarding offshore Pago Pago, American Samoa, Feb. 26, 2025. (U.S. Coast Guard photo, courtesy Sector Honolulu)

From Coast Guard District 14 External Affairs, March 4, 2025

HONOLULU – Coast Guard Maritime Safety and Security Team Honolulu personnel and a boarding team from Coast Guard Sector Honolulu deployed to American Samoa from Feb. 10-27 to protect the U.S. maritime border, enforce U.S. laws and regulations, enhance maritime domain awareness and coordinate with agency partners.

During the deployment, team members boarded six U.S.-flagged commercial fishing vessels, six foreign-flagged commercial fishing vessels, and five recreational boating safety boardings, resulting in the termination of one recreational voyage due to deficient safety equipment.

Crews patrolled the U.S. territorial maritime border and the

U.S. Exclusive Economic Zone surrounding American Samoa, which extends up to 200 miles offshore.

Additionally, MSST Honolulu and Sector Honolulu personnel conducted over 26 hours of training with the American Samoa Department of Homeland Security and American Samoa Marine Patrol, a law enforcement unit within the [American Samoa Department of Marine and Wildlife Resources](#). Training primarily focused on boarding procedures and weapons proficiency.

“Working closely with partners in American Samoa heightens our awareness of any illicit activities in the area and hones our combined ability to safeguard the maritime border,” said Lt. Cmdr. Nic Iannarone, enforcement division chief, Sector Honolulu. “Teamwork is a key component of taking a stand against threats to our ports and waterways.”

In accordance with the President’s Executive Orders and direction from Adm. Kevin Lunday, the acting commandant of the Coast Guard, the Coast Guard is increasing cutter patrols and operations in American Samoa. The Coast Guard is surging assets to increase presence in key areas to protect America’s maritime borders, territorial integrity, and sovereignty.

Maritime Safety and Security Team Honolulu is a specialized unit of the Coast Guard dedicated to enhancing maritime security and safety in the Pacific region. With a highly trained personnel team equipped to conduct law enforcement operations, port security assessments, and emergency response activities, MSST Honolulu collaborates closely with local, state, and federal agencies to safeguard vital maritime infrastructure and natural resources.

Sector Honolulu serves a broad expanse of the Pacific that includes 200 nautical miles surrounding the State of Hawaii, the islands and atolls of the Hawaiian Island Chain and American Samoa. The sector’s primary missions include ensuring

maritime security, conducting search and rescue operations, enforcing environmental protection laws, and facilitating law enforcement activities.

Navy CNO Franchetti Fired



Chief of Naval Operations Admiral Lisa Franchetti presents an award to a Sailor at Naval Support Activity (NSA) Crane, in Crane, Indiana, Feb. 10, 2025. Photo Credit: U.S. Navy | Senior Chief Petty Officer Elliott Fabrizio

Secretary of Defense Pete Hegseth announced he was firing Chief of Naval Operations Admiral Lisa Franchetti on Friday, the same day as he relieved Air Force General Charles Q. Brown as chairman of the Joint Chiefs of Staff, according to the New York Times.

According to the Times and other reports, Hegseth said

Franchetti and Air Force General James Slife, the service's vice chief of staff, also fired, had "distinguished careers," and "we thank them for their service and dedication to our country."

Franchetti was the 33rd chief of naval operations, the first woman to be CNO and the first woman to serve on the Joint Chiefs of Staff. She entered the Navy after earning a degree in journalism at Northwestern University and joining the Naval ROTC program there.

She later commanded the destroyer USS Ross, commanded U.S. Naval forces in Korea, served as commander of the U.S. 6th Fleet in the Mediterranean and director of strategy, plans and policy for the U.S. Joint Chiefs of Staff.

Navy Retires Last EP-3E Electronic Reconnaissance Aircraft



EAST CHINA SEA (Sept. 24, 2020) An EP-3E Airborne Reconnaissance Integrated Electronic System (ARIES) II, assigned to the "World Watchers" of Fleet Air Reconnaissance Squadron 1 (VQ-1), transits over the East China Sea. (U.S. Navy photo by MC3 Andrew Langholf)

By Richard R. Burgess, Senior Editor

ARLINGTON, Va. – The Navy has retired its last EP-3E Aries II electronic reconnaissance aircraft after the type's 45 years of service to the fleet.

In an informal Feb. 12, 2025, ceremony, at Naval Air Station Whidbey Island, Washington, Fleet Air Reconnaissance Squadron One (VQ-1), the sole remaining operator of the EP-3E, farewelled the last EP-3E. The aircraft was flown away on Feb. 13 for the last time.

The aircraft, BuNo 159893, was the last of 26 EP-3Es that served the fleet beginning in 1970. Ten P-3A Orion patrol aircraft were converted to EP-3Es for operation by VQ-1 and VQ-1, joining two earlier EP-3B versions in service. This batch of EP-3Es were replaced beginning the 1990s by a new generation of EP-3Es converted from P-3C Orions, with ultimately 17 aircraft converted to sustain an operational

fleet of 12 aircraft.

The EP-3E fleet provided multi-intelligence support to the fleets and to theater combatant commanders with near-real-time signals intelligence and full-motion video, the Naval Air Systems Command said. The aircraft was equipped with sensitive electronic receivers and high-gain dish antennas. The large crew was able to fuse the intelligence it collected with offboard intelligence and provide threat warning and situational awareness in support of suppression of enemy air defenses, anti-air warfare, anti-submarine warfare, and anti-surface warfare.

The EP-3E has been succeeded by the MQ-4C Triton high-altitude, long-endurance unmanned aerial vehicle operated by Unmanned Patrol Squadron 19.

VQ-1 has one P-3C remaining, which it used as a utility training and transport aircraft. The aircraft, BuNO 161588, will be retired in an informal ceremony to be held at NAS Whidbey Island on Feb. 20, 2025.

VQ-1 will hold its deactivation ceremony at Whidbey Island on March 28, 2025. The official date for the deactivation is March 31.

Marine Corps Updates F-35 Procurement, Transition Plan



Marine Fighter Attack Squadron (VMFA) 314 launch and recover F-35C as they work to renew their carrier qualifications onboard the USS Abraham Lincoln (CVN 72) (U.S. Marine Corps photo by 1stLt. Charles Allen)

By Richard R. Burgess, Senior Editor

ARLINGTON, Va. – The U.S. Marine Corps has adjusted its procurement and transition plan for its F-35 Lightning II strike fighter fleet. While the overall program of record remains at 420 F-35s, the balance between the numbers of short takeoff and vertical landing F-35B and the carrier launch capable F-35C has changed, with the number of F-35Cs increasing and the number of F-35Bs decreasing.

According to the 2025 Marine Corps Aviation Plan released Feb. 3, the Corps plans to procure a total 280 F-35Bs and 140 F-35Cs, as compared with the earlier program of record of 353 F-35Bs and 67 F-35Cs. These numbers will allow the Corps to support 12 F-35B fighter-attack (VMFA) squadrons and eight F-35C VMFA squadrons.

Before, the Corps had planned to support only four F-35C squadrons, VMFAs 314, 311, 251, and 115. With the change in the procurement profile, four other F/A-18 Hornet squadrons also will make the transition to the F-35C: VMFAs 232 and 323 and reserve VMFAs 112 and 134.

Currently, all but two operational F-35 squadrons are allowed to be equipped with 10 aircraft, with the other two, both based at Marine Corps Air Station Iwakuni, Japan, being allowed 12 aircraft each. Under the new plan, all operational F-35 squadrons will be equipped with 12 aircraft each beginning in 2030.

The Marine Corps F-35C squadrons will continue to support the TACAIR Integration Plan, in which they deploy as units of Navy carrier airwings.

Lockheed Martin Offers Mk70 Launcher to Increase Lethality of LCS



An SM-6 missile is launched from a containerized launcher on board USS Savannah (LCS 28) on Oct. 24, 2023. (U.S. Navy photo)

By Richard R. Burgess, Senior Editor

ARLINGTON, Va. – Lockheed Martin has adapted its Mk41 vertical missile launcher into a scalable containerized system that can be deployed on U.S. Navy ships, including the littoral combat ships (LCS) and non-traditional platforms of opportunity to increase their lethality with mid-range precision strike and air defense capabilities, company officials said.

The system, called the Mk70 Payload Delivery System, is a 40-foot-long ISO container in which four VLS cells can be fitted. The Mk70 system, designed for and deployed with the U.S. Army in a land-based configuration, can launch any type of missile certified for the Mk41, including the Tomahawk cruise missile, the various Standard surface-to-air missiles, the antisubmarine rocket, and the Evolved SeaSparrow missile. The Mk70 container is transportable on a C-17 cargo aircraft.

Ed Dobeck, director for launching systems at Lockheed Martin, told Seapower that the Mk70 was developed two years ago in concert with the Defense Department's Strategic Capabilities

Office to provide the Army with the ability to deploy and fire the Raytheon-built SM-6 Standard missile.

The same container can be secured on the flight deck or helicopter landing pad of a Navy ship using helicopter tie-down chains, occupying 400 square feet of a flight deck. Power from the ship's electrical system can supply 400 volts to the Mk70. No modifications are required to the ship itself. The container can be installed within hours with a pier-side crane. A command shelter with virtual Aegis and Tomahawk control systems controls the launch of the missiles.

The flight deck of the Freedom-class LCS can accommodate three Mk70 containers, while the Independence-class LCS can accommodate four containers, Dobeck said. With one or more containers installed, the ships are unable to launch or land helicopters. The missile tubes can be reloaded horizontally, an advantage over the ship-installed Mk41's need for vertical re-load by cranes.

Lockheed Martin has demonstrated containerized launch of SM-6 missiles from two Navy ships. An SM-6 missile was fired from the USS Savannah (LCS 28) in October 2023 and before that another was fired from the Overlord medium unmanned surface vessel Ranger during an exercise.

Dobeck said that the Navy has shown great interest in the Mk70 system, which already has been delivered to the Army. Two full batteries – totaling eight missile cells – have been delivered to the Army and two have been delivered to other customers. The Army has deployed the Mk70 to the Philippines

Amphibious Coalition Forecasts Benefits of Multi- Ship Amphib Ship Buy



By Richard R. Burgess, Senior Editor

ARLINGTON, Va. – The industry association for suppliers for the builder of U.S. Navy’s amphibious warfare fleet sees immediate benefits this year and the next one for its member companies, the association’s survey said.

In its annual survey of 219 member companies, the Amphibious Warfare Industrial Base Coalition (AWIBC) said that a majority of its member companies affirmed that the Navy’s announcement last year of a multi-ship buy will benefit their companies.

The survey focused on the August 2024 announcement by then-Secretary of the Navy Carlos Del Toro that the Navy would procure four amphibious warfare ships – one America-class amphibious assault ship (LHA) and three Flight II San Antonio-class amphibious transport dock ships (LPDs) in a bundle

procurement according to the below schedule:

- LPD 33 in FY25

- LPD 34 in FY27

- LHA 10 in FY27

- LPD 35 in FY29

The four ships in the procurement would be built at the HII Ingalls Shipbuilding shipyard in Pascagoula, Mississippi.

“Our survey asked specifically about the impacts this bundle will have on the supplier base,” said Jack Feenick, a spokesman for the AWIBC. “We also included questions about the overall health of the industrial base, touching on key areas like workforce, training, inflation, and supply chain disruptions. Below are some of the key findings from our survey and attached is an infographic that provides some more insight on the data.”

Amphibious Warship Industrial Base Coalition (AWIBC) Survey

(Conducted survey from October – November 2024 from a sample of 219 total suppliers.)

- 65% of amphibious warship suppliers say that the bundle buy will lead to immediate benefits starting in 2025 or 2026.

- 82% of suppliers that support both amphibious ships and

submarines agree that bundle buys benefit their capability to deliver on orders as well as their overall capacity.

- 52% say the bundle purchase will strengthen the shipbuilding industrial base to meet the demand of today and tomorrow
- 46% say the bundle purchase enables the hiring, retention, and training of a workforce
- 42% say the bundle purchase helps invest in equipment to ensure quality and on-time delivery
- Consistent with findings from our survey last year, the top three challenges facing suppliers are:
 - Inflation
 - Workforce training and retention
 - Supply chain disruptions
- Currently, only 10% of amphibious warship suppliers are operating at full capacity.
- 74% of suppliers who say they are sole-source/single-source supplier to the Navy are amphib suppliers.

- Suppliers say that multi-ship procurements and earlier AP [advance procurement] funding are most likely factors to drive down material costs, help meet delivery schedules and improve their workforce and facilities.

Lawmakers Introduce SHIPS Act to Revitalize Shipbuilding, Commercial Maritime Industries



U.S. Merchant Marine Academy graduates throw their covers in

celebration during the Merchant Marine Academy Commencement Ceremony in Kings Point, New York, June 22, 2024. *Credit: U.S. Marine Corps | Staff Sgt. Kelsey Dornfeld*

A bipartisan group of U.S. Senators and Representatives on Dec. 19 introduced the Shipbuilding and Harbor Infrastructure for Prosperity and Security (SHIPS) for America Act, comprehensive legislation to revitalize the United States shipbuilding and commercial maritime industries.

The SHIPS for America Act was introduced by Sens. Mark Kelly (D-Arizona) and Todd Young (R-Indiana) and Reps. John Garamendi (D-California) and Trent Kelly (R-Mississippi). After decades of neglect, the United States has a weakened shipbuilding capacity, a declining commercial shipping fleet dwarfed by China and a diminished ability to supply the U.S. military during wartime, the lawmakers said.

They said the bipartisan proposal would restore American leadership across the oceans by establishing national oversight and consistent funding for U.S. maritime policy, incentivizing domestic shipbuilding, enabling U.S.-flagged vessels to better compete in international commerce, rebuilding the U.S. shipyard industrial base and expanding the mariner and shipyard workforce.

“We’ve always been a maritime nation, but the truth is we’ve lost ground to China, who now dominates international shipping and can build merchant and military ships much more quickly than we can,” said Kelly, a U.S. Navy veteran and the first U.S. Merchant Marine Academy graduate to serve in Congress.

“The SHIPS for America Act is the answer to this challenge. By supporting shipbuilding, shipping, and workforce development, it will strengthen supply chains, reduce our reliance on foreign vessels, put Americans to work in good-paying jobs, and support the Navy and Coast Guard’s shipbuilding needs. I’m excited to introduce this comprehensive, fully paid for legislation today alongside my Republican and Democratic

colleagues and our partners representing all parts of the industry, and together we're going to work to get this effort across the finish line."

"America has been a maritime nation since our founding, and seapower was a significant contributor to our rise to being the most powerful nation on earth. Unfortunately, the bottom line now is America needs more ships. Shipbuilding is a national security priority and a stopgap against foreign threats and coercion. Our bill will revitalize the U.S. maritime industry, grow our shipbuilding capacity, rebuild America's shipyard industrial base, and support nationwide workforce development in this industry. This legislation is critical to our warfighting capabilities and keeping pace with China," Young said.

The move drew support from a wide variety of maritime-related groups and is backed by the Navy League of the United States.

"The Navy League applauds the introduction of the SHIPS for America Act, a landmark legislative achievement that will comprehensively meet the needs of the U.S. merchant marine and bolster our shipbuilding industrial base," said Mike Stevens, CEO of the Navy League.

"In today's global threat environment, arguably the most perilous since the end of the Cold War, the United States must not only maintain the finest Navy, Marine Corps, and Coast Guard on the seas, but also ensure a robust U.S.-flag merchant marine and a resilient shipbuilding industrial base. These elements are crucial for safeguarding our national and economic security in the event of large-scale military conflict. The SHIPS for America Act addresses these vital considerations and reaffirms that America is, and always will be, a maritime nation."

The SHIPS for America Act would:

Coordinate U.S. maritime policy by establishing the position

of Maritime Security Advisor within the White House, who would lead an interagency Maritime Security Board tasked with making whole-of-government strategic decisions for how to implement a National Maritime Strategy. The bill also establishes a Maritime Security Trust Fund that would reinvest duties and fees paid by the maritime industry into maritime security programs and infrastructure supporting maritime commerce.

Establish a national goal of expanding the U.S.-flag international fleet by 250 ships in 10 years by creating the Strategic Commercial Fleet Program, which would facilitate the development of a fleet of commercially operated, U.S.-flagged, American crewed, and domestically built merchant vessels that can operate competitively in international commerce.

Enhance the competitiveness of U.S.-flagged vessels in international commerce by establishing a Rulemaking Committee on Commercial Maritime Regulations and Standards to cut through the U.S. Coast Guard's bureaucracy and red tape that limits the international competitiveness of U.S.-flagged vessels, requiring that government-funded cargo move aboard U.S.-flag vessels, and requiring a portion of commercial goods imported from China to move aboard U.S.-flag vessels starting in 2029.

Expand the U.S. shipyard industrial base, for both military and commercial oceangoing vessels, by establishing a 25 percent investment tax credit for shipyard investments, transforming the Title XI Federal Ship Financing Program into a revolving fund, and establishing a Shipbuilding Financial Incentives program to support innovative approaches to domestic ship building and ship repair.

Accelerate U.S. leadership in next-generation ship design, manufacturing processes, and ship energy systems by establishing the U.S. Center for Maritime Innovation, which would create regional hubs across the country.

Make historic investments in maritime workforce by establishing a Maritime and Shipbuilding Recruiting Campaign, allowing mariners to retain their credentials through a newly established Merchant Marine Career Retention Program, investing in long-overdue infrastructure needs for the U.S. Merchant Marine Academy, and supporting State Maritime Academies and Centers for Excellence for Domestic Maritime Workforce Training and Education. The bill also would streamline and modernize the U.S. Coast Guard's Merchant Mariner Credentialing system.

Ready to Dive: ROV Pioneer Shares Seafaring Stories in New Book



A remotely operated vehicle prepares to go on a dive. *Credit: Curt Newport*

Curt Newport spent his career as a member of an elite club – as an underwater salvage expert, he has participated in more than 150 undersea operations, ranging from the recovery of astronaut Gus Grissom’s Liberty Bell 7 suborbital spacecraft to salvaging Air India Flight 182, the space shuttle Challenger and even sending images back from the RMS Titanic.

After 47 years as a trailblazer for using robotics for underwater salvage, Newport retired in 2022 and is the author of a new memoir, “Ready to Dive,” about his career, published by Purdue University Press. (He has also been a race car driver and musician, but there is only so much room in the magazine.)

Underwater explorers such as Jacques Cousteau and TV shows such as “Sea Hunt” helped stoke Newport’s early interest in the undersea world. He got a job building ship fenders for \$3.50 an hour, then graduated to building and maintaining saturation diving systems before deciding to attend commercial

diving school in California.

When he graduated, the company Ocean Systems had purchased a remotely operated vehicle (ROV) named Scorpio One, and Newport was hired to work on that team. He worked on oilfields with ROVs, did submarine cable work for communications companies such as AT&T, “and eventually graduated up into doing deep-ocean search and recovery, mostly for the Navy,” he told *Seapower*. With that, he was off to the races for a career stretching nearly five decades.

Undersea Technology

Technology has long been used in deep-ocean work, from towed sonar arrays to ROVs, each with their own strengths and weaknesses.

Towed arrays or camera sleds are useful and can provide real-time data but have a sizable turning radius. “The downside of those towed systems is if you’re working in deep water you’re going to have some very long turnaround times. When you get to the end of a search line, you’re going to make a turn, and in deep water, that can take anywhere from nine to 12 hours,” he said.

ROVs are nimbler to deploy and have gotten larger and more capable over the years, being able to dive anywhere from 300 meters down to 7,000 meters (almost 23,000 feet). They have been joined by autonomous underwater vehicles that require no tether.

There are also manned submersibles, which hit the news again last summer when the Titan submersible imploded during a dive to the ruins of the Titanic. Newport has done two dives in the Russian Mir 1 manned submersible, to 4,800 meters (including a dive to a sunken ship) but now it and the Mir 2 have been decommissioned and are displayed in museums.

“Really for the deep work, the advantage of an autonomous

vehicle is you don't have those long turn times. And actually, the quality of the side-scan data is better because you're not being towed by a ship. It's a very stable imaging platform," he said. "The problem is, you can't see any of the side scan data until you've recovered the vehicle and downloaded the data. That's a disadvantage. And they tend to be kind of complicated."

In the early days, the crews spent as much time wrestling with the vehicles as they did diving, Newport said.

"When I first started out with the Scorpio One vehicle, we spent most of our time broken down as opposed to diving because they were just complicated vehicles there, it was a new technology and we had a lot of problems with them. And you still have problems with it, but they've gotten to be a lot more reliable," especially with their communication systems and sensors.

"And the imaging systems were nothing like what we have now," he said. "I mean, the first vehicle I worked with, we didn't even have a colored camera. We had a black and white. We had one black and white SIT camera, SIT means silicon, silicon intensified target. It's a low-light camera," Newport said.

"And you know, nowadays vehicles will have four or five, six cameras. You got cameras all over the place. And we didn't have that. And the manipulators we had back then were fairly crude. But, you know, for the type of salvage work we were doing, you don't need a really sophisticated manipulator. In fact, it's better to not have one."



Newport suits up for a dive in 1977. *Credit: Curt Newport*

Now there are also sophisticated acoustic tracking systems that can operate as deep as 11,000 meters. In a nutshell, the differences between now and when Newport started in the diving business are “reliability and the ability to tell where the heck the vehicle is relative to the ship,” he said.

The Subsea Bounty

There are a great many things at the bottom of the world’s oceans waiting to be recovered or discovered.

It’s “just limitless,” he said. “When you think about human history, how long humans have been using the ocean to go from one place or another, thousands of years, and the things that are lost in deep water are generally well preserved.”

At one wooden shipwreck in 16,000 feet of water, he found silk fabric still intact and gold wrapped in newspaper that was still readable. In the deep ocean environment, “it’s only 36 degrees down there forever, pretty much. There’s no light. There’s no oxygen. So, everything is really well preserved. ...

Airplanes, ships, whatever, it's all down there, but it costs money to do that stuff."

Newport said the most interesting salvage of his career "has got to be Grissom's Liberty Bell 7 spacecraft."

That cramped vehicle was launched on July 21, 1961, in the early days of the space race with the Soviet Union. It conducted a short, sub-orbital flight and made Virgil "Gus" Grissom the second American to fly in space, but it started to sink after splashdown and nearly drowned him. It stayed below the waves for nearly four decades until Newport's team found it in an expedition funded by the Discovery Channel.

"It's one of those things that no one really expected us to ever be able to find it," he said. "You know, the thing is only nine feet tall, six feet in diameter, is lost in deep water, about 6,000 feet. And everybody who knew anything about this said, 'well, it's lost and gone forever.'"

The salvage team was just starting their work "and it was the first target we dove on. It just came out of the gloom down there, there it was. So that, that was the most amazing ever," he said.

Now that he's retired, one thing Newport doesn't do is spend time on boats.

"Ever since I started in this business, I have very rarely ever got on a boat for recreation. It just seems too much like work," he said. "If you're a bus driver, and then [on] your vacation time, you don't go on a cross-country trip. You stay home. The same thing with boats, with ships, you know. People can go out in little liners and whatever all they want, I'll just stay here and have my cocktail or something."



Curt Newport, author of "Ready to Dive." *Credit: Curt Newport*
Book Excerpt from 'Ready to Dive'

On Finding the Wreck of the Challenger

I was in California visiting my brother when Challenger was lost. Like other Americans, I watched with a heavy heart as another American spacecraft was lost at sea. Unlike Liberty Bell 7, this one did not remain intact, and its location would be marked by tangled debris drifting in the Gulf Stream currents. Tons of wreckage peppered the seafloor, much like the Air India jetliner, and once again, it would be up to people like me to help find the one piece of wreckage that provides conclusive proof of the cause of the disaster. The salvage of Challenger was the largest search and recovery operation in history and required the use of a mixture of underwater technologies: side-scan sonars to map the debris field, manned submersibles to identify wreckage, and divers and remote vehicles to recover the evidence.

The task confronting the Navy was overwhelming: Search an area encompassing about 470 square nautical miles and identify all targets as being Challenger or non-Challenger, inspect and categorize the targets, then recover all wreckage that might bear evidence of the disaster. Unfortunately, the location where Challenger went down was heavily traveled by ship and air traffic and drug smugglers, and it had been the repository of a large percentage of NASA's launch failures. There was a lot of space junk littering the seafloor.

The Navy set up their priorities as follows. First, they simply had to find the smoking gun. While it was strongly suspected that a segment of Challenger's right-hand booster had failed, NASA had to be sure. In the tons of debris stuck on the bottom, we had to find that one piece. Second, for humanitarian purposes, the Navy had to recover the astronauts' remains. Based on my Air India experience, I knew there would not be much left to recover. Challenger's crew compartment had

struck the ocean at over 200 miles per hour and broken up into several pieces. Third, we had to find and recover the tracking and data relay satellite located in the shuttle's cargo bay. If it was not found, the government would have to spend millions of dollars to change satellite communication codes so the Soviets could not find the TDRS and subsequently monitor our military communications.

And finally, we found what everyone wanted to see: a 6,000-pound chunk of steel. On one edge was an opening unlike what we had seen before. It was rounded and melted, not broken and sharp. This was how Challenger had perished.