DHS S&T Funds Startup to Customize Language Translator for USCG

WASHINGTON – The Department of Homeland Security Science and Technology Directorate (S&T) has awarded myLanguage of San Jose, California, $199,592 in Phase 1 funding to adapt and customize its language translation platform to support the U.S. Coast Guard (USCG).

“We look forward to working with myLanguage as they develop language translation solutions to enhance safe and efficient USCG missions,” said Wendy Chaves, chief of Coast Guard Research, Development, Test & Evaluation and Innovation.

Coast Guard operators must be able to communicate with vessel occupants, many who may be non-English speakers, while performing a variety of rescue and investigation missions. Accurate and swift translation of information is critical to the safety and security of USCG boarding teams and vessel occupants. S&T’s Silicon Valley Innovation Program (SVIP) Language Translator solicitation sought new capabilities to support the Coast Guard in facilitating real-time communication with non-English speakers and those who are unable to communicate verbally. The solicitation also included requirements for the language translation technology to be capable of operating both online and offline because many USCG interactions take place in extreme environmental conditions in locations without cell service or internet connection.

The current myLanguage platform is an online and offline voice-to-text speech recognition and text-to-text translation system that employs deep learning and artificial intelligence. In Phase 1, myLanguage will adapt its voice translation technologies for use in a rugged, hand-held mobile device that

can withstand extreme temperatures and is able to customize model designs and training language models to fit USCG use cases.

“The focus of the myLanguage technologies is to enable fluent conversations across language barriers,” said Melissa Oh, SVIP managing director. “This Phase 1 funding enables myLanguage to expand their product capabilities for commercialization and provide USCG with an innovative technology that strengthens operator safety and mission outcomes.”

Cutter Resolute Returns Home from 56-day Deployment

Resolute conducts an at-sea transfer with the CGC Diligence (homeported in Pensacola, Florida). The transfer included 77 additional Haitian migrants, their personal belongings, and a Creole interpreter. *U.S. COAST GUARD*

ST. PETERSBURG, Fla. – The crew of Coast Guard Cutter Resolute returns home to St. Petersburg, Florida, Oct. 16, following a successful 56-day Joint Interagency Task Force-South (JIATF-S) and Coast Guard District Seven (D7) Patrol in the Caribbean Sea, the Coast Guard 7th District said in a release.

During the patrol, Resolute interdicted multiple suspected smugglers on a go-fast vessel obtaining 279.5 kilograms of cocaine and rescued 260 Haitian migrants.

Resolute, with the assistance from a Customs and Border Patrol (CBP) maritime patrol aircraft, tracked and pursued a drug smuggling vessel for eight hours, culminating in a successful intercept and seizure. The suspected smugglers were detained

and later transferred for case disposition in the United States.

Due to increased political instability in Haiti, Resolute's tasking shifted to Alien Migration Interdiction Operations in the Windward Pass, specifically to overtly patrol and discourage unsafe maritime migration voyages. On Sept. 24, Resolute conducted one of the largest single-unit repatriations into Cap Haitien, Haiti in recent history. Small-boat crews conducted 78 consecutive transfers safely returning all 260 migrants and their personal belongings back to Haitian authorities.

On Sept. 22, Resolute interdicted an overcrowded sail freighter with 183 Haitian migrants including 17 children and infants aboard. Bound for the United States, the 55-foot vessel was dangerously overloaded and lacked sufficient navigation and safety equipment to make the journey. All 183 migrants were transferred safely to the cutter where they were provided food, water, shelter, and medical attention. In less than 24 hours, Resolute received an additional 77 migrants from another Coast Guard asset, raising the total count to 260.

"The migrant interdiction mission is always unique; while the migrants are attempting to escape the poor living conditions in Haiti, their unsafe voyages risk the lives of innocent people, including children," said Petty Officer 1st Class Joseph Wooley, a maritime enforcement specialist. "It is unfortunate to see, but it makes us feel good knowing that we potentially saved 183 people from capsizing and drowning at sea."

After a long and successful patrol, the crew is eager to return home and spend the holiday season with friends, family and loved ones.

"The crew's actions during this patrol were heroic and

inspiring. I am especially impressed with their professional dexterity and ability to shift from counter-drug operations to humanitarian missions in a moment's notice, embracing our service motto: Semper Paratus-Always Ready," said Cmdr. Justin Vanden Heuvel, commanding officer of Resolute.

Resolute is a 210-foot Reliance-class medium-endurance cutter and has a crew of 72. Resolute was commissioned on December 8, 1966, and is homeported St. Petersburg, Florida.

Three RAN Aircrew Safe after MH-60R Helicopter Ditched in the Philippine Sea

HMAS Warramunga (left) conducts a replenishment at sea with USNS Big Horn while sailing in company with HMAS Brisbane during a regional presence deployment. *ROYAL AUSTRALIAN NAVY / LSIS Daniel Goodman*

CANBERRA – Three crewmembers of a Royal Australian Navy (RAN) MH-60R Seahawk helicopter are safe after ditching their helicopter in the Philippine Sea during a routine flight overnight, the Australian Department of Defence said in an Oct. 14 release.

The aircraft was operating from HMAS Brisbane as part of a regional presence deployment with HMAS Warramunga, when the crew conducted an emergency landing in the water.

HMAS Brisbane deployed sea boats and rescued the crew approximately 20 minutes later. The crew received first aid for minor injuries upon their return to HMAS Brisbane.

Commander of the Australian Fleet, Rear Adm. Mark Hammond, commended the crews of both ships involved for their quick response to the emergency.

“The successful rescue is credit to the devotion to duty and skill of the officers and sailors of HMAS Brisbane,” Hammond said. “Their immediate actions ensured the survival of the aircrew, validating the significant training undertaken in the event an emergency of this nature occurs.”

Both ships continue to search the area for any debris, which will aid in determining the cause of the incident.

“With the aircrew safe, investigating the circumstances that led to the helicopter ditching is the priority at the moment,” Hammond said. “As a precaution, we have temporarily paused flying operations of the MH-60R Seahawk fleet.”

The Department of Defence is reviewing the impact of the incident on Brisbane’s and Warramunga’s current deployment. Australia is planning on procuring 12 MH-60Rs to supplement the 24 already procured and delivered by 2016.

U.S. Navy Increases Contract for Sarcos Guardian DX Mobile Robotic Avatar System

The Sarcos Defense Guardian DX tele-operated robot at work. *SARCOS DEFENSE*

SALT LAKE CITY – Sarcos Defense said Oct. 12 the U.S. Navy has exercised a contractual option to expand testing, evaluation

and demonstrations of the Guardian DX teleoperated dexterous robotic system for Navy-specific tasks, with a focus on maintenance, modernization and sustainment requirements.

Sarcos Defense is a wholly owned subsidary of Sarcos Technology and Robotics Corp., which develops robots that augment humans to enhance productivity and safety.

The Guardian DX robot is the defense-specific variant of the Guardian XT highly dexterous mobile robotic system, itself is a variant of the award-winning Sarcos Guardian XO full-body, battery-powered industrial exoskeleton. The Guardian DX robot is a teleoperated, dual-armed dexterous robot designed to perform tasks with human-like dexterity while keeping the operator at a safe distance in challenging and hazardous conditions, including at height. Its modular design enables the Guardian DX robot to be mounted to a variety of mobile bases.

“Consistent with the chief of naval operations’ readiness and modernization priorities announced earlier this year, we couldn’t be more proud to partner with the U.S. Navy to deliver innovative and cost-effective solutions to enhance our nation’s readiness at sea,” said Tom Jackson, president of Sarcos Defense. “The Navy’s exercise of this contract option is an important step in our efforts to commercialize the Guardian DX consistent with the Navy’s requirements.”

BAE Systems Successfully

Tests APKWS Laser-Guided Rockets Against UAS

An artist’s conception of an APKWS strike against an unmanned aircraft. *BAE SYSTEMS*

HUDSON, N.H. — BAE Systems Inc. has successfully tested APKWS laser-guided rockets in precision strike tests against Class 2 unmanned aircraft systems at Yuma Proving Grounds, Arizona, the company said Oct. 11.

The 2.75-inch test rockets combined standard M151 warheads and Mk66 motors with APKWS precision guidance kits and a newly developed proximity fuze, enabling them to engage and destroy airborne drones at a fraction of the cost of traditional counter-UAS strike capabilities.

“Unmanned aerial vehicles of all sizes are a growing threat increasingly deployed by adversaries around the globe,” said Greg Procopio, director of Precision Guidance and Sensing Systems at BAE Systems. “The flexibility and affordability of APKWS rockets make them a good choice for taking out small, tactical military drones. Our successful test strikes demonstrate the creativity of our engineers and an innovative and economical use of existing DoD materiel to address an emerging threat.”

BAE Systems conducted test fires and engineering tests to develop a capable system for U.S. armed forces and allies. The key to APKWS rockets’ counter-UAS capability is the innovative proximity fuze jointly developed by L3Harris Technologies and Technology Service Corp. The fuze combines target proximity detection and point detonation capabilities, and is a drop-in replacement for existing M423 fuzes, allowing APKWS rockets to destroy UAS without the need for a direct hit.

Unlike expensive C-UAS missiles, APKWS rockets do not need to

lock on the target before launch, instead relying on semi-active laser guidance optics that activate on launch, saving warfighters precious seconds when it counts.

APKWS guidance kits transform unguided rockets into precision-guided munitions with explosive effects and range capabilities that make them well-suited for today's dynamic military engagements. APKWS rockets have proven combat capabilities and the flexibility to strike a variety of stationary and moving targets from planes, helicopters, ground vehicles, boats, and remote weapon stations.

Coast Guard Contracts Ameresco for First Battery Energy Storage System Project at Training Center Petaluma

An aerial photograph of Coast Guard Training Center Petaluma, the enlisted school for the service's food service specialists, health service technicians, storekeepers, yeomen, information technicians, electronics technicians, and operations specialists. *U.S. COAST GUARD*

FRAMINGHAM, Mass. and PETALUMA, Calif. – Ameresco Inc. has entered into a $43 million Energy Savings Performance Contract with the U.S. Coast Guard at the service's largest west coast training facility, Training Center Petaluma.

The project will be the USCG's first battery energy storage system project and the Department of Homeland Security's largest solar renewable energy project integrated within the

USCG's first fully functional, renewable energy-powered microgrid, the company said in a release.

Training Center Petaluma faces a range of energy security and resiliency challenges endemic to the climate and regional power infrastructure in northern California. In light of the regularity and severity of weather events and utility interruptions affecting the site, USCG competitively selected Ameresco in February 2021 to fast-track development of a comprehensive Energy Savings Performance Contract to enhance the site's electric infrastructure and resiliency posture. The microgrid will integrate existing distributed backup generators with a new 5 megawatt (MW) solar array and an 11.6MWh battery energy storage system to power the entire site in the event of a loss of utility. Planned improvements also feature the deployment of new power distribution transformers, Smart controls in 10 buildings across campus, LED lighting improvements for over 8,000 fixtures, installation of new electric vehicle charging infrastructure and heating, ventilation, and air conditioning equipment upgrades.

"This contract award enables continuity of operations in an environment of unpredictable climate hazards and will increase Training Center Petaluma's relevance throughout the region, while sustaining our Coast Guard mission ready total workforce," said Capt. Steven Ramassini, commanding officer for the training campus.

Once completed, Training Center Petaluma will realize a cost savings of more than $1.2 million in the first year alone. The project will also reduce the site's annual electricity and propane consumption by 8.7M kWh and 50.8 kgal, respectively.

"We are so honored to lead the design and development of this historic project for the United States Coast Guard," said Nicole Bulgarino, executive vice president, Ameresco. "The upgrades outlined integrate energy efficiency and clean onsite energy with advanced microgrid controls and significantly

enhance the training facility's energy resiliency. The finished project will set a strong precedent for future Federal renewable generation and battery storage projects."

Construction on the project is set to begin in October 2021 and be complete by fall 2023.

Coast Guard Cutter Juniper Completes Patrol in Oceania

The crew of the Coast Guard Cutter Juniper (WLB 201) return to Honolulu after completing a 45-day patrol in Oceania in support of Operation Aiga, Oct. 1. During the 10,000 nautical-mile patrol, the cutter's crew conducted operations to counter illegal, unreported, and unregulated fishing and strengthened relations with foreign allies while promoting maritime sovereignty and resource security of partner nations in the Indo-Pacific. *U.S. COAST GUARD*

HONOLULU — The crew of the Coast Guard Cutter Juniper (WLB 201) returned to Honolulu after completing a 45-day patrol in Oceania in support of Operation Aiga Oct. 8, the Coast Guard 14th District said in a release.

During the 10,000 nautical-mile patrol, the cutter's crew conducted operations to counter illegal, unreported, and unregulated (IUU) fishing and strengthened relations with foreign allies while promoting the collective maritime sovereignty and resource security of partner nations in the Indo-Pacific.

Operation Aiga, the Samoan word for family, is designed to integrate Coast Guard capabilities and operations with the

United States' Pacific Island Country partners in order to effectively and efficiently protect shared national interests, combat IUU fishing and strengthen maritime governance on the high seas.

"During our deployment in Oceania, Juniper conducted fisheries enforcement in an effort to counter and deter illegal fishing activities in the Central Pacific," said Cmdr. Chris Jasnoch, the Juniper's commanding officer. "We were able to establish a presence on the high seas and in the U.S. Exclusive Economic Zone [EEZ] in American Samoa while also patrolling our partner nation's EEZs."

The Juniper's crew worked under the Western and Central Pacific Fisheries Commission (WCPFC), which strives to protect the region's fish stocks on the high seas. The WCPFC has 26 member nations and seven participating territories, 18 of which have enforcing authority. The United States is both a WCPFC member and an enforcing nation.

"We get to take part in a unique, rewarding mission in the Pacific," said Lt. j.g. Ryan Burk, the operations officer on the Juniper. "We have the privilege of building and strengthening relationships with our Pacific Island partners, while protecting and preserving global resources."

During the patrol the Juniper embarked a Mandarin linguist from the U.S. Marine Corps to query 11 foreign fishing vessels and board four fishing vessels, generating vital information reports for IUU fishing in the region.

The crew also conducted joint operations with a French navy Falcon 200 aircraft to identify and intercept vessels on the high seas. They also conducted a fueling evolution with the Coast Guard Cutter Oliver Berry's crew, another participant in Operation Aiga.

"We strengthened our joint capabilities with the French Navy in the fight against IUU fishing activities on the high seas

in support of the WCPFC," said Jasnoch.

To promote American Samoa's maritime transportation system, the Juniper crew serviced vital aids to navigation in Pago Pago Harbor and in neighboring islands, demonstrating the cutter's multi-mission capabilities.

In addition to normal buoy maintenance, Juniper accomplished the first Waterways Analysis and Management System Report for Pago Pago since 2003. This report integrates the opinions of Pago Pago Harbor's regular users to review the relevance of existing aids and reevaluate where new aids would be useful, ensuring the sustainability and safety of the waterway.

Juniper's crew also put together a donation box for the children in Pago Pago, including sporting equipment, books and toys for the Boys and Girls Club of American Samoa.

"Despite COVID restrictions preventing an in-person event, it felt good to know that we made a difference," said Ensign Elaine Weaver, the Juniper's community relations officer.

The Juniper is a 225-foot seagoing buoy tender home ported in Honolulu and is responsible for maintaining aids to navigation, performing maritime law enforcement, port and coastal security, search and rescue and environmental protection.

Multiple Allied Carrier Strike Groups Operate

Together in 7th Fleet

The United Kingdom’s carrier strike group led by HMS Queen Elizabeth (R 08), and Japan Maritime Self-Defense Forces led by (JMSDF) Hyuga-class helicopter destroyer JS Ise (DDH 182) joined with U.S. Navy carrier strike groups led by flagships USS Ronald Reagan (CVN 76) and USS Carl Vinson (CVN 70) to conduct multiple carrier strike group operations in the Philippine Sea. *U.S. NAVY / Mass Communication Specialist 3rd Class Gray Gibson*

PHILIPPINE SEA – U.S. Navy carrier strike groups led by flagships USS Ronald Reagan (CVN 76) and USS Carl Vinson (CVN 70) joined with Japan Maritime Self-Defense Force’s (JMSDF) Hyuga-class helicopter destroyer JS Ise (DDH 182) and the United Kingdom’s carrier strike group (CSG 21) led by HMS Queen Elizabeth (R08) to conduct multiple carrier strike group operations in the Philippine Sea, Oct. 3, Commander, Task Force 70 Public Affairs said Oct. 8.

The integrated at-sea operations brought together more than 15,000 Sailors across six nations and demonstrates the U.S. Navy’s ability to work closely with its unmatched network of alliances and partnerships in support of a free and open Indo-Pacific.

Carrier Strike Group (CSG) 5 from Ronald Reagan is operating with CSG 1 from Carl Vinson for the first time during its 2021 deployment and marks the second time operating with UK CSG 21 and JS Ise this year.

“We are picking up right where we left off in 5th Fleet with the Queen Elizabeth team and building on what we started with the JMSDF after first leaving Japan,” said Rear Adm. Will Pennington, commander, Carrier Strike Group 5/Task Force 70. “Adding the fantastic Vinson team to this potent force dynamically displays our capabilities across all domains,

keeping us ready to respond to a range of maritime challenges."

The strike groups conducted flight operations and air defense exercise scenarios as well as simulated strikes against maritime targets. The operations brought together F/A-18 Super Hornets from Carrier Air Wing (CVW) 5 aboard Ronald Reagan, along with F-35Bs from both Royal Air Force and U.S. Marines operating from Queen Elizabeth, and F-35Cs from Carrier Air Wing (CVW) 2 aboard Carl Vinson.

"Interoperability across air platforms, to include the addition of the Air Wing of the Future, is just one way we have integrated operations for enhanced lethality, readiness and maneuverability across our collective forces," said Rear Adm. Dan Martin, commander, Carl Vinson Carrier Strike Group (VINCSG)/CSG 1. "This is Carl Vinson strike group's fourth exercise with allies and partners since entering 7th Fleet, and we have continued to improve our ability to conduct prompt and sustained operations at sea with a more mobile, agile and flexible force. Through alliances and partnerships, we have developed the right operational concepts, plans, proficiencies and capabilities to bolster our maritime advantage."

Vinson and U.K. CSG conducted joint interoperability flights together in 7th Fleet in August, the first time CSG-21 engaged with the F-35 "C" model, assigned to CVW-2. The two F-35B squadrons have been deployed together aboard HMS Queen Elizabeth for her inaugural, global deployment, demonstrating the interoperability the F-35 provides.

"The UK Carrier Strike Group offers the largest 5th Generation air wing afloat today and working with our close allies to develop operating procedures and capabilities while concurrently showcasing the agility of land and carrier-based aviation in the Indo-Pacific demonstrates our commitment to the region," said Commodore Steve Moorhouse, OBE Royal Navy,

Commander U.K. Carrier Strike Group.

The training and events provided commanders the chance to practice capabilities across the maritime domain, as participating forces focused on anti-air, anti-surface, and anti-submarine warfare tactics and procedures.

“In addition to the two carrier strike groups of the U.S. Navy, I feel very honored to be able to train with the Royal Navy’s most advanced carrier strike group, which is an extremely valuable experience,” said Rear Adm. KONNO Yasushige, commander of JMSDF Escort Flotilla 2. “Through this training, we enhanced our tactical skills and interoperability with the participating navies. In order to realize a free and open Indo-Pacific, the JMSDF will work closely with the naval forces of the U.S., Britain, the Netherlands, and Canada, which share the same objectives, to respond to global challenges and defend maritime order based on the rule of law.”

Joining the JS Ise from the JMSDF were the destroyers JS Yamagiri (DD 152) and JS Kirishima (DDG 174). The frigates HMCS Winnipeg (FFH 338) from the Royal Canadian Navy and HMNZS Te Kaha (F 77) from the Royal New Zealand Navy, represented their countries in the operations.

In addition to the carrier, the Queen Elizabeth Strike Group is comprised of anti-submarine frigates HMS Richmond (F 239) and HMS Kent (F 78), guided-missile destroyers HMS Defender (D 36) and HMS Diamond (D 34), Royal Fleet Auxiliary’s RFA Fort Victoria and RFA Tidespring, U.S. guided-missile destroyer USS The Sullivans (DDG 68), and Dutch frigate HNLMS Evertsen (F 805).

CSG 1 includes aircraft carrier USS Carl Vinson (CVN 70), the squadrons of Carrier Air Wing (CVW) 2, Destroyer Squadron (DESRON) 1, Arleigh Burke-class guided-missile destroyers USS

Chafee (DDG 90), USS Stockdale (DDG 106) and Ticonderoga-class guided-missile cruiser USS Lake Champlain (CG 57).

CSG 5 includes the U.S. Navy's only forward-deployed aircraft carrier USS Ronald Reagan (CVN 76), the embarked staffs of Task Force 70 and Destroyer Squadron (DESRON) 15, Ticonderoga-class guided-missile cruiser USS Shiloh (CG 67), and aircraft from Carrier Air Wing (CVW) 5.

The Ronald Reagan Carrier Strike Group and CSG 1 are deployed to the U.S. 7th Fleet area of operations in support of a free and open Indo-Pacific region.

U.S. 7th Fleet conducts forward-deployed naval operations in support of U.S. national interests in the Indo-Pacific area of operations. As the U.S. Navy's largest forward-deployed fleet, 7th Fleet interacts with 35 other maritime nations to build partnerships that foster maritime security, promote stability, and prevent conflict.

Coast Guard Cutter Diligence Returns from 54-day Caribbean Sea patrol

An overloaded Haitian vessel interdicted by Coast Guard Cutter Diligence and Coast Guard Cutter Bernard C. Webber Sep. 14, 2021. During this patrol, Diligence's crew performed extensive migrant interdiction operations in support of Operation Southeast Watch. *U.S. COAST GUARD / Petty Officer 3rd Class Christian Homer*

PENSACOLA, Fla. – The crew of Coast Guard Cutter Diligence

returned to homeport in Pensacola, Florida, Oct. 6 after a 54-day Caribbean Sea patrol, the Coast Guard 8th District said Oct. 8.

During this patrol, Diligence's crew performed extensive migrant interdiction operations in support of Operation Southeast Watch. The crew of Diligence played a role in the interagency effort to detect and deter vessels engaged in illegal maritime migration.

Partnering with seven other Coast Guard cutters and five Coast Guard aircraft, Diligence interdicted, cared for, and repatriated nearly 600 migrants who departed from Haiti. Additionally, Diligence's crew safely escorted two other overloaded vessels engaged in an illegal migrant venture, ensuring the safety of more than 300 people. The 54-day patrol provided critical training opportunities to build proficiency through shipboard training and drills enhancing operational readiness and effectiveness.

"Throughout the deployment, Diligence's crew exemplified the Coast Guard's core values of honor, respect, and devotion to duty," said Cmdr. Jared Trusz, cutter Diligence commanding officer. "In response to a challenging mission, they supported national security objectives by deterring illegal maritime migration, while ensuring the safety of life-at-sea. The crew provided humanitarian care for those interdicted and treated all migrants with dignity and respect as we safely returned them to Haiti. I cannot thank Diligence's crew enough for the hard work and sacrifices made during this patrol."

Diligence is a 210-foot medium-endurance cutter homeported in Pensacola with 78 crewmembers. The cutter's primary missions are counter drug operations, migrant interdiction, enforcing federal fishery laws, and search and rescue in support of Coast Guard operations throughout the Western Hemisphere.

DoN Concludes Investigations into Assault Amphibious Vehicle Tragedy

An AAV7A1 assault amphibious vehicle conducts a wet-gap amphibious crossing on Camp Lejeune, North Carolina, Aug. 10, 2021. *U.S. MARINE CORPS / Lance Cpl. Jacqueline C. Arre*

ARLINGTON, Va. – The U.S. Navy and Marine Corps released findings of separate investigations into the assault amphibious vehicle (AAV) tragedy that occurred July 30, 2020, the Navy said Oct. 6.

The investigations revealed that a combination of maintenance failures and human error caused the deaths of eight Marines and one Sailor.

The Navy investigation, conducted by commander, 3rd Fleet, examined the Navy's role in the incident and revealed gaps in doctrine and procedures by the Navy and Marine Corps.

"The Navy and Marine Corps learned from this tragedy and we are codifying the lessons we have learned as an organization so that the deaths of these Marines and Sailor are not in vain," said Vice Adm. Roy Kitchener, commander, Naval Surface Force, U.S. Pacific Fleet. "We are reworking procedures and doctrine, clarifying aspects of amphibious operations, and instituting new training requirements to prevent future tragedies.

"The investigation by 3rd Fleet led to comprehensive updates to the Wet Well Manual to include clarification regarding safety boat requirements, ship requirements to ensure positive

control of AAVs during evolutions, as well as additional improvements to the integration of training between the Navy and Marine Corps," Kitchener said. "Additionally, all Navy commanding officers will attend the Senior Amphibious Warfare Course before taking command. Future AAV operations will require a comprehensive and integrated communications plan to be submitted before AAV operations can occur."

The Marine Corps previously concluded two investigations: a safety investigation, Oct. 1, 2020, and a command investigation, Feb. 25, 2021. As a result of these initial investigations, the Marine Corps directed 23 institutional actions to ensure the safe execution of AAV waterborne operations. These actions fall into one of three categories, equipment, procedures or training.

Equipment actions include a combination of equipment advances and additional inspections such as procurement and sustainment of a Waterborne Egress Capability program, electronic tablets for crewmembers to manage associated technical and procedural manuals, and new criteria for hull watertight integrity, bilge pump function, communications systems, and emergency egress lighting systems.

To address procedural actions, the Marine Corps administered publication and policy reviews to operating procedures, technical manuals, and safety structure requirements during training. These include updates to training and qualification prerequisites, authority and decision-making procedures, and safety boat requirements.

Finally, training actions include implementing additional standards for water survival, underwater egress training for both crew members and embarked personnel, and standardized knowledge tests for crew members.

Recently, the Marine Corps concluded a subsequent command investigation, led by Lt. Gen. Carl E. Mundy, focused on the

formation of the 15th Marine Expeditionary Unit (MEU). The investigation found a confluence of factors, including COVID-19 impacts, task-saturation and reduced manning, poor communication and inadequate training and equipping played significant roles in contributing to the conditions that allowed for the tragedy to occur. The investigation's recommendations include a comprehensive review of relevant orders, programs and training curricula as well as increases in material inspection and reporting requirements, leadership manning, preparation and oversight.

Senior Marine Corps and Navy personnel are conducting a Strategic Review of Amphibious Operations to build upon the findings and recommendations of these investigations. That review will assess all aspects of current amphibious operations with special consideration for future concepts of amphibious operations.

To view the Navy investigation, visit the SECNAV FOIA website.

To view the Marine Corps Investigation, visit the USMC FOIA website.

The Navy Command Investigation will be posted on the SECNAV FOIA reading website. Due to technical issues there may be a slight delay. A copy of the Navy investigation is available in the meantime here.