

New Dry Dock Project at Pearl Harbor Naval Shipyard Reaches Early Milestone



Caption: PEARL HARBOR, Hawaii – Contractors work on the construction of Dry Dock 5 at Joint Base Pearl Harbor-Hickam Dec. 18, 2023. Dragados/Hawaiian Dredging/Orion JV (DHO JV), under contract with Naval Facilities Engineering Systems Command, is conducting major in-water construction for a new dry dock at Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility (PHNSY & IMF). The \$3.4-billion graving dock project, the first new dry dock in Pearl Harbor since 1943, will support PHNSY & IMF's ability to continue maintaining and modernizing the U.S. Navy's nuclear-powered submarines into the future. U.S. Navy photo by Joel Onemu

From Pearl Harbor Naval Shipyard Public Affairs, Feb. 16, 2024

PEARL HARBOR, Hawaii – Dragados/Hawaiian Dredging/Orion JV

(DHO JV), under contract with Naval Facilities Engineering Systems Command (NAVFAC), has begun major in-water construction for a new dry dock at Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility (PHNSY & IMF).

Dry Dock 5 construction commenced after a traditional Hawaiian blessing ceremony on Aug. 19, 2023, and the project has reached the milestone of starting the installation of foundational piles that will essentially anchor the new graving dock.

The Navy will commemorate this significant, early-phase construction milestone at the Dry Dock 5 Anchoring Ceremony scheduled for Feb. 24, 2024, at 10 a.m. at PHNSY.

U.S. Senator Mazie Hirono, Adm. Samuel Paparo, Commander, U.S. Pacific Fleet, and Gerry Majkut, president of Hawaiian Dredging Construction Company, Inc., are scheduled to speak at the ceremony.

“This milestone is a testament to the hard work various organizations have put into the project and a reminder of the steadfast commitment to our community here in Hawai’i,” said Capt. Richard Jones, PHNSY & IMF commander.

The \$3.4-billion graving dock project will support PHNSY’s ability to continue maintaining and modernizing the U.S. Navy’s nuclear-powered submarines into the future. It will include the necessary support facilities and the new dry dock will have a 150-year service life. Dry Dock 5 will replace Dry Dock 3, one of four existing dry docks at PHNSY & IMF. Dry Dock 3 is the smallest dry dock and is incapable of docking the current Virginia-class of Navy submarines. The last dry dock to be constructed in Pearl Harbor was in 1943.

To oversee the project, Naval Facilities Engineering Systems Command (NAVFAC) commissioned its newest command, Officer in Charge of Construction, Pearl Harbor Naval Shipyard (OICC PHNSY) in March 2023. OICC PHNSY provides robust quality

assurance, contract administration, and command-level accountability for construction of DD5 and the broader once-in-a-generation recapitalization of PHNSY under the Navy's Shipyard Infrastructure Optimization Program (SIOP).

"Setting the conditions for full-scale construction on a project of this magnitude took a robust team of professionals in both government and industry," said OICC PHNSY Commanding Officer Capt. Stephen Padhi. "Logistics, permits, monitoring, site preparation, work planning and controls had to set the stage for production for the next four years. As major activities are underway, we look forward to confidently meeting our targets for schedule, quality, safety, cost, and ethics."

Leading the construction is contractor DH0 JV. "We're extremely excited to work on a project of this scale with the U.S. Navy," said Gerry Majkut, president of Hawaiian Dredging Construction Company, Inc. "Not many companies get the chance to be part of a major project like this, so having the opportunity to build this dry dock is extremely rewarding."

Over the course of construction, which is scheduled to finish in 2027, DH0 JV expects to draw from many local and small businesses in Hawaii to support the project, in close coordination with local unions. Overall, the project is expected to provide approximately 2,500 jobs locally.

Pacific Marines, Philippine Marines Meet for Annual Staff

Talks



U.S. Marine Corps Col. Christopher Oliver, left, assistant chief of staff, G-5, U.S. Marine Corps Forces, Pacific, and Philippine Marine Corps Col. Bayani Curaming, Chief of Philippine Marine Staff, have a conversation during staff talks on Camp H.M. Smith, Hawaii, Feb. 13. *U.S. Marine Corps | Lance Cpl. Matthew Benfield*

CAMP H.M. SMITH, Hawaii – Senior leaders from U.S. Marine Corps Forces, Pacific, and the Philippine Marine Corps held their annual Marine-to-Marine Staff Talks here from Feb. 12 to 15.

The annual Marine-to-Marine Staff Talks are a key component of the U.S.-Philippine defense relationship. They serve as a forum for senior military leaders to exchange views on regional security issues and enhance bilateral cooperation. The discussions from this week further reinforce the strong and enduring bond between both nations and their commitment to

regional stability and security.

“The importance of integrating our militaries cannot be overstated,” stated Marine Corps Brigadier General Daniel L. Shipley, deputy commander of U.S. Marine Corps Forces, Pacific. “Regular discussions, such as these staff talks, and consistent engagement during exercises like Balikatan and KAMANDAG, are key reasons why we are able to come together to rapidly support each other as we are currently doing in Mindanao in response to the flooding.”

The annual event emphasized the significance of the U.S.-Philippine military relationship and provided an opportunity to collaborate on common interests. During the three-day meeting, leaders from both militaries discussed a variety of topics including recent experiences with amphibious operations, methods of modernizing training, and advancing capabilities to remain ready and responsive in the Indo-Pacific region.

This year’s iteration focused heavily on the development of the Republic of the Philippines-U.S. Mutual Defense Board-Security Engagement Board cycle and development of an assessment model for current and future engagements. The MDB-SEB cycle enhances defense cooperation between the two countries, while the assessment model will enhance improvements to the readiness and capability of both forces. This process helped compile a list of events for 2025 that will serve as a foundation for the rest of the MDB-SEB cycle.

Representatives participating in the PMC-MARFORPAC Staff Talks discussed future exercises meant to strengthen interoperability between the two services. Militaries from both countries regularly participate in a variety of activities and exercises, such as Balikatan and KAMANDAG, to mutually develop their defense capabilities while aligning to common goals shared between both nations.

During the opening program, the Head of the Philippine Marine Corps delegation, Col. Bayani V. Curaming, the Chief of Marine Staff, PMC, emphasized that “everything about bilateral engagements between the two Marine Corps should be contextualized and in-sync with realization of the Archipelagic Defense and the Marine Corps’ Strategic Posturing that goes with it.”

The U.S. and the Philippines have a long-standing diplomatic relationship dating back to 1951, with the signing of the Mutual Defense Treaty, which serves as the foundation for close security cooperation. More than 70 years later, the two nations continue to work closely together towards common goals based on shared values and interests in the region.

**Navy to Commission Future
Expeditionary Sea Base USS
John L. Canley**



FEB. 16, 2024

The Navy will commission the future USS John L. Canley (ESB 6) as the newest Expeditionary Sea Base ship (ESB) during a 10:00 a.m. PST ceremony on Saturday, Feb. 17, in Coronado, California.

The commissioning ceremony's principal address will be delivered by the Honorable Carlos Del Toro, Secretary of the Navy. Remarks will also be provided by General Joseph P. Dunford, Jr., 19th Chairman of the Joint Chiefs of Staff and 36th Commandant of the Marine Corps; Sergeant Major Carlos Ruiz, Sergeant Major of the Marine Corps; and Mr. David Carver, President of General Dynamics NASSCO. The ship's sponsor is Patricia Sargent, Sgt. Maj. Canley's daughter.

Built by General Dynamics NASSCO, currently there are six delivered ships across two variants: Expeditionary Transfer Dock (ESD) and Expeditionary Sea Base. The future USS John L. Canley (ESB 6) is a highly flexible platform used across

various military operations. When commissioned, the ship will be employed as a mobile sea-based asset. It will be a part of the critical access infrastructure supporting the deployment of forces, equipment, supplies, and warfighting capability.

The first of its name, the ship honors United States Marine Corps Sgt. Maj. John L. Canley, Ret., who was awarded the Medal of Honor 50 years after his actions during the Battle of Hue City. Canley served as Company Gunnery Sergeant, Company A, First Battalion, First Marines, First Marine Division in the Republic of Vietnam from Jan. 31 to Feb. 6, 1968. Sgt. Maj. Canley passed away in Bend, Oregon May 11, 2022.

ESB 6 joins the USS Lewis B. Puller (ESB 3), USS Hershel "Woody" Williams (ESB 4), USS Miguel Keith (ESB 5) which support a variety of maritime-based missions, including Special Operations Forces (SOF) and Airborne Mine Counter Measures (AMCM). ESBs have a four-spot flight deck, mission deck, and hangar, designed around four core capabilities: aviation facilities, berthing, equipment staging support, and command and control assets. Follow-on ships Robert E. Simanek (ESB 7) and Hector A. Cafferata Jr. (ESB 8) are under construction. The commissioning of ESBs provides combatant commanders greater operational flexibility to employ this platform in accordance with the laws of armed conflict.

The ceremony will be live streamed at <https://www.dvidshub.net/webcast/33415>. The link becomes active approximately ten minutes prior to the event at 09:50 a.m. PST.

Three-Star Command Lands in Norway for Exercise Nordic Response 24



By II MEF Communication Strategy and Operations, Feb. 15. 2024

On February 12th, the vanguard of the U.S. Marine Corps, II Marine Expeditionary Force (MEF) command element arrived at Bardufoss Air Station, Norway, to participate in NATO's exercise Nordic Response 24. As the Land Component Command headquarters for the exercise, II MEF's command element will synchronize operations between the U.S. Marine Air-Ground Task Force, Norwegian Army units and a combined Swedish and Finnish Brigade under a NATO Joint Task Force.

We're looking forward to exercising with our Norwegian hosts, NATO allies and partners," remarked II MEF commanding general Lt. Gen. David A. Ottignon. "There's no place like the Nordic countries to sharpen our warfighting skills."

Nordic Response 24 is part of the much larger NATO exercise Steadfast Defender 2024, which is expected to involve approximately 90,000 troops across Europe. According to U.S. Army Gen. Christopher Cavoli, NATO's Supreme Allied Commander and U.S. Europe Command commander, the exercise "will demonstrate our unity, our strength, and our determination to protect each other."

II MEF's strategic deployment more than 6,500 kilometers from its home base in the United States demonstrates the reach and mobility of American forces available to defend NATO's northern flank, if called upon.

"Nothing is easy when you're operating in several feet of snow, at negative 40 degrees Fahrenheit, surrounded by 5,000-foot mountain peaks," Ottignon said. "But being a Marine isn't about doing what's easy. It's about being the best and being prepared for the challenges of the future. This exercise in this environment is designed to do just that by building on the grit, skills, and determination within every Marine so they can operate in any climate and place."

Around 2,500 U.S. Marines will join the exercise alongside NATO allies and Sweden. The goal is to strengthen coordination across air, ground, maritime and other domains into a unified fighting force ready to respond to any threat.

From January to March 2024, the U.S. Marines and their Norwegian counterparts will work hand-in-hand with NATO allies to hone tactics and procedures for winter warfare. Beyond tactical objectives, the exercise signals the steadfast solidarity allies share in defending collective security.

"Norway is special to us. Our countries have been working together for more than a century. II MEF has trained side-by-side, strengthening bonds and operating as one cohesive team in Norway during the last decade of Cold Response exercises," added Ottignon. "The Arctic is a fluid strategic place. It's

important for our allies to know that we're here today and we'll be here when needed to respond swiftly to any threat."

[B-roll](#), [imagery](#), and [news stories](#) of II MEF Marines preparing for exercise Nordic Response 24 can be found hyperlinked.

CENTCOM Intercepts Iranian Weapons Shipment Intended for Houthis



Military-grade weapons and other lethal supplies are stacked on the deck of a vessel seized by the U.S. Coast Guard Sentinel-class fast-response cutter USCGC Clarence Suthpin Jr. (WPC 1147) in the Arabian Sea, Jan. 28. Clarence Suthpin Jr. operates in the U.S. 5th Fleet area of operations to help ensure maritime security and stability in the Middle East region. **(Photo by U.S Coast Guard)**

By U.S. Central Command Public Affairs | February 15, 2024

TAMPA, Fla. – A U.S. Coast Guard cutter, forward deployed to the U.S. Central Command (CENTCOM) area of responsibility, seized advanced conventional weapons and other lethal aid originating in Iran and bound to Houthi-controlled areas of Yemen from a vessel in the Arabian Sea on Jan. 28.

The U.S. Coast Guard Sentinel-class fast-response cutter USCGC Clarence Sutphin Jr. (WPC 1147), assigned to U.S. Naval Forces Central Command, located the vessel and boarded it in the Arabian Sea. The boarding team discovered over 200 packages that contained medium-range ballistic missile components, explosives, unmanned underwater/surface vehicle (UUV/USV) components, military-grade communication and network equipment, anti-tank guided missile launcher assemblies, and other military components.

The direct or indirect supply, sale or transfer of such aid violates U.N. Security Council Resolution 2216 (as extended and renewed by resolutions 2675 and 2707).

“This is yet another example of Iran’s malign activity in the region, ” said Gen. Michael Erik Kurilla, CENTCOM commander. “Their continued supply of advanced conventional weapons to the Houthis is in direct violation of international law and continues to undermine the safety of international shipping and the free flow of commerce.”

CENTCOM is committed to working with our allies and partners to counter the flow of Iranian lethal aid in the region by all lawful means including U.S. and U.N. sanctions and through interdictions.

WEST 2024: Naval Special Warfare a Force Multiplier for Fleet, Prioritizing Reintegration with Joint Force



Rear Adm. Keith Davids, commander, Naval Special Warfare Command (NSWC), answers questions during the WEST 2024 convention held at the San Diego Convention Center. *U.S. Navy | Mass Communication Specialist 2nd Class Kyle Fiori*
[By MC1 Felicito Rustique, Naval Special Warfare Command Public Affairs](#)

SAN DIEGO – Rear Adm. Keith Davids, commander, Naval Special Warfare Command (NSWC), attended and participated in AFCEA-USNI WEST (WEST) 2024 conference, Feb. 13-15.

WEST, the premier naval conference and exposition on the West Coast, brings military and industry leaders together to discuss new technologies and capabilities. The theme of the 34th iteration of the event was, "Are Acquisition and Readiness on Pace to Meet Global Security Demands?"

Davids participated in a panel discussion alongside six leaders from sea service warfare communities to discuss acquisition and readiness and address the question, "What Changes are Community Leaders Making to Meet Global Security Demands?"

"Over the past two decades, the focus of Naval Special Warfare (NSW) has been primarily on counterterrorism," said Davids. "Now, we are prioritizing integration with the Fleet and Joint Force. We can operate forward in contested areas that enhances warfighting lethality in unique ways. "

Davids emphasized that conventional response methods have grown ineffective in addressing contemporary conflicts and diverse threats across the globe. To counter the instability and distinct challenges to U.S. warfare capabilities, Davids called on industry to support NSW's value proposition.

"We're interested in leveraging our maritime access and placement to deliver asymmetric effects for the Fleet. Therefore, we need industry's help to enhance our stealth, precision, scale, and decision advantage," said Davids. "We are eager to collaborate with many of you on new ideas and concepts."

Joining Davids on the panel was Rear Adm. Brad Andros, commander, Navy Expeditionary Command, Lt. Gen. Karsten Heckl, commanding general, Marine Corps Combat Development Command, Vice Adm. Brendan McLane, commander, Naval Surface Forces,

Vice Adm. Daniel Cheever, commander, Naval Air Forces and Elizabeth Nashold, deputy commander, Naval Information Forces. Retired Vice Adm. Peter H. Daly, former CEO and Publisher, U.S. Naval Institute, moderated the discussion.

AFCEA, which stands for the Armed Forces Communications & Electronics Association, and the U.S. Naval Institute (USNI), sponsor WEST each year. The conference is organized into a main program and three engagement theaters – Marine, General, and Information Warfare.

Along with exhibits, keynote speakers and panel discussions, WEST also gives attendees a chance to hear from the Secretary of the Navy, the Chief of Naval Operations, the Commandants of the Marine Corps and Coast Guard, the Sea Service Chiefs, and various industry leaders.

WEST 2024 also featured a Department of the Navy (DON) Information Technology (IT) conference, an Innovation Showcase, and awards announcements recognizing individual and group winners in categories such as Emerging Leaders, a USNI essay contest, and women's appreciation.

Naval Special Warfare is the nation's elite maritime special operations force, uniquely positioned to extend the Fleet's reach and gain and maintain access for the Joint Force in competition and conflict.

AeroVironment's Puma 3 AE Now

Offers Extended Endurance of up to 3 Hours



A new optional battery extends the range of AeroVironment's Puma 3 AE UAS. *AeroVironment*

ARLINGTON, Virginia – AeroVironment's PS2500 battery is now approved for use in the Puma 3 AE unmanned aircraft system (UAS). The optional PS2500 battery allows operators to achieve extended endurance of up to three hours of flight time. The increased endurance provides operators with greater mission flexibility and time on station across land and maritime operations.

"The new PS2500 battery offers both new and current Puma customers the opportunity to dramatically expand the duration of their operations, enabling more ground covered in a single flight," said Brad Truesdell, AeroVironment's vice president and general manager of small UAS (SUAS). "Adding longer endurance capabilities to Puma's existing flexible launch options and modularity makes it a truly unparalleled asset for various types of operations."

Puma customers can now choose between the standard smart

battery with two and a half hours of endurance, or the PS2500 battery with three hours of endurance. The high-energy-density lithium-ion PS2500 battery pack features an improved capacity of 24.5Ah (amp-hours) while retaining the size and form factor needed to be seamlessly integrated into Puma 3 AE's existing battery bay and is also interoperable with Puma LE as a Line Replaceable Unit (LRU).

U.S. 7th Fleet Holds Change of Command, Welcomes New Commander



By U.S. 7th Fleet Public Affairs, Feb. 15, 2024

YOKOSUKA, Japan – U.S. 7th Fleet held a change of command

ceremony Feb. 15 at the Fleet Activities Yokosuka Theater.

Vice Adm. Fred W. Kacher relieved Vice Adm. Karl O. Thomas as the 54th commander of the world's largest forward-deployed naval force, U.S. 7th Fleet.

"To the men and women of 7th Fleet, it has been my sincere honor to lead this forward deployed team as you demonstrated daily how professional navies operate to secure the maritime commons and uphold the rules based international order," said Thomas. "To my counterparts in our ally and partner nations throughout the region, your professionalism and friendship has been the greatest reward as we operated as one seamless team. I remain inspired by your commitment to maintaining a free and open Indo-Pacific."

Prior to commanding 7th Fleet, Thomas served as the assistant deputy chief of naval operations, plans, and strategy, a role Kacher also held. Thomas began his career as an E-2C Hawkeye aviator, and he commanded a carrier airborne early warning squadron, two aircraft carriers and the forward-deployed Carrier Strike Group in Japan. His follow-on assignment will be the deputy chief of naval operations for information warfare.

During the ceremony, Thomas emphasized the critical importance of his close relationships with fleet commander counterparts throughout the Indo-Pacific. Throughout his tenure, Thomas led numerous advanced dual-carrier operations, multilateral events, critical freedom of navigation operations, and Taiwan Straits transits, among other high-visibility exercises and operations with allies and partners from across the Indo-Pacific.

Vice Adm. Blake Converse, deputy commander, U.S. Pacific Fleet, spoke highly of Thomas's visionary leadership and the importance of the rules-based international order in the Indo-Pacific.

“Our national command authority continues to recognize that this is the most important and consequential theater that we operate our forces in,” said Converse. “As such, we have grave responsibilities to deter aggression, to protect the international rules-based order, and to ensure freedom of navigation.”

Kacher began his career as a surface warfare officer aboard cruisers and destroyers. He was the first commanding officer of the Arleigh Buke class guided-missile destroyer USS Stockdale (DDG 106), and went on to serve as the commodore of Destroyer Squadron Seven, commander of Expeditionary Strike Group Seven; executive officer to the Supreme Allied Commander, Europe, and Commander, U.S. European Command; and chief of staff to Commander, Naval Surface Force, U.S. Pacific Fleet. He most recently served as the acting Superintendent of the U.S. Naval Academy.

“I could not be more humbled to lead the U.S. 7th Fleet,” said Kacher. “I am honored to re-join our forward deployed men and women as we operate combat credible naval forces in one of the most complex maritime regions in the world, and I look forward to engaging with our allied and partner navies in our shared commitment to a free and open Indo-Pacific.”

U.S. 7th Fleet is the U.S. Navy’s largest forward-deployed numbered fleet and routinely interacts and operates with allies and partners in preserving a free and open Indo-Pacific region.

For more news from Commander, U.S. 7th Fleet, visit <https://www.c7f.navy.mil/>.

CNO Concludes Trip to West Coast for Industry and Sailor Engagements



14 February 2024

SAN DIEGO – Chief of Naval Operations Adm. Lisa Franchetti traveled to San Diego to speak at WEST 2024, meet with industry leaders, and engage with Sailors, Feb. 12-14.

Franchetti's visit to San Diego was anchored with WEST 2024, the premier naval conference and exposition on the West Coast, which brings military and industry leaders together – connecting platform builders and designers of technologies with the military and government officials that utilize them, where she delivered a keynote address and took questions from the audience.

During her remarks, the CNO emphasized her priorities for

America's Warfighting Navy and discussed how leaders at all levels need to think differently about how the Navy operates in uncertain, complex and rapidly changing environments. She expressed her pride in the Navy team, noting that no other Navy is capable of deploying and sustaining forces at such a global scale – from seabed to space, cyberspace and in the information environment. Looking to the future, she shared that the Navy is acting with purpose and urgency to leverage technological breakthroughs that are redefining conflict. She then highlighted her focus on expanding the reach, depth, and lethality of the Fleet through manned-unmanned teaming.

“We're building on the many successes with unmanned systems that you've read about in 4th Fleet, 5th Fleet, and 7th Fleet. These are real-world laboratories of learning.” said Franchetti. “I think unmanned and autonomous systems have an enormous potential to multiply our combat power by complementing our existing fleet of ships, submarines and aircraft.”

After the keynote address, Franchetti walked the exhibit floor room to see displays, watch demonstrations, and meet with industry leaders to discuss how the Navy can work with the defense industrial base to field the Navy of today and the future. Franchetti then visited General Dynamics NASSCO, the only full-service shipyard on the West Coast, where she was briefed on current and future programs, and heard how NASSCO is leveraging commercial design and finding innovative ways to construct ships in order to drive down cost and mitigate construction delays.

While at the shipyard, CNO toured the fleet replenishment oiler USNS Earl Warren (T-AO 207). The 746-foot Warren is one of the new John Lewis-class and has the ability to carry 162,000 barrels of diesel ship fuel and aviation fuel and dry stores cargo, which will bring increased capacity to sustain warfighters at sea.

Next, Franchetti visited the amphibious transport dock USS Anchorage (LPD 23). Anchorage entered the shipyard in July 2023, following a 7-month Western Pacific deployment, where the crew received the 2023 Maritime Excellence Award. Anchorage is currently undergoing a lifecycle maintenance availability to prepare the ship for future deployments through system upgrades and refurbishments.

Aboard Anchorage, Franchetti met with Sailors and recognized them for their achievements, received updates on the ship's first Drydocking Selected Restricted Availability, and was able to speak to the crew and NASSCO shipyard workers on the ship's Main Circuit.

"I can see by walking around and meeting some of your great teammates that you're getting after my priorities every day, and you're making sure our Navy puts more players on the field just like this exceptional warship," Franchetti said. "I couldn't be more proud of what the team has done in just six or so months, you've made incredible progress. From the installation of the new SPS-73 radar, to the repairs on the bulkhead and ballast tanks and everything in between, I am really impressed with what's been accomplished here."

CNO rounded out her visit with an all-hands call at Naval Base San Diego for more than 750 Sailors. During the all-hands call she highlighted her priorities, emphasized the need for a ready, combat-credible maritime force, and stressed the importance of the warfighter to the Navy's mission.

"It's about warfighting – delivering decisive combat power, and that's about warfighters," said Franchetti. "That's all of you right here in this room. Because we can have the best platforms in the world, but they don't go anywhere and they don't do anything without the people that operate them and make us the most powerful Navy in the world."

Franchetti concluded her trip to San Diego by visiting

multiple unaccompanied housing barracks at Naval Base San Diego and Naval Air Station North Island, in order to see firsthand the living conditions on base. She assured leadership and Sailors that she remains committed to providing the Navy's Sailors and civilians with a quality of service that meets or exceeds established standards.

"My priorities are warfighting, warfighters and the foundation that supports them. We can't do what we need to do every day, without our Sailors, active and reserve, without our Department of Navy civilians, and of course, without the families who support everything we do. So I am focused on quality of service, which is a combination of the quality of work and the quality of life," said Franchetti.

This was CNO's second trip to the West Coast since her confirmation.

ONR Global Gaining Insight into the Effects of Glacial Melting in Coastal Regions



The Office of Naval Research is studying how melting glaciers in Patagonia can affect the coastal environment. *ONR*

A research project from the Office of Naval Research (ONR) Global is providing valuable information about the effects of melting glaciers in Patagonia that feed into coastal fjords, transporting sediments, freshwater and nutrients.

Dr. Chris Konek, science advisor at ONR Global in Chile, said the research will help the Department of the Navy understand the effects of a changing climate on the coastal environment.

“That’s the kind of the thing the Marines need to be able to handle,” he said. “It’s basic research and so it will help provide a fundamental understanding of this aspect of coastal systems where you can expect more things like this to happen in the future – more glacial melting as opposed to less.”

Konek said sediment trapped in the melting glaciers creates higher density in the water that feeds into the fjords, creating stratification and internal waves.

“When we have those waves between different layers in the water in the ocean, we call those internal waves,” Konek said. “So then the idea of the project is that you have this glacial

plume, the sediment and the internal waves, and you're looking to see how these different features interact with one another."

Cristian Escauriaza, professor, Pontificia Universidad Católica de Chile, is the principal investigator along with his university colleague, Megan Williams. They are working with the Filantropía Cortés-Solari, a conservation organization that owns and manages the Melimoyu Elemental Reserve in northern Patagonia.

Escauriaza said, "We are interested in understanding the changes in the physical environment produced by the large input of glacial rivers to the coast. In these sub-Antarctic regions, and similarly near the Arctic, the effects of the fresh water in the coastal ocean can change the physical properties and dynamics of the flow in the adjacent fjords."

Patagonia is largely remote with a diverse ecosystem and a rich array of wildlife, including penguins and blue whales. Konek said ONR Global is interested in Escauriaza's project for its potential to inform what's happening to that ecosystem, which can also help inform what's happening to other coastal regions experiencing the same challenges.

While the project in Patagonia was awarded about a year ago, Escauriaza's team recently carried out field measurements.

"Early information has shown that measurements of the tide amplitudes, river discharge variability, temperature and salinity are critical to identify the leading mechanisms of the formation and propagation of internal waves," Escauriaza said.

He added, "The fjords and river systems in Patagonia are a critical part of the sub-Antarctic region and understanding their dynamics is vital to addressing the challenges posed by climate change. Our goal is to provide new insights into the processes that govern these coastal systems, which will help

develop sustainable strategies for their management.”

Researchers from Stanford and Stonybrook Universities, Oliver Fringer, Stephen Monismith and Jacqueline McSweeney, are also taking part in the study.

Konek said collaboration among the scientific community is key to what ONR Global is able to accomplish through its research awards.

“We’ve got two people at the Naval Research Lab that are really supportive of the project. One of them was recently promoted to technical director of the Naval Meteorology and Oceanography Command, so we’re hoping that kind of collaboration continues and expands.”

In addition to measuring the effects of glacial waters in Patagonia’s coastal fjords, Konek said ONR Global is sponsoring another project on climate change with the same university for the prediction of heat waves across both North and South America.