THE CHESAPEAKE ENGINEER

SPECIAL EDITION 2024

US Army Corps of Engineers®
Baltimore District

ENGINEERING SOLUTIONS FOR OUR NATION'S TOUGHEST CHALLENGES

FRANCIS SCOTT KEY BRIDGE

SPECIAL EDITION 2024

Restoring the Fort McHenry Federal Channel

U.S. Army Corps of Engineers photo by Dylan Burnell

U.S. Army Corps of Engineers photo by Christopher Rosario

THE CHESAPEAKE ENGINEER MAGAZINE

The mission of the U.S. Army Corps of Engineers, Baltimore District, is to deliver vital engineering solutions in collaboration with our partners to serve and strengthen the Nation, energize the economy and reduce disaster risks.

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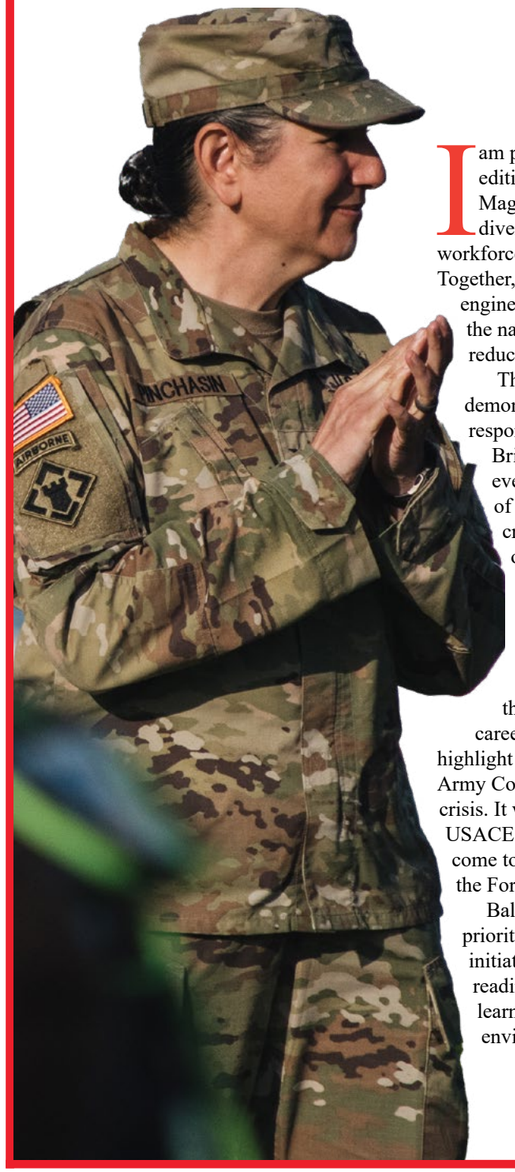
THE DISTRICT ENGINEER



I am pleased to provide our latest edition of the Chesapeake Engineer Magazine showcasing the district's diverse portfolio, industrious workforce, and collaborative partnerships. Together, we continue delivering vital engineering solutions to strengthen the nation, energize the economy, and reduce disaster risks.

This is a very special edition, as it demonstrates the Baltimore District's response to the Francis Scott Key Bridge Collapse – a catastrophic event that tragically took the lives of six people and temporarily crippled the Port of Baltimore's operations with significant impacts on the Nation's economy. Being a member of the Unified Command was by far one of the most meaningful roles I've ever served in throughout my entire U.S. Army career. I could not be prouder to highlight the work performed by the U.S. Army Corps of Engineers during this crisis. It was so incredible to see all our USACE teammates and various partners come together so quickly to fully restore the Fort McHenry Federal Channel.

Baltimore District continues prioritizing critical capabilities and initiatives that support regional readiness and resilience. You'll learn about the progress in our environmental justice priorities, significant civil works and military construction projects, coastal engineering initiatives, and the Washington Aqueduct. Our team of teams works diligently to safely deliver quality projects to our stakeholders, highlighted in this edition.

Last, and most importantly, we highlight the exceptional people who are part of our Baltimore District family and work so hard to make these incredible projects become a reality. Baltimore District's contributions are invaluable and epitomize the unwavering commitment of the U.S. Army Corps of Engineers to deliver for our nation and for the American people.

As this is my last edition of the Chesapeake Engineer as your District Commander, I thank you for all you do to build our nation!
It is, and always has been, an immense honor to serve alongside such exceptional and dedicated professionals.

BUILDING STRONG!

Col. Estee S. Pinchasin
Commander and District Engineer
USACE, Baltimore District

USACE RESPONDS TO FRANCIS SCOTT KEY BRIDGE COLLAPSE

By Nicole Strong, Baltimore District PAO

"On behalf of the 38,000 men and women in the U.S. Army Corps of Engineers today, our thoughts and prayers are with the families of those who have been lost in this terrible accident. We are just one small part of a much larger whole of government approach."

- Lt. Gen. Scott Spellmon

Key Bridge Response 2024 Unified Command photo by U.S. Coast Guard Pety Officer 3rd Class Carmen Caver

MAYDAY

Key Bridge Response 2024 Unified Command photo by U.S. Coast Guard Petty Officer 3rd Class Carmen Caver

In the early morning of March 26, 2024, crew aboard Motor Vessel DALI issued the mayday call moments before the crash that took down the Francis Scott Key Bridge, enabling authorities to limit vehicle traffic on the span. The collapse of this pivotal piece of infrastructure sent eight construction workers into the Patapsco River below, taking the lives of six of them.

The cargo ship departed the Port of Baltimore around 12:40 a.m. for what was expected to be a journey to Sri Lanka. Shortly after leaving the terminal, M/V DALI lost power and struck one of the Key Bridge's support pillars. Within seconds, almost a mile of the 80-foot-wide bridge crumbled, falling into the water below. One section, roughly 500-feet long, 80-feet wide, and weighing 400-600 short tons, fell onto the M/V DALI's bow, pinning the ship to the federal channel.

The federal Fort McHenry Channel, now blocked by wreckage and M/V DALI, is operated and maintained by the U.S. Army Corps of Engineers (USACE), Baltimore District, authorized by Section 101 of the Rivers and Harbors Act of 1958 and the Water Resources Act of 1996. The channel is regularly surveyed and dredged to its authorized depth of 50-feet and a minimum width of 700 feet.

With the channel blocked by the M/V DALI, wreckage, and debris, ships could no longer pass through the Port of Baltimore – creating a catastrophic ripple in economic impact both locally and beyond.

The Port of Baltimore is the ninth-busiest port in the country for international cargo, and the seventeenth-largest overall. In fiscal year 2023 alone, the public terminals handled nearly 12 million tons of general cargo, while also handling another 52.3 million tons of international cargo – both numbers setting a record for the facility.

THE RESPONSE & UNIFIED EFFORT

U.S. President Joe Biden addresses the Francis Scott Key response during a press conference in Baltimore, Maryland, April 5, 2024. President Biden completed an overflight assessment and was briefed by local officials, the U.S. Coast Guard and U.S. Army Corps of Engineers on the situation in the water and its impacts on the region. (U. S. Coast Guard photo by Petty Officer 1st Class Brandon Giles)

USACE, Baltimore District activated its Emergency Operations Center (EOC) on March 26 in an immediate response to the collapse. With the activation of the EOC, engineering, construction, contracting, and operations specialists from around the district began the complex process of clearing the wreckage and debris from the bridge to restore safe navigation in and out of the Port of Baltimore.

Simultaneously, both Maryland and City of Baltimore officials declared a state of emergency allowing state and local resources to be directed to the response.

The Unified Command was formed to carry out the response, consisting of six agencies and organizations: USACE, U.S. Coast Guard, Maryland Department of the Environment, Maryland Transportation Authority, Maryland State Police, and Witt O'Brien's, representing Synergy Marine.

While the exact number of responders flowed and ebbed since the bridge collapse, more than 350 uniformed and civilian workers from 53 federal, state and local agencies from all corners of the U.S. deployed in Baltimore for the recovery and salvage effort. Including an additional 553 contract specialists currently serving in a diverse variety of jobs related to activities like dive, crane and vessels operations, more than 1,200 people have contributed to the Key Bridge Response mission.

"We have marshalled incredible skills and the best equipment available," said Baltimore District Commander Col. Estee Pinchasin. I am fully confident that we have the right team and partners in place to tackle this project and do what we do best – serve and strengthen this great Nation."

The Unified Command identified three concurrent salvage operation priorities to be met in order to restore the Port of Baltimore to normal operations at the initial stage of response.

Priority 1: Clear the Channel (the Federal Channel and Priority 1A, the Limited Access Channel)

Priority 2: Refloat the Vessel (Moving the M/V DALI out of the Federal Channel)

Priority 3: Remove the Remaining Wreckage

> ***"We continue to provide our best talent and technology in support of the Coast Guard and our local, state and federal Partners."***
>
> Lt. Gen. Scott Spellmon
> USACE Commanding General

USACE contributed its unique technical expertise and abilities to the Unified Command team in support of accomplishing these three priorities. The top USACE asset is its people. Other USACE capabilities included certified underwater assessments, structural engineering, bridge inspections, contract support and waterway wreckage management – all facilitated by advanced hydrographic and topographic sonar tools on its fleet of highly-specialized survey vessels.

ENGINEERING SOLUTIONS FOR THE NATION'S TOUGHEST CHALLENGES

On March 30th, removal of the Francis Scott Key Bridge wreckage commenced with assistance from 56 federal, state, and local agencies, represented by 1,587 individual responders. Additionally, about 500 specialists from around the world operated a fleet of 36 barges, 27 tugboats, 22 floating cranes, 10 excavators, and four survey boats. Subject matter experts from all over the U.S. also provided essential technical knowledge to the Unified Command.

Clearing the wreckage from the Fort McHenry federal channel posed a series of extremely complex and unique challenges. The total weight of the steel and concrete wreckage across the total collapsed span was estimated at 50,000 short tons, equivalent to 100 million pounds - or roughly 3,800 fully loaded dump trucks.

"The U.S. Army Corps of Engineers is responsible for engineering solutions to our nation's toughest challenges, and this disaster constitutes one of those top challenges," said Lt. Gen. Scott Spellmon. "It requires a deliberate, diligent engineering strategy, based on careful assessments of the disaster site, and with safety as our top priority."

USACE Baltimore's Navigation teams sprang into action. Survey Vessel CATLETT and Debris Vessel REYNOLDS both took to the water and provided their expertise. S/V CATLETT provided sonar imagery of debris beneath the waterline and D/V REYNOLDS removed smaller debris from the waterway. Both vessels were an invaluable asset to the initial Key Bridge collapse response.

Advanced imaging technologies such as LIDAR, sonar, and PhoDAR allowed engineers to get a picture of the positioning and location of the wreckage underwater. However, they couldn't rely on technology alone as some elements of the wreckage might not be detected. Physical divers in the water to survey the wreckage was paramount.

Under an interservice agency agreement, USACE worked in a joint effort with the U.S. Navy's Supervisor of Salvage and Diving (SUPSALV) to oversee the commercial dive companies performing the work underwater. There were three overarching steps to the underwater salvage response:

Step 1: Survey and map the underwater hazards

Step 2: Develop and execute the salvage plan

Step 3: Safely execute the salvage work. It was an iterative process that was repeated after each removal.

To ensure the safety of the divers, they were restricted in how long they can be in the water due to water temperature pressure.

"The response to the Francis Scott Key Bridge collapse is an unusual mission with an uber-extreme work environment of dark, cold water. Beneath those waters, divers are moving as if playing an underwater game of Twister and Jenga with hundreds of tons of shattered concrete and twisted steel in complete darkness," said Rick Benoit, USACE North Atlantic Division, Emergency Management Specialist. "If divers fail, the price of failure could be severe injury or death; safety must be the top priority at all times."

A total of 79 missions operated by Unified Command to gather sonar and laser images for mapping the wreckage and safe transit routes and 109 dive missions, not including those that were performed during the initial 48 hours after the collapse, were completed. Once the wreckage and debris beneath the water's surface was assessed, removal could begin.

Some of the largest floating cranes on the East Coast were brought in to help remove the wreckage – including a 1,000-metric-ton hydraulic wreck grab that is attached to the Chesapeake 1000 crane and capable of lifting 1,000 tons of the debris at a time. The grabber on the Chesapeake 1000 is the largest in the United States and even it couldn't handle some of the wreckage pieces due to their size and weight. The pieces had to first be cut down to be moved.

Forensic operations technicians from various state and federal agencies assist in analyzing data acquired from the U.S. Army Corps of Engineers survey vessel CATLETT in the earliest days of the Key Bridge response, March 27, 2024. Sonar equipment was used to determine the location of debris and search for submerged vehicles. (U.S. Army Corps of Engineers photo by David Adams)

The immense tension in the steel created numerous potential hazards. When one piece was moved, the pieces around it were affected and could potentially move on their own. The team analyzed the steel and anticipated how the secondary pieces would move to prepare for the mitigation of additional potential hazards.

"When the bridge fell, it created a lot of force on the steel. There's a lot of compression and tension," said Brig. Gen. John Lloyd, commander of the USACE-North Atlantic Division. "I think everybody that I talk to realizes the magnitude of this. It is certainly unprecedented; you don't realize the scale in photos and videos."

The wreckage throughout the clearing of the channel was transported to Sparrows Point for follow-on processing.

Salvage crews at the Sparrows Point lay down site continue work deconstructing wreckage removed from the collapsed Francis Scott Key Bridge in Baltimore Maryland on April 18, 2024. Debris and wreckage removal is on-going in support of a top priority to safely and efficiently open the Fort McHenry channel. (U.S. Army Corps of Engineers Public Affairs Specialist Dylan Burnell)

LIMITED ACCESS CHANNEL

One of the first major milestones occurred the week of April 22 when the Limited Access Channel opened, meeting Unified Command's Priority 1A.

USACE had enough wreckage cleared to establish the 35-foot-deep Limited Access Channel (LAC), in accordance with USACE's commitment to deliver it by the end of April. The LAC ran the northern portion of the wider federal channel and had a 300-foot horizontal clearance. Over the next couple of weeks, it was deepened to 48 feet deep.

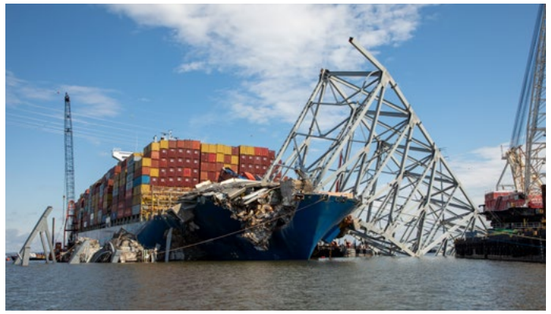
"We're working to strike a balance between enabling temporary access to support commercial activity and undertaking necessary measures to fully reopen the Fort McHenry Channel," said U.S. Coast Guard Capt. David O'Connell, Captain of the Port and Federal On-Scene Coordinator.

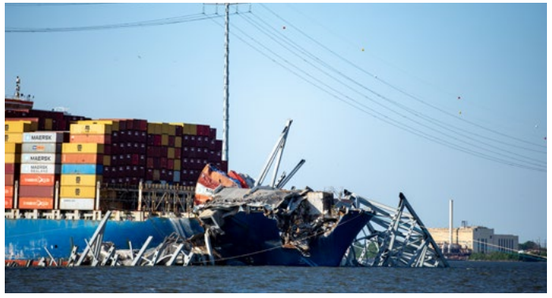
"This limited access deep draft channel will provide a window for five of the deep draft vessels currently unable to depart the port as well as some smaller deep draft vessels to transit. Meanwhile, the Unified Command personnel continue to work full speed ahead to safely and efficiently finish operations."

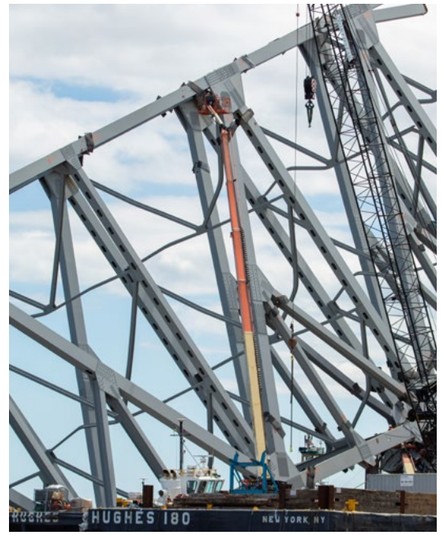
During the clearing of debris, all six remaining construction workers were located, and their families were notified by Maryland State Police.

"Each day we thought of those who lost their lives, their families, and the workers impacted by this tragic event," said Col. Pinchasin. "Not a day went by that we didn't think about all of them, and that kept us going."

Wreckage removal operations continue April 21, 2024, as part of the Key Bridge Response 2024, part of a top priority to safely and efficiently open the Fort McHenry Federal Channel. (U.S. Army Corps of Engineers photos by Christopher Rosario)







"These are very discrete, highly focused charges that will be cutting through the steel. What you might see are these poofs of smoke around the wreckage. This is the most efficient way to conduct all these cuts simultaneously and allow the wreckage to fall out and away from the ship.

COL. ESTEE PINCHASIN
COMMANDER AND DISTRICT ENGINEER
USACE, BALTIMORE DISTRICT

PRECISION CUTTING

REFLOAT THE VESSEL

The M/V DALI is safely refloated and moved to a local marine terminal on May 20, 2024, in Baltimore, Maryland, as wreckage removal continues from the Fort McHenry Federal Channel. The removal of the DALI from the bridge site was a critical milestone to restoring full commercial vessel traffic to the Port of Baltimore. (U.S. Army Corps of Engineers photo by Thomas I. Deaton)

With the Unified Command's Priority 1 completed, the team was immediately on to the next mission priority of removing M/V DALI from the channel.

Priority 2 also had to be completed in stages and posed its own challenges. The first phase took place simultaneously during the clearing of the LAC. Containers needed to be removed from the ship to lessen the weight and lift the vessel up off the riverbed. This process began on April 7, and the weight and balance of the M/V DALI were assessed throughout.

> ***"The removal of the containers is a critical step required to safely move the M/V DALI and eventually fully reopen the Fort McHenry Channel."***
>
> Col. Estee Pinchasin
> Commander and district engineer
> USACE, Baltimore District

Once 182 of the 4,700 containers aboard the ship were removed, the next phase was to remove the truss, referred to as "Section Four," that fell on the M/V DALI's bow during the Key Bridge initial collapse. This piece was laying across the M/V DALI's bow and into the water, pinning it without movement to the riverbed.

Due to the sheer size of the truss, Unified Command determined a precision cutting technique was the safest and most efficient method of removal.

This industry-standard technique involved the use of small charges that when detonated, create pressure that separates the metal into multiple, smaller and more-manageable sections. Salvors pre-cut the truss at strategic locations determined by engineers and small metal-covered explosive cores were placed inside the cuts. Many of these smaller pieces would fall into the water where salvors later used the cranes and barges already on scene to remove them.

A notice of detonation went out to the public in advance, and the charges were detonated on May 13. The detonation first appeared as a bright flash with several puffs of smoke with the sound, similar to a short round of fireworks, coming seconds later.

The refloat and transit sequence was deliberately designed to ensure the refloat crews and support personnel around the M/V DALI remained in complete control of the vessel and its movement to the Seagirt Marine Terminal.

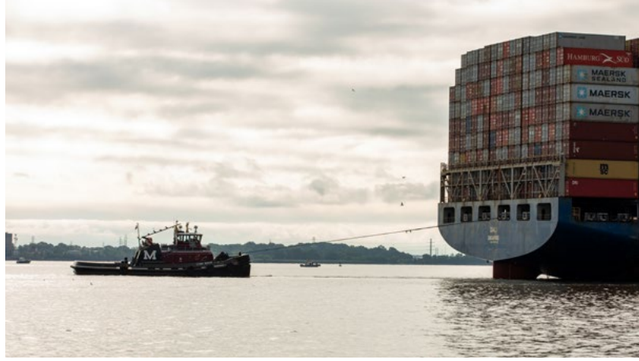
> ***"You want the ship to move on your terms, not its terms. If a ship is made too light, too fast, it could jolt upward and swing around uncontrolled, potentially damaging its hull by bumping into a piece of debris. The last thing you want to do is knock a hole in the ship."***
>
> Mike Dean
> Executive Director
> American Salvage Association

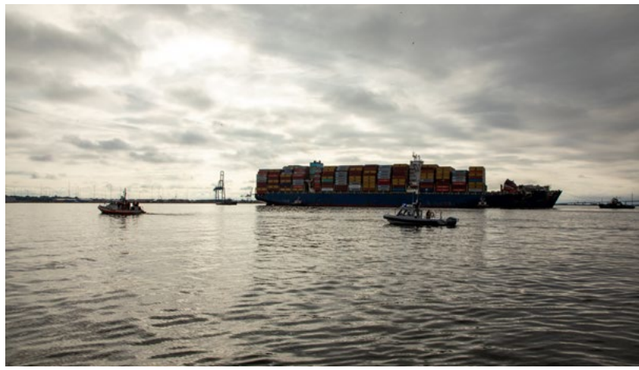
The entire refloat sequence began roughly 18 hours beforehand, on May 19. Some of the vessels anchors and mooring lines were released, with nearby tugboats on standby; de-ballasting of part or all of the 1.25 million gallons of water pumped onto the ship, to compensate for the weight removed during the controlled demolition; and detailed inspections confirming all obstructions had been removed on the left side of the M/V DALI by Unified Command dive survey teams and the USACE Baltimore District Survey Vessel CATLETT.

With the weight removed from the bow of the ship, and the refloat sequence steps complete, M/V DALI was refloated and moved by Unified Command on Monday, May 20 around 7 a.m.

With the assistance of five tugboats and other support vessels, the vessel was towed and pushed 2.5 miles, arriving at a local marine terminal around 9 a.m. This milestone allowed all pre-collapse, deep-draft commercial vessels to enter and exit the Port of Baltimore for the first time since April 26.

With the removal of the M/V DALI, Unified Command salvage crews, using crane and barge assests already on-site worked to remove the remaining wreckage and debris from the water.





The M/V DALI is safely refloated and transited to a local marine terminal, in order to remove the remaining bridge wreckage from the Federal Channel and restore commercial vessel traffic, May 20, 2024, during the Key Bridge Response 2024. (U.S. Army Corps of Engineers photos by Christopher Rosario)

MISSION COMPLETE

On June 4, the last major piece of steel truss was removed from Federal Channel and on June 10 – just 76 days from the Francis Scott Key Bridge collapse - the U.S. Army Corps of Engineers and U.S. Navy Supervisor of Salvage and Diving restored the Fort McHenry Federal Channel to its original operational dimensions of 700 feet wide and 50 feet deep for commercial maritime transit through the Port of Baltimore.

Following the removal of wreckage at the 50-foot mudline, the Unified Command performed a survey of the Federal Channel June 10, certifying the riverbed as safe for transit.

“We’ve cleared the Fort McHenry Federal Channel for safe transit. USACE will maintain this critical waterway as we have for the last 107 years,” said Col. Estee Pinchasin, Baltimore District commander. “I cannot overstate how proud I am of our team. It was incredible seeing so many people from different parts of our government, from around our country and all over the world, come together in the Unified Command and accomplish so much in this amount of time.”

Throughout this mission, USACE Baltimore’s overarching goal was to restore full operational capacity to the Federal Channel. With the assistance and support that was received from the partnerships within the Unified Command, USACE was successful in ensuring the safety of the public and first responders, accountability of missing persons, protecting the environment, incident stabilization, safely restoring transportation infrastructure and commerce, and supporting the investigation.

"Estee, we salute you and the Baltimore team," said Maj. Gen. William (Butch) Graham, USACE Deputy Chief of Engineers and Deputy Commanding General. "Mission accomplished. Well done."

Maj. Gen. William (Butch) Graham, U.S. Army Corps of Engineers Deputy Chief of Engineers and Deputy Commanding General, provides remarks at a press conference at the Port of Baltimore marking the full reopening (on June 10) of the Fort McHenry Federal Channel, June 12, 2024. (U.S. Army Corps of Engineers photo by Thomas I. Deaton)

RESTORING THE FORT McHENRY FEDERAL CHANNEL

MARCH 26

Key Bridge Collapsed

Unified Command is Assembled

APRIL 1 - 3

Unified Command opens the Two Temporary Channel at Sollers and Hawkins Points allowing for empty barges, small tugs, survey vessels, crew boats, floating cranes, Coast Guard Buoy Tenders, crane barges, Coast Guard Patrol Boats, Navy YPs, commercially essential vessels

APRIL 21

Unified Command opens a Third Temporary Channel at Fort Carroll allowing for loaded barges, commercially essential traffic through the Port of Baltimore

APRIL 25

Unified Command establishes the Limited Access Channel allowing for some larger deep draft vessels, large marine tugs, MARAD vessels

MAY 13

Unified Command commences Precision Cutting to free the M/V DALI from a 5,000 ton bridge truss

MAY 20

Unified Command successfully refloats and moves the M/V DALI from the Federal Channel

MAY 24 - JUNE 4

Unified Command successfully removes the last major section of the collapsed bridge from the Federal Channel

JUNE 5 - 8

Unified Command continues to remove residual wrecakge from the bottom of the Federal Channel

JUNE 9 - 10

Unified Command performs Certification Surveys of the Federal Channel

JUNE 11

Unified Command fully restores the Federal Channel (50' x 700')

BEHIND THE LENS

FROM BUGS TO BRIDGES: *A BIOLOGIST'S DEDICATION SHINES IN BALTIMORE HARBOR CRISIS*

By Jeremy Todd, Baltimore District PAO

With a love of crawly things and creatures the average person would avoid, Ariel Poirier loved bugs since childhood. Everyone has dreams of being something as a child, but she followed that dream, and it led her to becoming a biologist. She made a career out of it and now works for the U.S. Army Corps of Engineers (USACE), Baltimore District.

Since entering the profession, she had the ability to harness her caring side and apply it to her work. So, when tragedy struck Baltimore, Poirier was one of the first to raise her hand and volunteer to be a member of the district's Emergency Operations Center (EOC). Within days, hundreds would join her in what would become the Key Bridge Response team, which operated from the Incident Command Post (ICP) at the Maryland Cruise Terminal in Baltimore.

With a full staff and plenty of coordinating to do, Poirier was positioned as an operations liaison with the EOC. She served onsite from the outset of the collapse on March 26, only recently demobilizing after a month of work on the response. In this high-stress environment, she celebrates the nuances by embracing the vast number of different personalities she has encountered. “It has been amazing to meet different USACE employees, learn about their areas of expertise, and experience the interconnectedness that makes the Unified Command function.”

In this temporary position, she kept track of several moving pieces and relayed that information to the various department heads. During an emergency such as this one, an operations liaison serves as a vital link between the EOC, response teams, and other stakeholders, ensuring all parties are working together effectively to manage the crisis and protect the community. The operations liaison helps maintain accurate records of the response efforts, including decisions made, actions taken, and resources deployed. They also contribute to the preparation of situation reports and action reviews.

During Poirier’s service at the ICP, the experiences of the versatile operation added to the learning made possible by her career with USACE.

With nearly two years at the agency, Poirier has become a vital part of the organization.

“Ariel, like a few others, has shown she is not just tied to her job title, she has a wealth of information and is as versatile as they come," said Rebecca Fosnight, EOC operations management specialist. "Her dedication to mission success and commitment to the USACE family has made me proud to have her as a colleague.”

During the response, as long and consecutive duty days persisted, Poirier described the heavy challenges she experienced with balancing work and life dynamics.

“I struggled finding time to spend with family and friends,” said Poirier. “But this is all temporary though, and I have a wonderful support system that made it easy to keep my focus on the mission.”

As the response efforts continued, Poirier remained steadfast in her commitment to the mission, demonstrating the vital role that passionate professionals play in times of crisis.

“I gave this mission my complete focus and attention,” Poirier said. “My strength to fulfill the role was inspired by knowing the many impacts the collapse has had on people and the economy. Lives were lost, navigation halted, and people’s lives were directly impacted. Loss and change are difficult, and knowing this, it’s easy to care. It’s human to step up and do your part during times of trouble, and that’s what motivates me.”

On April 8, 2024, during the total solar eclipse, a group of professionals from various scientific backgrounds took a moment to observe the celestial event. The group, pictured from left to right, included Kimberly Matthews, design manager with the U.S. Army Corps of Engineers, Baltimore District; Kareem Orio, Coast Guard Master Chief marine science technician; and Baltimore District personnel Amani Khalil, environmental ecologist and Ariel Poirier, biologist. United by their scientific curiosity, they briefly paused their duties to witness the rare astronomical phenomenon together. (U.S. Army EOC Photo)

During an emergency, an operations liaison, like U.S. Army Corps of Engineers, Baltimore District biologist Ariel Poirier pictured here during the Key Bridge Response in April 2024, plays a critical role in ensuring effective communication, coordination, and decision-making among the various agencies, departments, and teams involved in the response efforts. Their primary goal is to support the Emergency Operations Center (EOC) in managing the crisis and minimizing its impact on the community. (U.S. Army Corps of Engineers photo by David Adams)

BEHIND THE LENS

VERSATILE ECOLOGIST TAKES ON MULTIPLE ROLES TO ENSURE SMOOTH OPERATIONS AT UNIFIED COMMAND CENTER

By Jeremy Todd, Baltimore District PAO

In the heart of the Emergency Operations Center (EOC), where efficiency was paramount and every role is critical, Amani Khalil stood out as a beacon of adaptability and expertise. While her day-to-day job revolved around environmental ecology, within the confines of the Incident Command Post (ICP), Khalil assumed many responsibilities.

As an environmental ecologist by profession, Khalil's expertise was assessing environmental impact analyses, a role crucial in disaster response operations. However, within the EOC, she wore multiple hats, taking on titles such as emergency operations coordinator, logistics specialist, and personnel resource officer.

"I'm happy to help where I am needed," Khalil expressed. "I have learned so much about each of our roles, and I have a better appreciation of each person I work with."

In the fast-paced environment of the EOC, Khalil's versatility proved invaluable. She navigated between roles with ease, ensuring the machinery of the center operated smoothly. Her ability to step in and fill any void demonstrated not only her dedication but also her understanding of the interconnectedness of the team's efforts.

One of the hallmarks of Khalil's approach was her accessibility. Clad in a red shirt, she welcomed inquiries from anyone in need. If she didn't have the answer, she was quick to direct them to who did. The level of cross-training exhibited by Khalil was a powerful example of knowledge management within the EOC. Her willingness to learn and adapt not only enhanced her own skill setbut also fostered a culture of collaboration and mutual respect among her colleagues.

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The level of cross-training exhibited by Khalil is a powerful example within the EOC. Her willingness to learn and adapt not only enhances her own skill set but also fosters a culture of collaboration and mutual respect among her colleagues.

"Her attitude of being happy to help wherever she's needed fosters a collaborative environment and strengthens the team dynamic," remarked Emergency Operations Planning Lead, Rebecca Fosnight.

US Army Corps of Engineers ecologist Amani Khalil participates in operations at the Unified Command Center in Baltimore, Maryland. Khalil is backfilling various roles of USACE employees for the Key Bridge Response

The Key Bridge Response 2024 Unified Command priorities are to ensure the safety of the public and first responders, account for missing persons, safely restore transportation infrastructure and commerce, protect the environment, and support the investigation of the incident. Pictured from left to right are Biologist Ariel Poirier, Emergency Planner Rebecca Fosnight, and COL Estee S. Pinchasin, Commander and District Engineer for Baltimore District U.S. Army Corps of Engineers. They are reviewing successes of the previous week and future operation plans.

BALTIMORE NATIVE LEADS COORDINATION EFFORTS FOR U.S. ARMY CORPS OF ENGINEERS IN KEY BRIDGE RESPONSE

By Jeremy Todd, Baltimore District PAO

In the heart of Baltimore, Kimberly Matthews, a design manager with the U.S. Army Corps of Engineers, Baltimore District stands at the forefront of disaster mitigation efforts, orchestrating a seamless coordination between USACE engineers and architectural engineering firms. With a recent full-scale training operation conducted in early March as a foundation, Matthews and her team applied their honed tactics and procedures in
a real-world scenario, tackling challenges head-on.

Matthews, a native of Baltimore, is no stranger to the importance of collaboration, and she is deeply impressed by the level of cooperation among various agencies and skilled workers involved in the disaster mitigation effort.

"There are ups and downs with every disaster mitigation effort; however—this Unified Command is exactly that, unified," said Matthews. Speaking on her role, Matthews emphasized the criticality of her position in ensuring effective communication and synergy between engineering teams and architectural contractors, essential for the success of the operation.

Central to this approach is the recognition that no single agency can tackle such a monumental task alone. Instead, a diverse array of stakeholders joined forces to form a cohesive team. The progress made each day was tangible, with the dynamics of the operation growing stronger with every passing moment.

While office-bound colleagues may lack direct visibility into the frontline operations, Matthews finds herself uniquely positioned to witness the tangible progress and accomplishments through live feed videos, photos, and meetings.

“These glimpses into the ongoing efforts on the ground and in the water offer me a direct sense of pride in my job and mission,” said Matthews.

What set this response apart from other is its emphasis on steady, precise action. Rather than setting unrealistic benchmarks, the focus remained on ensuring the safety of all involved and minimizing the potential for errors.

"The opportunity to witness firsthand the impact of our work is truly gratifying," said Matthews. "It underscores the significance of our mission and reinforces our commitment to serving our community in times of need."

Despite the many hours away from home, her family expresses their pride in knowing she was part of the response.

"Overall, I’m impressed with how we have come together and love that I can see the progress from one day to the next,” said Matthews.

Emergency Operations end of shift briefings

Unified Command operations center

GENERATIONS ON THE WATER

By Nicole Strong, Jeremy Todd, and Thomas Deaton, Baltimore District PAO

Born in Cecil County, Maryland, Jacob Tuer was destined for a life on the water. His neighborhood had a slip for his family boat to rest in, and he spent countless hours on jon boats cruising the Elk River with his father.

His father, Jeff Tuer, operated survey vessels for the U.S. Army Corps of Engineers (USACE), Baltimore District from 2014 to 2018. He served on the S/V CATLETT, the District's newest survey vessel, from the time of its commissioning in 2017 to the end of his USACE career in 2018.

Following in the footsteps of his father, Jacob is now the acting captain of the S/V CATLETT, the largest survey vessel in the District's Hydrographic Survey Section. The ship surveys navigation channels in and around the upper and lower Chesapeake Bay, including shipping lanes associated with the Port of Baltimore, as part of the USACE mission to ensure safe navigation in the region's federal channels.

Aboard the S/V CATLETT, Tuer performs the duties his father once did. It is his responsibility to get the vessel ready to go and navigate the Chesapeake Bay. Working with a crew of three to four, Tuer is a jack of all trades. He assists the surveyors with their setup, performs oil changes and general maintenance, inspects lifejackets, works with vendors to order fuel, and drives the vessel.

"Throughout my career, it's been a recurring theme to hear, 'I know your dad, I worked with him!'," said Tuer.

Although the Tuers never worked aboard the S/V CATLETT together, the generational wealth of knowledge is impactful to the everyday survey mission of the Baltimore District. But when the M/V DALI struck the Key Bridge on March 26, 2024, leading to its catastrophic collapse and blocking the Fort McHenry Federal Channel, an additional member of this family of Maryland watermen, Jacob's brother Matthew, found his path converging with his brother's in an unexpected way. Matthew, a Boatswain's Mate 2 and activated Reservist with the US Coast Guard (USCG), also played a crucial role in the response efforts.

What brought these two brothers together still resonates as a tragedy and a great loss for the tightknit Maryland community. Thousands were affected immediately, and hundreds of thousands more would be affected in the days and months to follow.

Because the Baltimore District is responsible for ensuring safe depth and clear navigation for all who use the shipping channel, Jacob and the S/V CATLETT crew were on-site within hours of the bridge's collapse, providing sonar support and serving as a work platform for partner agencies in the search for survivors as the "Unified Command" interagency response took shape.

As the mission shifted to locating wreckage and providing data to restore safe navigation, Jacob and team continued their surveys, while Matthew, stationed at the Coast Guard port in Curtis Bay, provided security support from his patrol boat.

Shortly after the collapse, on March 28th, the brothers' paths unexpectedly crossed when Jacob radioed the USCG about a civilian vessel that had entered the restricted zone near the collapse site. To his surprise, it was Matthew who responded to the call.

"I figured it was going to happen sooner or later," Matthew said, chuckling at the coincidence. "I didn't think it would be on the first day."

The Tuer brothers' shared background and deep roots in the community have shaped their commitment to serving others. Jacob, a father of two and one of the roughly 37,000 civilians working for USACE, cherishes the time he spends with his wife and their children after long days on the water. Matthew, a full-time student at Towson University, juggles his Coast Guard duties with his studies in healthcare management.

For Jacob, looking back, one fond memory from when he was about 11 ignited a desire to work on the water.

"I remember being taken out of school for an appointment, and instead of my dad taking me back, he took me on a boat ride up the river," Tuer said. "We went to the C&D canal and stopped at the Chesapeake Inn restaurant."

In reality, the boat ride was uneventful. It was the vast knowledge that Jeff was able to share with Jacob that made the lasting impression and shaped the direction for his future career.

"It was such a long trip. We would pass businesses and boats and my dad would know exactly what they did and who worked there or on a particular boat," said Tuer. "I remember passing by Dann Marine Towing and thinking it would be cool to work on a tugboat like that."

Jacob would later graduate from SUNY Maritime College with an associate degree in Small Vessel Operations in 2016. After graduation, he started his career with Dann Marine Towing, the same company he aspired to work for as a young child.

"I worked on a tugboat engaged in dredging operations and I would always see Army Corps boats down there," said Tuer. "That position was the other side of what I do now — it's really neat looking at the operations from the other end."

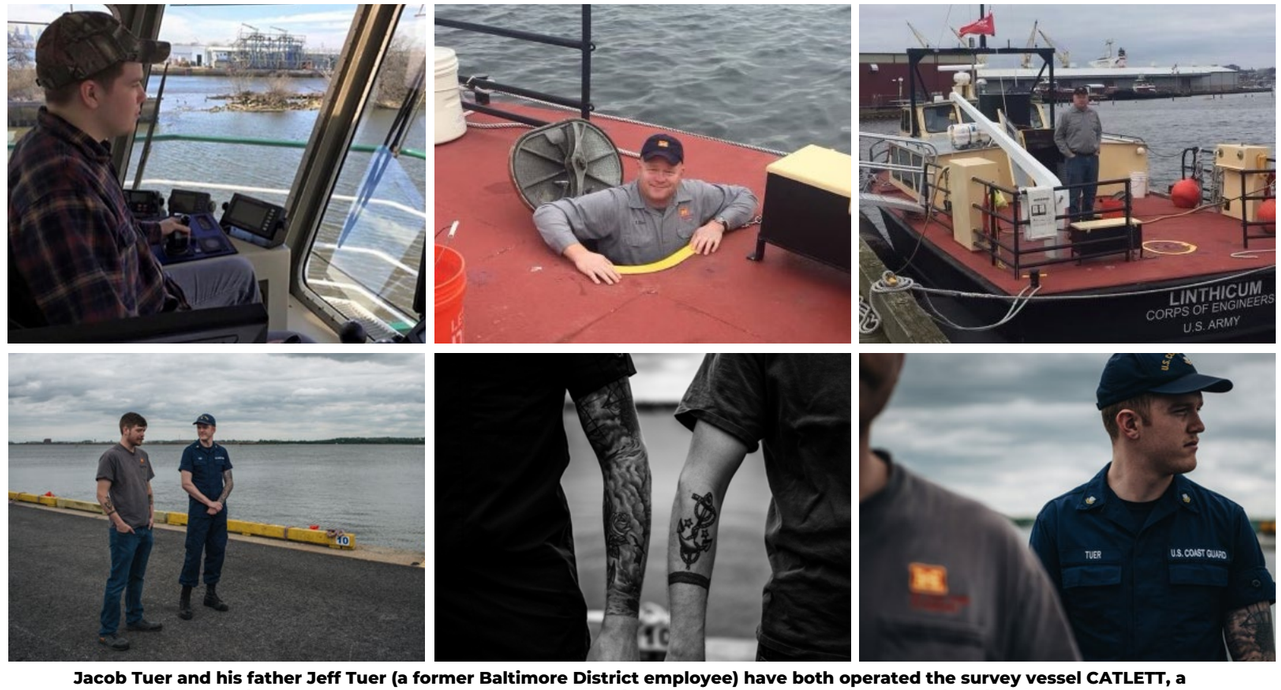
Navigational channel maintenance is a shared responsibility between USACE and the USCG. USACE is responsible for monitoring and maintaining the depth and width of the federal channel, while the USCG marks the best channel given the highly variable waterway conditions using fixed, floating, and virtual aids to navigation, as well as providing any restrictions on vessels.

The collapse of the iconic Key Bridge, a critical transportation artery that connected the complex geography of Baltimore, Maryland, has presented one of the nation's toughest engineering challenges in recent memory. With the bridge's wreckage obstructing vital water channels, disrupting transportation routes, and posing environmental risks, the urgency of the situation couldn't be overstated.

"The readiness of our personnel to deploy at a moment's notice demonstrates their dedication to duty and community service," Baltimore District Commander Colonel Estee Pinchasin emphasized. "Their resiliency and professionalism enable us to approach this disaster with speed and confidence."

On June 10, just over two months after the collapse and following final hydrographic surveys by the S/V CATLETT and Unified Command teams, the U.S. Army Corps of Engineers and U.S. Navy Supervisor of Salvage and Diving restored the Fort McHenry Federal Channel to its original operational dimensions of 700 feet wide and 50 feet deep for commercial maritime transit through the Port of Baltimore.

The Key Bridge collapse has proven the resilience of the Maryland community, and it has highlighted the unwavering commitment of those who took on the mission, including the Tuer brothers, who found themselves united in purpose on the very waters that shaped their lives.



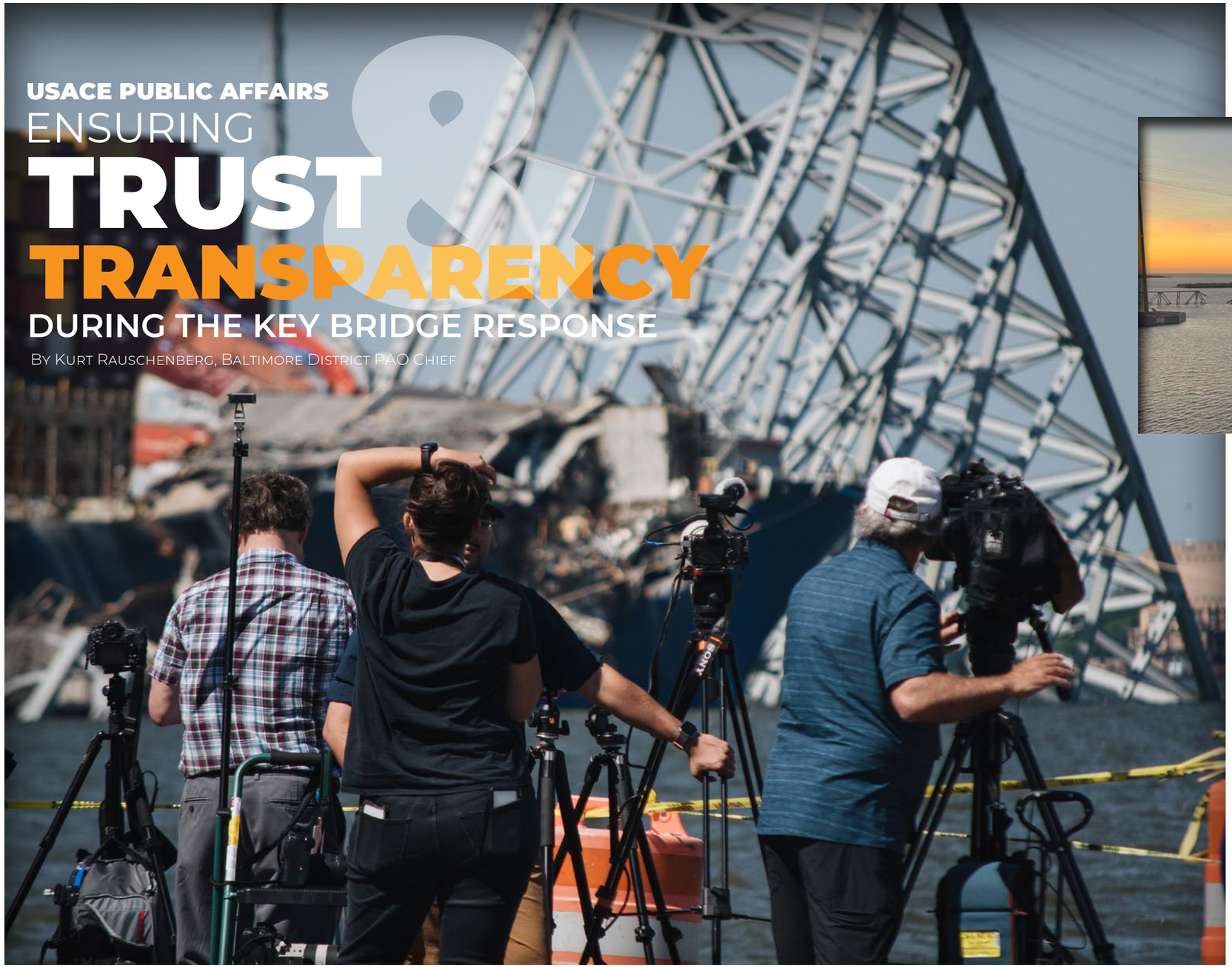
Jacob Tuer and his father Jeff Tuer (a former Baltimore District employee) have both operated the survey vessel CATLETT, a 64-foot foil assisted catamaran, creating a multi-generational connection to the vessel and its role collecting critical survey data about the depth and channel conditions of shipping lanes throughout the Chesapeake region. During the Francis Scott Key Bridge mission, Matthew Tuer, Jacob's brother, was also involved in the response as an activated Reservist with the US Coast Guard. (U.S. Army Corps of Engineers photos by Thomas Deaton and courtesy of the Tuer family)

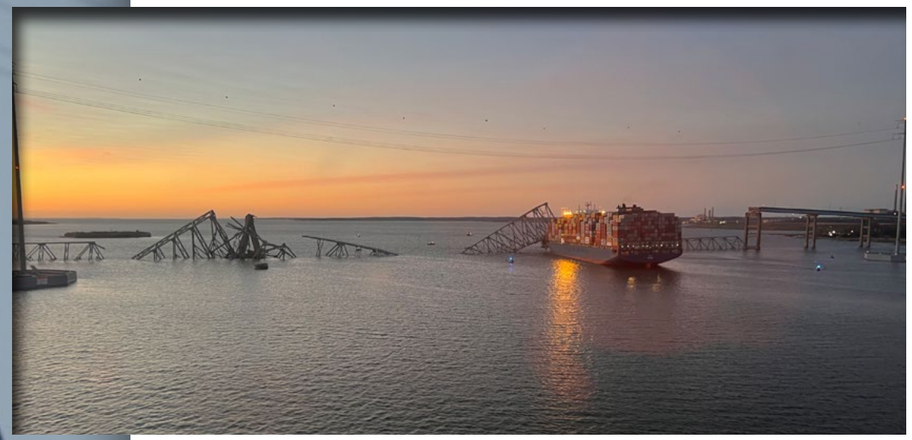
USACE PUBLIC AFFAIRS

ENSURING TRUST & TRANSPARENCY

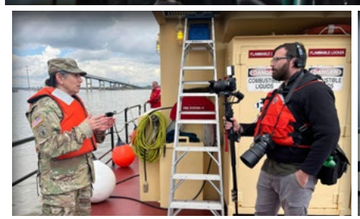
DURING THE KEY BRIDGE RESPONSE

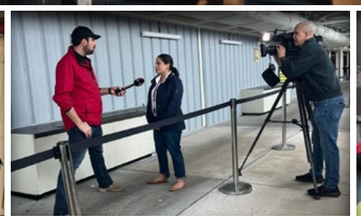
By Kurt Rauschenberg, Baltimore District PAO Chief

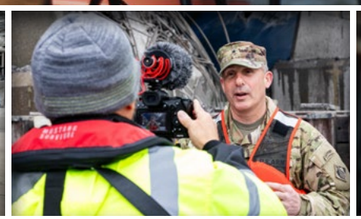


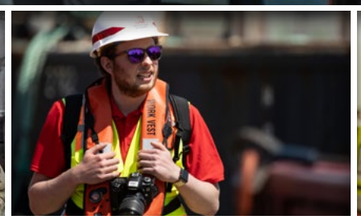


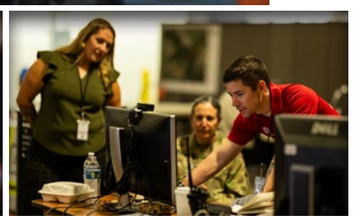
When the sun rose over the Patapsco River on March 26, it unmasked a shadow of tragedy and despair. The historic Francis Scott Key Bridge was destroyed, the M/V DALI sat immovable in the Fort McHenry Federal Channel, six lives were lost, thousands were out of work and the flow of commerce into and out of the Port of Baltimore was brought to a halt. Knowing the mission to come, it was that morning when the U.S. Army Corps of Engineers, Baltimore District Public Affairs Office would rally its extensive communications capabilities.

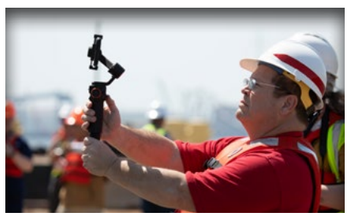










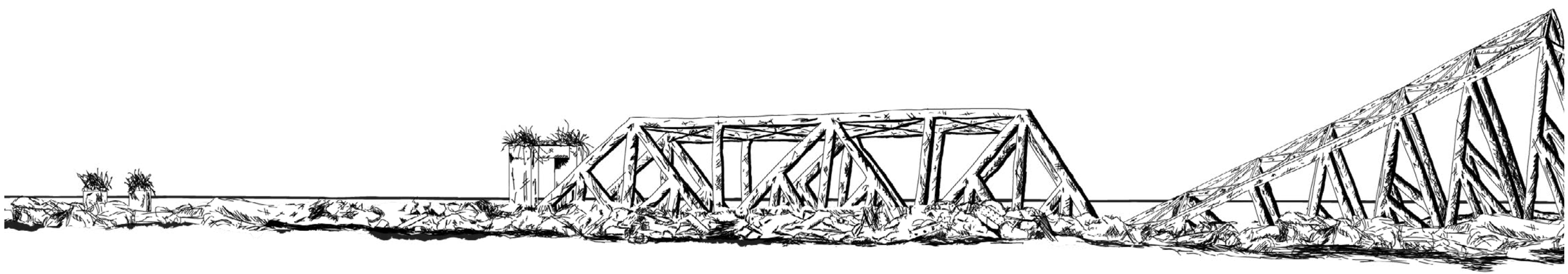


THE CALL-UP

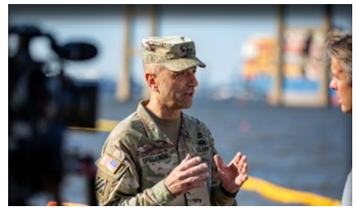
Like many crises, the first day of the response effort was a gathering of dozens of federal, state, and local agencies and hundreds of responders who would partner with one another for the months to come in what was known as the Unified Command.

The first day was like try-outs for a sports team's new season. Based on the immediate size and scale of this response effort, it was evident we would need to assemble our own office and call in some of the best public affairs professionals around USACE.

The team fully integrated into the Unified Command's Joint Information Center, consisting of about a dozen U.S. Coast Guard public affairs personnel and communications specialists from each entity of the Unified Command, and began participating in daily press events with Maryland Governor Wes Moore.







THE STRATEGY

After the first week, leaders from the Unified Command expressed an immediate need for multimedia communication products to depict better the reality of the response, mission and priorities and illustrate the phased technical dynamics through visual information. So, two additional personnel from the visual information community were requested to integrate within the more extensive public affairs operation, which became a primary communication strategy throughout the response.

"By integrating with our visual information counterparts, we successfully developed informative products that could be easily absorbed and understood by anyone," said Joshua A. Voda, chief of Public Affairs for the USACE, North Atlantic Division. "These visual products would demonstrate the full complement of a crisis communications strategy."

After the first two weeks of the response, Voda deployed to the Baltimore District. He led the visual information integration efforts, which resulted in highly praised and sought-out products that ultimately put all the efforts into a digestible perspective.

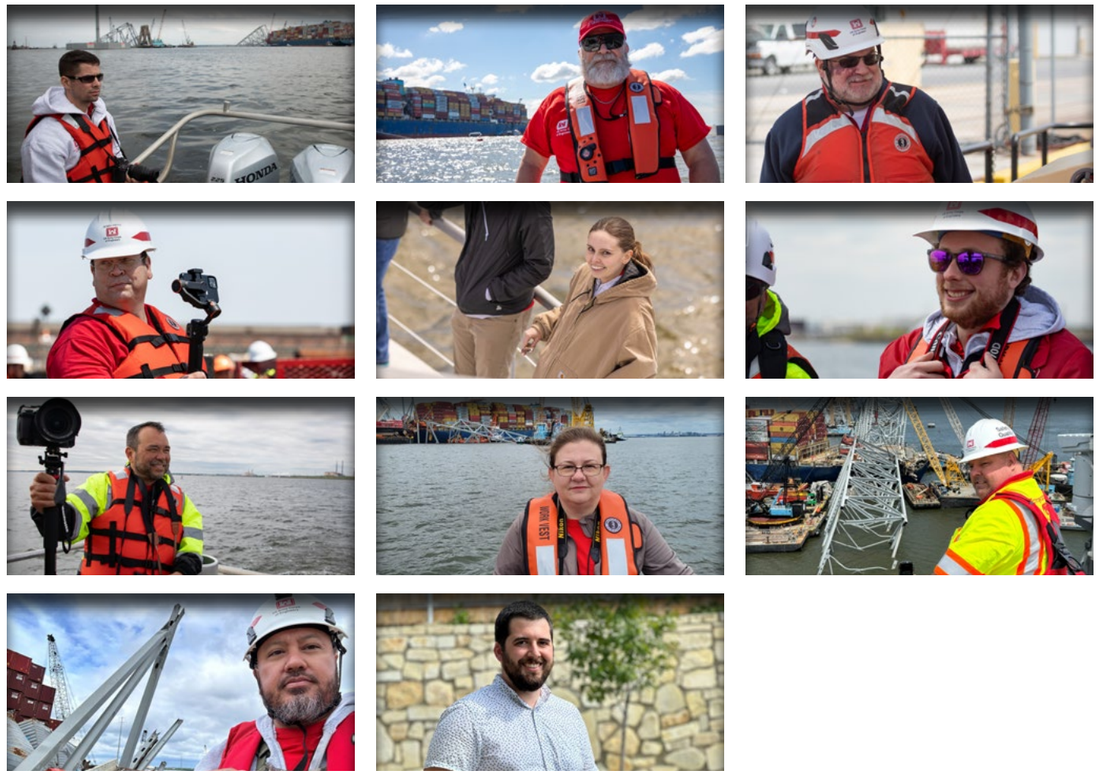
In addition to the visual information integration, another communication strategy involved enlisting the support of key leaders to serve as the voice for the USACE response efforts. USACE, Baltimore District commander Col. Estee S. Pinchasin served as the local USACE voice; USACE, NAD commander Brig. Gen. John P. Lloyd was the regional voice; and USACE Commanding General Lt. Gen. Scott A. Spellmon was the national and international voice.

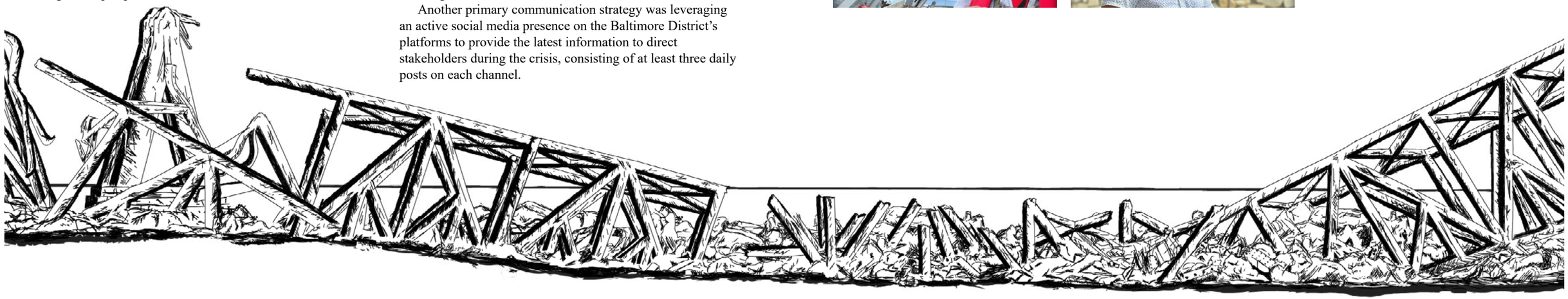
"We were fortunate to have such incredible USACE leaders as the voice of this response," said Cynthia Mitchell, deputy chief of Public Affairs for the Baltimore District. "I saw how serious they took every media engagement. These leaders made it their purpose to get the right information to the right people throughout the response in a manner that was digestible to our various audiences."

Mitchell led a notable initiative during this period when she recognized the critical need to communicate effectively with Spanish-speaking communities. Since all six victims and their families were Spanish-speaking, her efforts to engage Spanish-language media were immeasurably critical in ensuring inclusive communication.

Another primary communication strategy was leveraging an active social media presence on the Baltimore District's platforms to provide the latest information to direct stakeholders during the crisis, consisting of at least three daily posts on each channel.

"From day one, the overall online sentiment toward the Baltimore District remained very positive, especially as efforts to clear the federal navigation channel concluded," said public affairs specialist Thomas I. Deaton, social media manager for the Baltimore District. "It was remarkable to see the community so dedicated to following our efforts and supporting every step, from footage of the biggest lifts to the latest sonar imagery."





THE RESULT

The social media strategy proved to be particularly successful. From March 26 to June 26, 2024, it's estimated that USACE, Baltimore District's social media platforms reached approximately 59.06 million user accounts. This engagement translated to about 3.4 million interactions and a substantial increase in followers, with an estimated 88,500 new followers gained across various platforms — an increase of approximately 1,000% from the status quo. Because the Baltimore District played a crucial role in the release of information from the Unified Command, approximately 570 posts were shared from Baltimore District accounts during this period.

The public affairs team engaged extensively with the media, conducting more than 100 media engagements and managing more than 1,000 media queries. This proactive approach led to about 10,000 online stories that mentioned the Corps of Engineers and the Key Bridge, all maintaining a neutral to positive public sentiment. The factual and strong USACE presence in the news ensured the public remained well-informed.

The multimedia products from the visual information specialists incorporated imagery from USACE photographers, summarized information from public affairs planners, and created appealing graphics designed to catch the public's attention. These products reached some of the highest engagements on social media posts. Many senior leaders across the Department of Defense and the Maryland communities widely recognized them, and the news media regularly shared these products directly.

The USACE Public Affairs Office integrated seamlessly with the Unified Command's JIC, which included dozens of Public Information Officers from the U.S. Coast Guard and state, local and other federal agencies.

Bobby Petty, a public affairs specialist from the Galveston District, Kasey Thomas, a public information officer for Anne Arundel County supporting the JIC, and Rauschenberg all reunited after recently completing the FEMA Certified Master Public Information Officer Program, which played critical roles in the JIC's integration.

"The positive coverage and feedback we received during the 12-week response effort reaffirmed my belief in the effectiveness of transparency with the media," said Petty. "While we emphasize openness with the media during public affairs training and exercises, occasionally I've observed a tendency to not be forthcoming with media for fear of negative coverage."

Petty noted the numerous reporters who praised the public affairs team for the unprecedented access to the incident site, commanders and subject matter experts involved in the recovery process. He served as a "Go-To" for all information and synchronization across the extensive line of partner agencies. His deployment to Baltimore, lasting almost three months, assisted the JIC in managing the distribution of dozens of news releases and thousands of products across public-facing online platforms, creating a unified and efficient communication strategy.

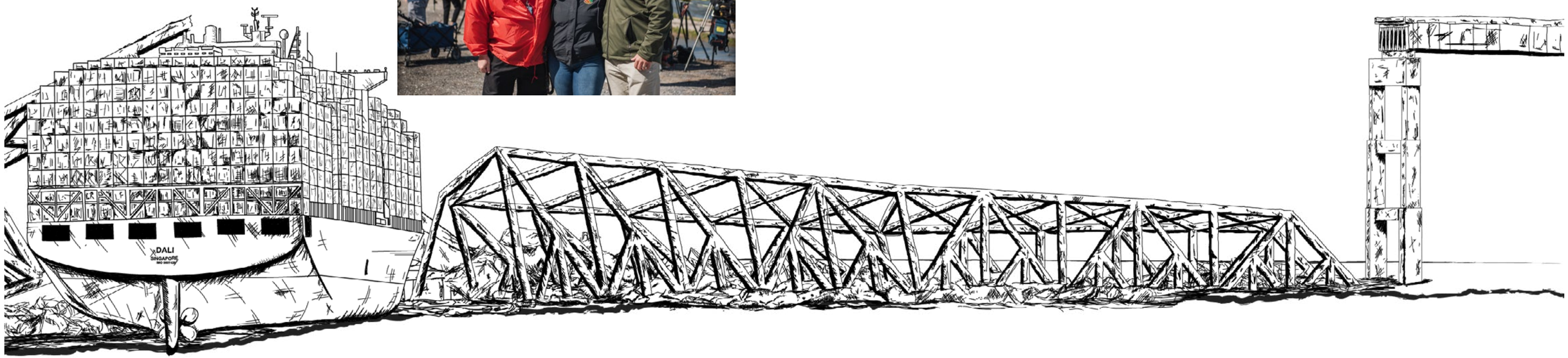
"I am very pleased with the positive media coverage of Unified Command's hard work in clearing the Federal Channel," Petty said.

During the FSK Bridge response, the public affairs team's efforts achieved unprecedented engagement and reach within the Baltimore District, a testament to the 18 USACE Public Affairs Specialists, including 11 deployers over the course of the response, who logged about 6,500 hours throughout the three-month period. They produced impressive content, including 61 videos, 1,036 images, six stories, 15 graphics and five news releases.

These efforts resulted in about 6,300 downloads and 283,000 views from external news outlets and the public on the Defense Visual Information Distribution Service. The published materials, shared on thousands of social media accounts, in countless media reports and on interagency governmental platforms, including the President of the United States' social media pages, significantly amplified its reach. DVIDS reports reflected the FSK Bridge response as the most significant volume of quality content ever published by the Baltimore District.

Throughout the FSK Bridge response, the Baltimore District's Public Affairs Office set many new benchmarks for crisis communication, demonstrating the power of coordinated, transparent and inclusive public information strategies.

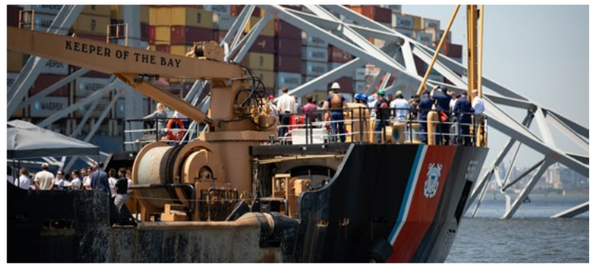
"Throughout this response, I saw the true value and reaffirmed my strong belief in our Public Affairs capabilities," said Pinchasin. "In times of crisis, especially in today's ever-evolving new media world, it's the work that these professionals perform that can make the organization's trust and transparency with the public a true success, and I can't thank them enough for their accomplishments."



"This story starts and it ends with people. It starts with the lives of six people who were tragically lost on the morning of March 26th. But fortunately the story does not end there. Along the way we added a ton of people to bring this story to today's conclusion. We added first responders, fire fighters, policemen, Coast Guard sentinels, who showed up on the water to search for people, we added more people as the Unified Command stood up, the Army Corps of Engineers, the Department of Maryland Environment, the State Police from Maryland, all of those people came to this event to help to be part of the solution.

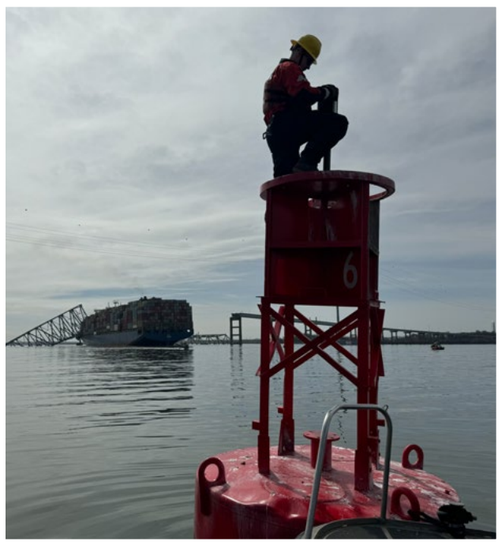
REAR ADM. SHANNON GILREATH
5TH COAST GUARD DISTRICT COMMANDER
U.S. COAST GUARD
JUNE 12, 2024

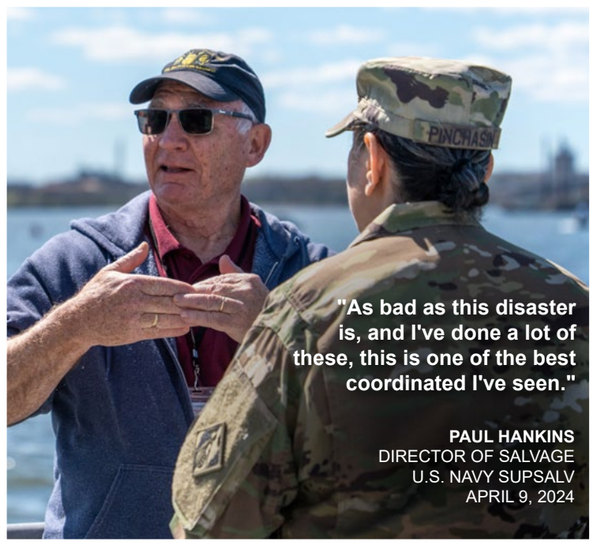
KEY BRIDGE RESPONSE 2024
US Army Corps of Engineers
WITT O'BRIEN'S
ambipar response
UNIFIED COMMAND
MARYLAND STATE POLICE
STATE OF MARYLAND DEPARTMENT OF NATURAL RESOURCES
MARYLAND TRANSPORTATION AUTHORITY POLICE
BALTIMORE, MARYLAND



"We have made enormous progress. Over the next week, we expect another 20 vessels and barges to come through the Port's public terminals. But I want to be very, very clear: The mission is not over. The work is not done."

WES MOORE
GOVERNOR
MARYLAND
MAY 21, 2024



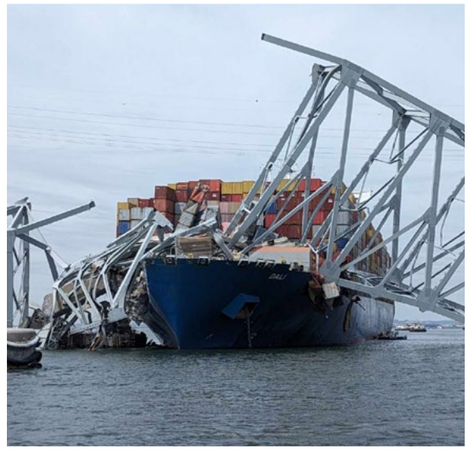


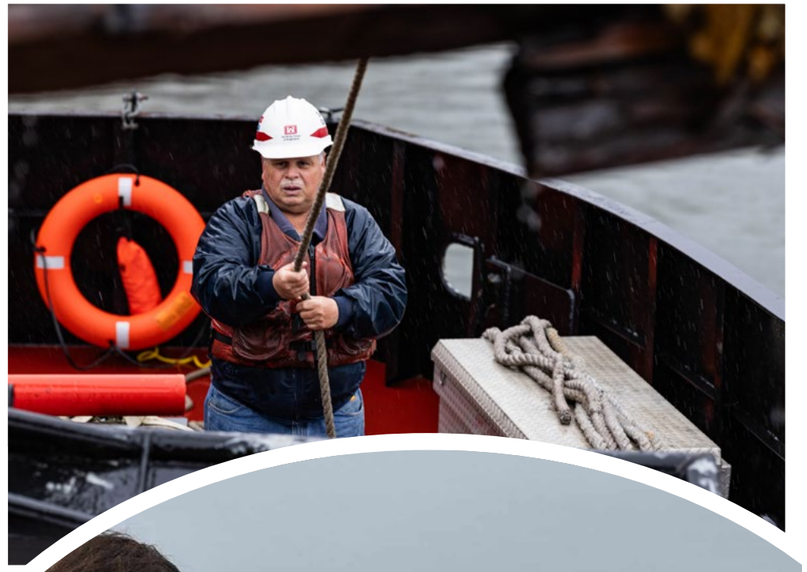
"As bad as this disaster is, and I've done a lot of these, this is one of the best coordinated I've seen."

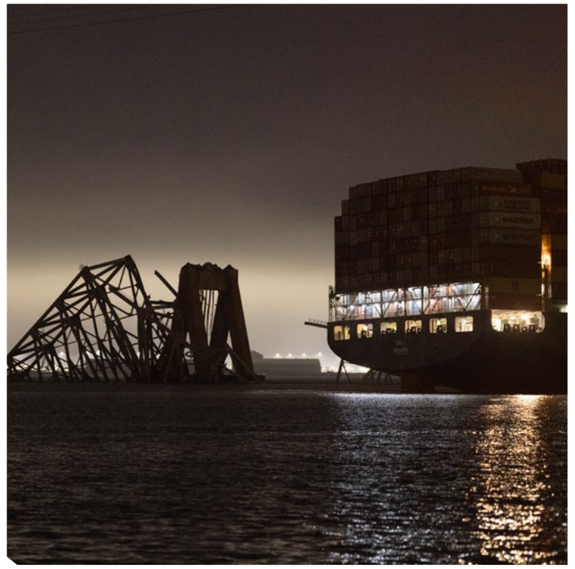
PAUL HANKINS
DIRECTOR OF SALVAGE
U.S. NAVY SUPSALV
APRIL 9, 2024

"To watch them have that humility to learn from each other, share the survey information, share their experiences as every piece of steel comes out of the water … so no lesson goes unlearned and it's being applied every time to the next evolution. It's amazing."

COL. ESTEE PINCHASIN
COMMANDER AND DISTRICT ENGINEER
USACE, BALTIMORE DISTRICT
APRIL 9, 2024



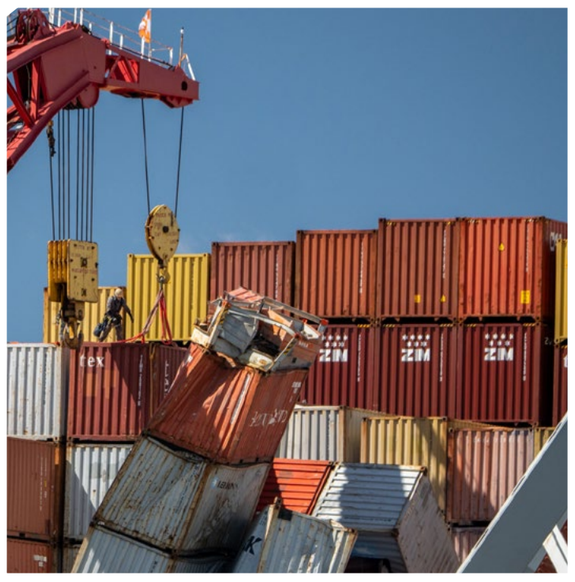




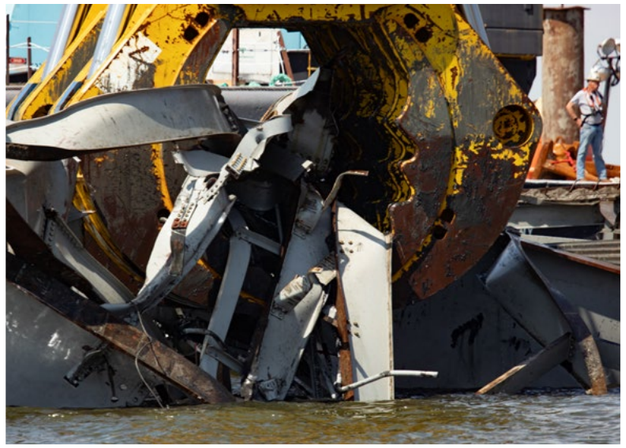

36 BARGES


U.S. ARMY
CORPS OF ENGINEERS


27 TUG BOATS

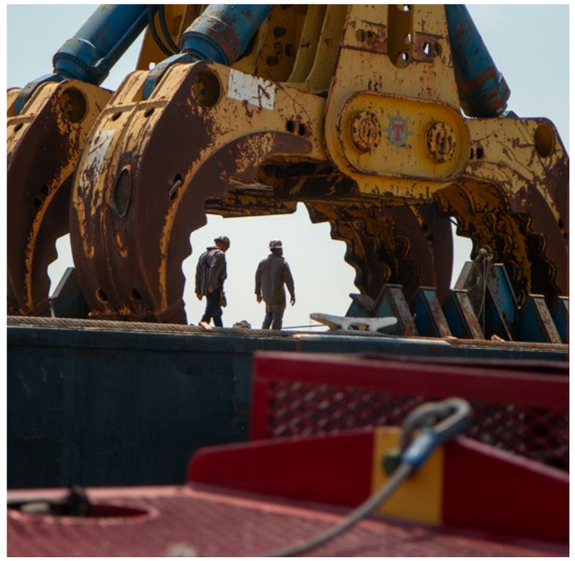



22 FLOATING CRANES
CHESAPEAKE 1000




GOVERNOR
WES MOORE
MARYLAND


U.S. ARMY
CORPS OF ENGINEERS
U.S. ARMY
CORPS OF ENGINEERS



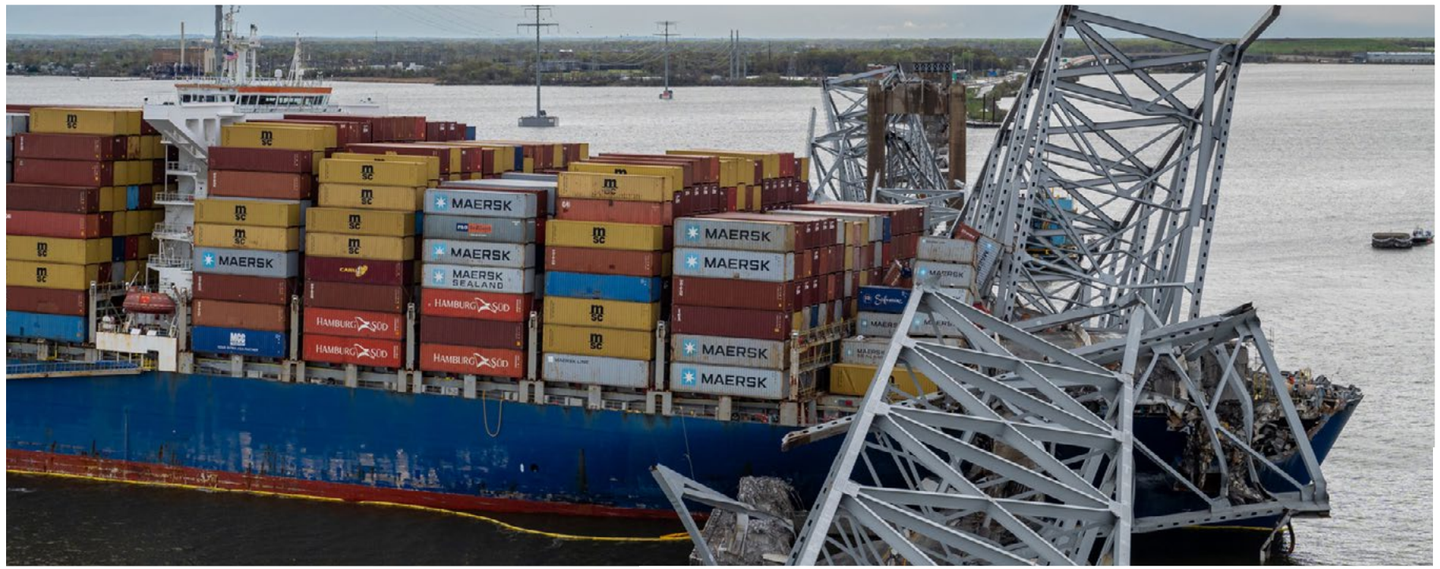

GILREATH


1,587 RESPONDERS

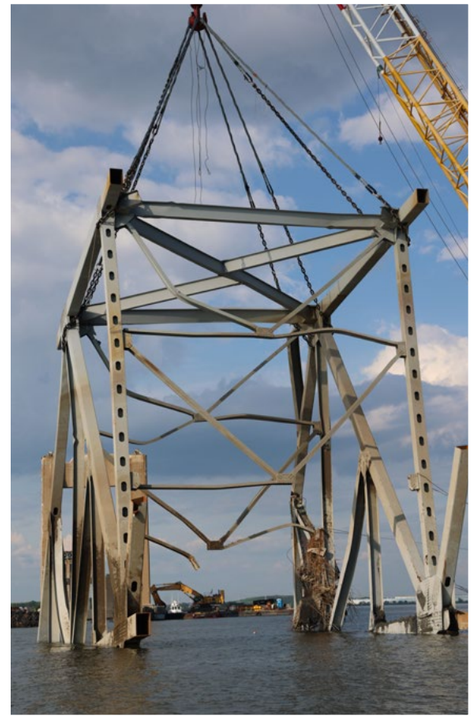

COAST GUARD
MARYLAND-NCR


EVERGREEN
PORT OF BALTIMORE
1706
Helen Delich Bentley

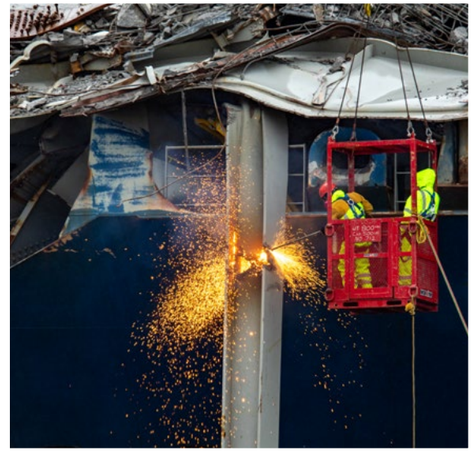

44 VESSELS

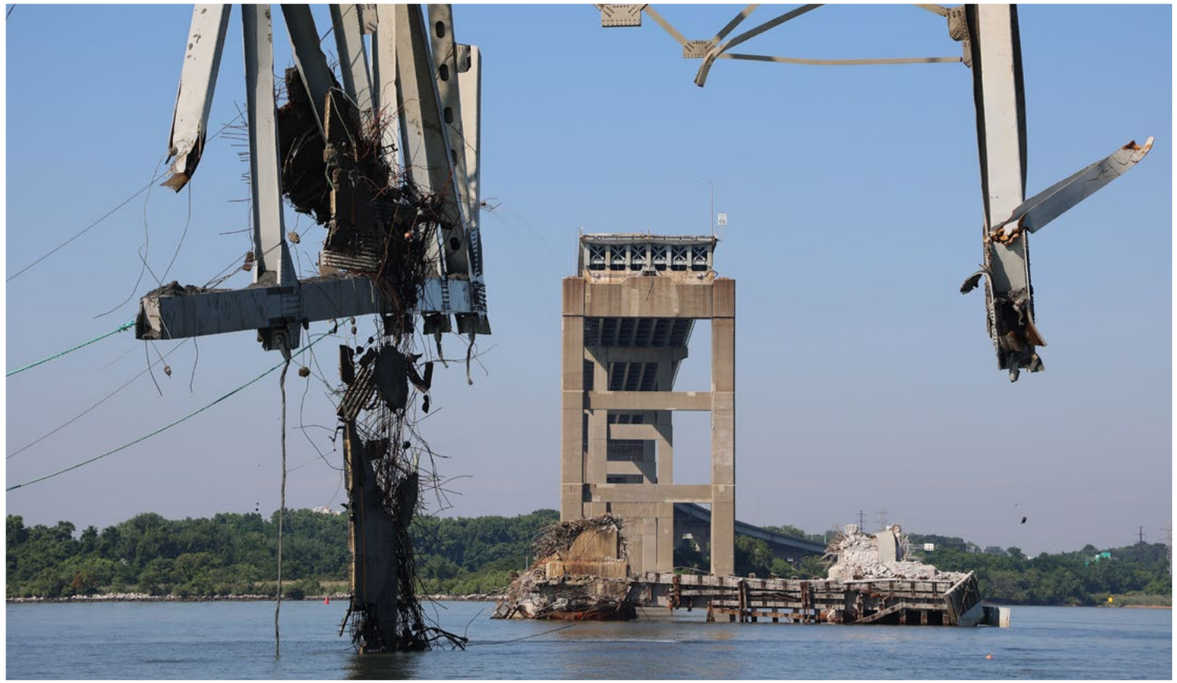

MAERSK
MAERSK SEALAND
HAMBURG SÜD

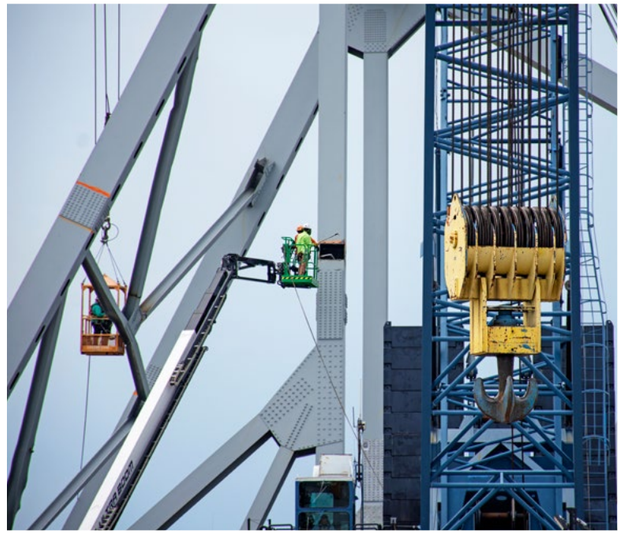

56 FEDERAL, STATE, AND LOCAL AGENCIES

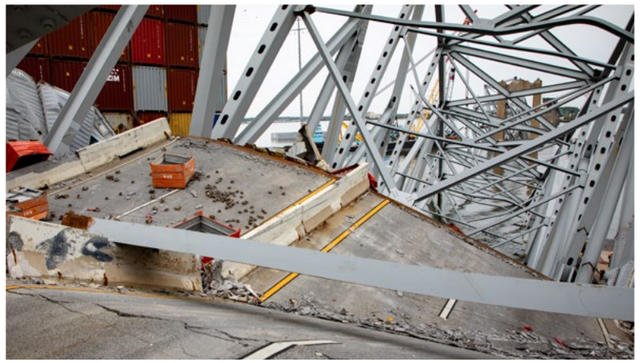


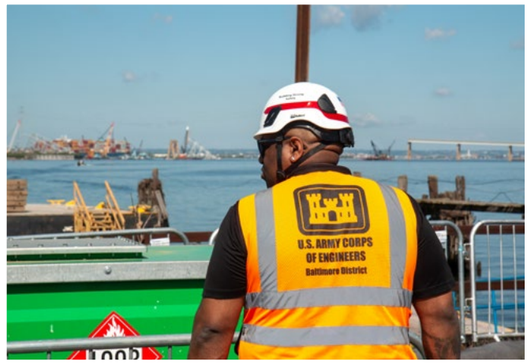

50,000 TONS OF BRIDGE WRECKAGE



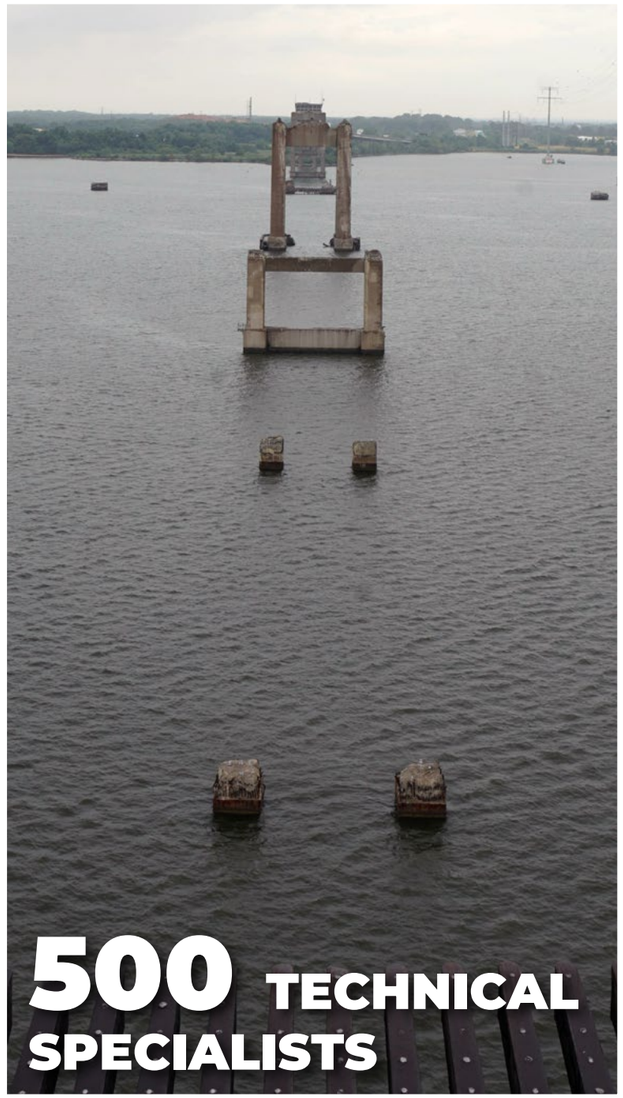







U.S. ARMY CORPS
OF ENGINEERS
Baltimore District


U.S. COAST GUARD


500 TECHNICAL SPECIALISTS


10 EXCAVATORS, A DREDGER, A SKIMMER, AND A COAST GUARD CUTTER

BALTIMORE DISTRICT

BENEFICIAL USE PROJECT RESTORES VITAL DELMARVA HABITAT

By Cynthia Mitchell, Baltimore District PAO

The U.S. Army Corps of Engineers, Baltimore District, partnering with Wicomico County, recently removed about 16,000 cubic yards of dredged material from the lower Wicomico River.

The U.S. Army Corps of Engineers, Baltimore District, partnering with Wicomico County, recently removed about 160,000 cubic yards of dredged material from the lower Wicomico River. The significant milestone is part of maintenance dredging the federal navigation channel to its authorized depth of 14 feet.

The project's accomplishments ensure safe navigation for barge traffic passing throughout the vital waterway towards the Port of Salisbury, home of Maryland's second largest port, which is crucial in supplying fuel, aggregate, and agricultural products to the Delmarva Peninsula. Recreational boaters can now reap the benefits of reduced shoaling.

Despite the many benefits to navigation and related industry, the project's largest benefactor is a series of rapidly eroding Chesapeake Bay tidal marshes that provide critical habitat for threatened bird species. The dredged material, removed by a hydraulic cutterhead dredge, was transported by pipeline to Deal Island Wildlife Management Area. The Maryland Department of Natural Resources owns and operates WMA, providing the means to restore approximately 70 acres of wetlands that show heavy signs of degradation and fragmentation.

The material, mostly silt and sand, was beneficially placed for wetland restoration that increases habitat for migratory birds and waterfowl. Deal Island WMA supports one of the largest concentrations in the state of herons, egrets, and ibis and also hosts one of Maryland's only breeding populations of black-necked stilts.

"This project protects environmental habitat and expands public access within the Chesapeake Bay watershed, while ensuring vessels can continue safely carrying fuel and cargo to and from Eastern Shore communities," said Baltimore District Project Manager Kevin Fenyak. "It is a win-win for all. We're proud to partner with Wicomico County on this effort and look forward to observing the long-term benefits of ecosystem restoration at Deal Island."

After more than a decade of research and testing, USACE and its partners identified Deal Island WMA as a suitable placement site for dredged material from the Wicomico River. Sediment was sampled and tested in 2010 and fell within acceptable ranges. In February 2021, sediment samples were collected at the previously used upland placement site for the lower portion of the Wicomico River. These sediment samples also showed contamination levels within acceptable ranges and were suitable for planting and growing similar species of vegetation to be planted at the Deal Island WMA.

Additional coordination with partner agencies also provided required safeguards, with a focus on protecting local ecosystems. Areas at greatest risk of disappearing due to sea level rise, rapid erosion, and land subsidence were prioritized. Several environmental windows and time-of-year restrictions were set to avoid as much impact as possible on fish, other species, and aquatic vegetation during both dredging and material placement. For example, dredging was avoided during fish spawning timeframes in the Wicomico River.

"This collaborative project exemplifies the innovative approach we need to address both environmental restoration and navigational safety. By utilizing dredged material to restore vital tidal marshes at Deal Island Wildlife Management Area, we not only enhance habitats for threatened bird species but also support the resilience of our coastal ecosystems against sea level rise and erosion," said Maggie Cavey, Natural Resource Planner for Beneficial Use, Maryland Department of Natural Resources.

The project is now in its final stage, which includes 100,000 individual native grass plantings, including Saltgrass and Saltmeadow Cordgrass, over two years. Following placement, vegetation will be monitored for up to five years.

The beneficial use of dredged sediment is essential to USACE's dredged material management strategy. This strategy aims to create value from dredged sediments through beneficial uses such as beach nourishment, enhancing wetland habitat, and brownfield reconstruction.

This project is part of the Baltimore District's Navigation program, which includes operating and maintaining more than 290 miles of federal navigable channels within the Susquehanna River watershed. This work includes dredging, employing cutting-edge technology to conduct underwater surveys, and applying debris removal vessels to clear floating hazards out of the federal channels in the Baltimore Harbor and Potomac and Anacostia rivers.

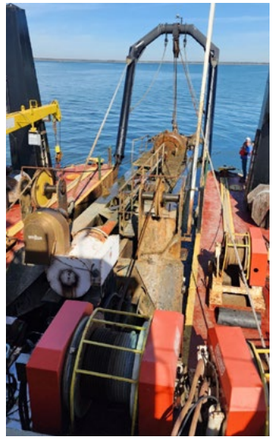
(Far left) The Deal Island wildlife natural management area is a wetland rebuilding project that will grow a barrier island using locally sourced dredge material and native grasses. Watermen have used this area for both recreational and commercial activities for generations. (U.S. Army Corps of Engineers photos by Jeremy Todd)

(Left center) The Saltmarsh Sparrow is just one of the species that is attracted to these native grasses. Their return is good for coastline resiliency. Birding, fishing, crabbing, and hunting are just a few of the reasons that residents and visitors come here. (U.S. Army Corps of Engineers photos by Jeremy Todd)

(Left right) This planting process allows roots to get a better grip on the dredge material helping it settle so it can eventually become part of the marsh. USACE has deposited nearly 180 thousand cubic yards of material that will serve as the foundation for the native grasses being planted. (U.S. Army Corps of Engineers photos by Jeremy Todd)

(Top right three) The dredge Lexington conducts maintenance dredging for the Lower Wicomico River, located in both Wicomico and Somerset counties, October 2023. (U.S. Army Corps of Engineers photos by Cynthia Mitchell)

(Bottom three) All material dredged from the Lower Wicomico was hydraulically pumped through a pipeline to Deal Island WMA. Project partners include Wicomico and Somerset Counties, U.S. Fish and Wildlife, Maryland Department of Natural Resources, National Audubon Society and National Oceanic and Atmospheric Administration Fisheries. (U.S. Army Corps of Engineers photos by Cynthia Mitchell)



CELEBRATING 50 YEARS OF RAYSTOWN DAM

By Nicole Strong, Baltimore District PAO

Sitting within the distinctive ridge and valley portion of the Allegheny Mountains, is Raystown Lake – the largest lake located entirely in Pennsylvania. Due to the topography of the Alleghenies from millions of years of erosion and shifting of continental plates, rain runoff is naturally encouraged, causing major flood risk to the local communities.

The original construction of Raystown Dam was completed in 1911, for electric power generation, creating the first Raystown Lake which was shallow and only about a quarter of the size of the 28-mile-long lake in existence today. However, when a major flood in 1936 devastated most of the Juniata and Susquehannock River valleys, the public identified a need for the construction of a new and larger dam.

The Dam was authorized by the Flood Control Act of 1962 and took nearly ten years before it was completed. In 1974, then Vice-President Gerald R. Ford – the only president ever to work as a park ranger – dedicated the new dam.

Raystown Dam is one of the largest dams in the east, standing at 225 feet tall and 1700 feet across, and has saved communities over $314 million in potential flood damage costs to date. This multi-use project constructed and managed by the U.S. Army Corps of Engineers (USACE), is used for flood risk management, hydroelectric power, recreation, and fish and wildlife conservation and mitigation.

"We are proud that the dam and its lake have benefited downstream communities for 50 years and counting," said Col. Estee Pinchasin, USACE Baltimore District Commander. "The USACE professionals who manage and maintain the dam daily are committed to ensuring this dam and others alike continue to operate as long as possible."

Raystown Lake draws over a million visitors annually and generates an estimated $19 million in related sales. Visitors from around the country come to enjoy panoramic views of 8,300 surface acres of clear water surrounded by 21,000 acres of forested mountain slopes, access to excellent public recreation facilities, and fishing and hunting opportunities. The project has five campgrounds with a total of 594 campsites, 10 boat launches, two full-service marinas, nearly 70 miles of trails, a disc-golf course, mountain biking skills park, and endless opportunities for creating lasting memories.

"My favorite part about my job would be the memories that all of the people have shared and built while using the facilities that I've been a part of creating and managing," said Allen Gwinn, Raystown Lake supervisory park ranger. "I've worked at Raystown for almost 30 years, and I've seen a lot of people build a lot of memories here."

The success of Raystown today could not be possible without the partnerships USACE has built over the last 50 years. The local, county, and state officials, Huntingdon County Visitors Bureau, the Pennsylvania Fish and Boat Commission, Juniata College Field Station, the Friends of Raystown Lake, and volunteers who have contributed to the project over the years are invaluable.

In commemoration of this major milestone, USACE's partners and members in Raystown's surrounding communities came together to celebrate in a variety of ways.

The Friends of Raystown Lake, Huntingdon County Visitors Bureau and USACE held free tours of the Raystown Lake Dam facilities throughout the summer for the public; a drone and fireworks show was displayed over the Seven Points Recreation Area; children were sworn in as an official Raystown Lake 50th Anniversary Junior Ranger's; local businesses sold official Raystown 50th Anniversary merchandise, and the Raystown Lake Dam staff planted a time-capsule to be opened in another 50 years.

"Colonel Pinchasin has awarded a Commander's Coin to the Operations Manager and Head Dam Operator for the year 2074," said Jude Harrington, Raystown Operation's Project Manager. "So, in 50 years, one of the things that's in the time capsule will be an award for serving the public and serving Raystown, but the coin is already 50 years old. I think that's pretty cool."

Raystown Dam and its lake have now benefitted downstream communities for a half century and will continue to do so with the dedicated and passionate staff, partners, and volunteers further defining its proud legacy in history.

After standing tall and serving the community of Pennsylvania for 50 years, Raystown Dam was rededicated on June 6, 2024. The event was commemorated with dam tours open to the public, a lighted boat parade, a drone and fireworks show, planting of a time-capsule and a rededication ceremony.

DECOMMISSIONING THE ARMY'S FORMER

NUCLEAR POWER PLANT IN ALASKA

By Brenda Barber, Deactivated Nuclear Power Plant Program Manager, and Thomas Deaton, Baltimore District PAO

Teams with the Radiological Health Physics Regional Center of Expertise, based at Baltimore District, began the decommissioning and dismantlement of the first-of-its-kind SM-1A nuclear power plant in 2024.

U.S. Army Corps of Engineers photo by Thomas Deaton

SUMMARIZING A COMPLEX HISTORY

With the recent mobilization at the site of the former SM-1A nuclear power plant on Fort Greely, Alaska, our Radiological Health Physics Regional Center of Expertise, located at the U.S. Army Corps of Engineers' Baltimore District, began its work toward the decommissioning and dismantlement of its third nuclear power plant, this time located just 175 miles south of the Arctic Circle.

All three of the decommissioning projects under the Baltimore District's oversight originated from the U.S. Army's legacy "Army Nuclear Power Program." The program was established in 1954 and concluded in 1978 after building and operating nine reactors for U.S. Army, Air Force, and Navy projects — but not before it had contributed a lasting impact on nuclear power development in the United States and led to innovations in reactor design, containment and control, lifecycle costs, and health and safety.

After the program ended, the U.S. Army Corps of Engineers (USACE) was responsible for safeguarding, maintaining, and performing environmental radiation monitoring for the three remaining Army deactivated reactors. These facilities, which had been placed in safe storage by 1978, include Fort Greely's SM-1A as well as the SM-1 on Fort Belvoir, Virginia, and the MH-1A onboard the nuclear barge STURGIS, the world's first floating nuclear power plant.

Now, the USACE Deactivated Nuclear Power Plant Program (DNPPP) continues this history in its decommissioning efforts through intense focus on the health and safety of the military installations and communities that surround these sites and the workers involved at each phase of dismantlement.

"This work has built a legacy in the history of nuclear power and will pave the way for the future generations of Army nuclear power plants," said Dave Watters, the Radiation Safety Officer for the Baltimore District.

In 2019, we celebrated the completion of the decommissioning and dismantling of the historic STURGIS barge when the final section of the former vessel was brought ashore for processing and recycling at the International Shipbreaking facility in the Port of Brownsville, Texas. By the end of 2023, we had removed all large reactor components from the vapor container structure of the SM-1 on the western shore of the Potomac River at Fort Belvoir, and above-grade demolition was complete.

Our DNPPP team now brings the lessons and industry muscle memory from these projects to Fort Greely in its work on the final remaining Army reactor, SM-1A, originally built to test the likelihood of engaging a nuclear power source in arctic conditions while providing power and heat for the utility systems of Fort Greely.

U.S. Army Corps of Engineers photo by David Gray

POST-DEACTIVATION, SAFETY, AND REGULATORY FRAMEWORK

Since the SM-1A was initially deactivated — including the removal of all control rods, fuel, and liquid radioactive waste — and placed in safe storage in 1973, USACE has continued annual monitoring of the site from both an environmental and radiological perspective and issued annual reports of these findings with no impacts found to date.

Though no nuclear fuel remains, the site was in safe storage for several decades to ensure the occupational safety of work crews involved in the eventual dismantlement. Though minimal risk is expected to the public, safety continues to take center stage in this project, which primarily will involve the removal of large pieces of activated metal.

In the early 2000s, a management plan for the decommissioning of the site began, later including a historical site assessment and a series of characterization surveys which resulted in a formal report and, later, additional characterization efforts as recently as 2020 to ensure all relevant background data was collected.

The team's extensive 2021 Environmental Assessment led to a Finding of No Significant Impact, which allowed us to present the formal Decommissioning Plan to project regulators at the Army Reactor Office and obtain the Decommissioning Permit. Our work is considered self-regulated, meaning the regulatory framework comes from within the U.S. Army and broader government structure, like the Atomic Energy Act of 1954 and the Army Radiation Safety Program. Permits to both possess the site and to implement the decommissioning originate from the U.S. Army Nuclear and Countering Weapons of Mass Destruction Agency, known as USANCA. All standards within this framework comply with Department of Transportation, Nuclear Regulatory Commission, and Environmental Protection Agency standards.

The complexities of this framework aren't only limited to those placed upon the team by our own chain of command; throughout the course of the project the team has encountered or will encounter requirements imposed by regulations like the Atomic Energy Act, National Environmental Protection Act, Toxic Substance Control Act, Clean Air Act, Clean Water Act, Endangered Species Act, and more from across the Alaska state structure.

We have engaged actively with the Alaska State Historic Preservation Office, and, because this site is on the National Registry, we have developed a Memorandum of Agreement where we will preserve all historic artifacts and prepare a Historic American Engineering Record that will document the operation of the site and our current dismantlement activities.

There are seven plaques of historic importance throughout the facility, and site markers will be developed to leave behind both on the installation and in the nearby town of Delta Junction, signifying the location of Alaska's original — and, to date, only — nuclear reactor.

U.S. Army Corps of Engineers photo by Thomas Deaton

U.S. Army Corps of Engineers photo by David Gray

DECOMMISSIONING PLAN AND FIRST STEPS

Now, with site mobilization underway, the DNPPP team and its contractor began work to implement the decommissioning in compliance with the framework under which we received the permit. As part of the decommissioning, all reactor components, site buildings, and radiologically contaminated soils will be removed, properly packaged, and transported to the mainland United States for disposal.

Throughout the project, the team will complete a significant amount of in-process radiological, environmental, air-sampling, and stormwater surveys before ever reaching the goal of a Final Status Survey that will, in the end, allow the team to demonstrate that the site is ready for unrestricted release.

One of the key components of both the plan and the team's efforts to ensure timely completion of the decommissioning stems from our need to work year-round, including through the extreme seasonal weather of the Tanana River Valley in interior Alaska. To meet this need, the contractor will construct a large weather enclosure over the site in 2025, enabling exterior work to continue beyond the short summer season while interior demolition begins under controlled containment in the meantime.

The weather enclosure, when complete, mitigates risks to the team by providing a buffer from arctic environment conditions, allows for the storage of equipment when not in use to maintain readiness, and, as a secondary benefit, isolates the worksite from adjacent tenants on the installation. All in-process radiological monitoring will take place both inside and outside this enclosure, and all containment efforts will continue even when the weather enclosure is removed from the site near the end of the project.

Because of the small footprint of the site and the geographically complex, multi-modal transportation required to move the project's waste to the Lower 48, an additional area on the installation will be set up for waste storage in preparation for coordinated shipping campaigns. When the project is completed, no waste or site components will remain in Alaska.

The first steps to dismantling the site take the form of hazardous materials abatement common when demolishing facilities of this age. Asbestos, lead-based paint, and polychlorinated biphenyls (PCBs) are part of this primary work, which minimizes exposure to the team as the project progresses, part of the knowledge we've built throughout our previous projects.

"The asbestos abatement team and the demolition team worked meticulously to deal with the asbestos and lead paint at the SM-1 site and to efficiently and safely handle this aspect of the decommissioning," said Rebecca Yahiel, SM-1 project manager. "The lessons we learned in decommissioning the STURGIS provided valuable insights into this aspect of this project."

This work is followed by materials and equipment removal not located inside the encasement material or vapor containment structure. These large industrial components include the site's original steam turbine, generator, bridge crane, and more, making the facility more accessible for future work.

ENTERING THE VAPOR CONTAINMENT STRUCTURE AND GETTING STARTED

In January of 2024, we opened and entered the vapor containment structure around the reactor for the first time since 2011. As an example of what future industrial hygiene will look like at the site, the team observed the atmospheric conditions in the structure and the surrounding workspace using five-gas monitors (oxygen, carbon monoxide, VOCs, explosive gases, and hydrogen sulfide) and Draeger tubes. The Draeger tubes were used to monitor ammonia, a potential by-product of the degradation of the AM-9 grout employed as the site's encasement material.

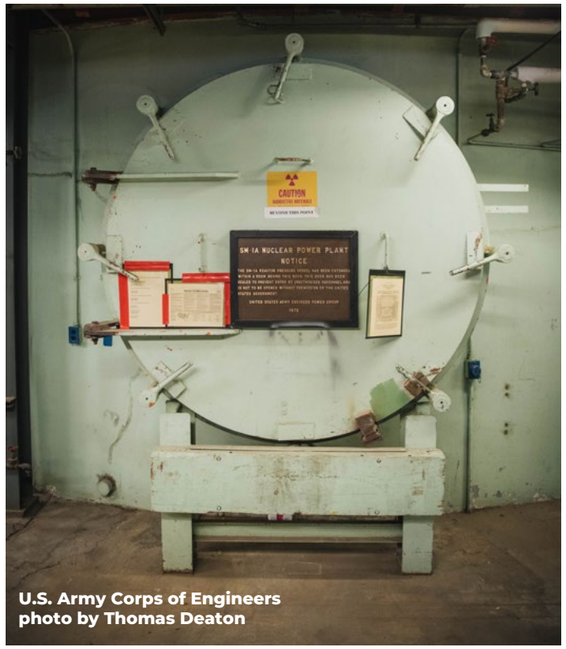
The team filtered the vapor containment air using high efficiency particulate absorbing (HEPA) filters before discharging it to the atmosphere in the former cold storage facility at the site where additional monitoring occurred. After ventilating the vapor containment for over 72 hours, we concluded the ventilated structure was safe to enter.

The team members went in with purified air breathing respirators to ensure their occupational safety, and we performed the entry in order to carry out a safety analysis before additional work could occur.

Later, once the inner opening was enlarged, the team began drilling sample cores of the AM-9 grout encasement material for additional testing and started sampling background radiological measurements inside the structure.

From an occupational safety perspective, the primary radiological concern stems from Cobalt-60 associated with the operation of the reactor, though its short half-life, just over five years, means the protracted safe storage period ensured it has decayed significantly. Residual Nickel-63, also from the original operation and which has a much longer half-life of over 100 years, will be removed as part of the dismantlement of the primary system components and managed at a long-term disposal facility in perpetuity.

U.S. Army Corps of Engineers photo by Thomas Deaton



U.S. Army Corps of Engineers photo by Thomas Deaton

REACHING THE PUBLIC AND PROJECT LEGACY

Because of public interest in this historic project and warranted public concern about the radiological material being handled at the site, outreach and education have been important parts of the decommissioning process for our team.

Throughout the project's active recent years, we've held a series of public meetings and provided regular notifications to inform the installation, nearby stakeholders, and Alaska Native communities about our upcoming work and to allow ample opportunities for feedback and questions. This dialogue has been encouraging, and it helps us better understand the knowledge gaps present when providing future communications. Perhaps most importantly, the DNPPP team has also been able to stress the importance of safety in our work — and the community has been able to learn about the history of the project that operated in their backyard a half-century ago.

"Our team continues to utilize proven controls and precautions to address safety and other engineering details during all stages of decommissioning and dismantlement at these sites," said Jeffrey Hillebrand, the SM-1A project manager. "This will ultimately serve as an important program and will provide a clear path forward in Army nuclear power."

Both remaining decommissioning efforts are slated to be complete by 2029, ending the Army's liability associated with the prior nuclear power plants — MH-1A, SM-1, and SM-1A — and bringing to a close a major legacy in the history of nuclear power. The conclusion of this work demonstrates the full life cycle of this technology and paves the way for future generations of Army nuclear power plants.

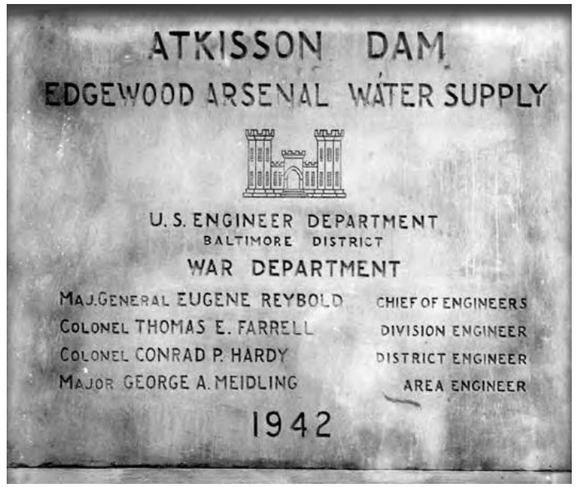
ATKISSON DAM

The teamwork on this dam removal project is a shining example of incorporating systems thinking and risk management in early plans.

By Amy Guise, chief of Planning Division, Baltimore District

Atkisson Dam in Harford County, Maryland, was constructed in 1942 to provide water supply to Edgewood Arsenal, now known as Aberdeen Proving Ground. It was named after U.S. Army Col. E.J. Atkisson, commander of the First Gas Regiment during World War I and commander of Edgewood Arsenal from 1920 to 1923. Even in the development of the project in the 1940s, the environment, risk management and a systems approach were at the forefront of the planning, design and construction. The site was chosen due to the unique geologic setting and small area of farmland that would be lost to production. In addition, formulation of the dam balanced evaluations of water supply, drought and flooding.

While originally built to provide water supply, the dam eventually stopped being used for this purpose, and sediment accumulation was degrading aquatic habitat. Due to these sediment concerns, along with identified safety concerns and potential hazards associated with dam failure, the U.S. Army began looking to divest itself of Atkisson Dam. Aberdeen Proving Ground consulted the U.S. Army Corps of Engineers Baltimore District to evaluate the potential environmental impacts of the full or partial removal of Atkisson Dam.

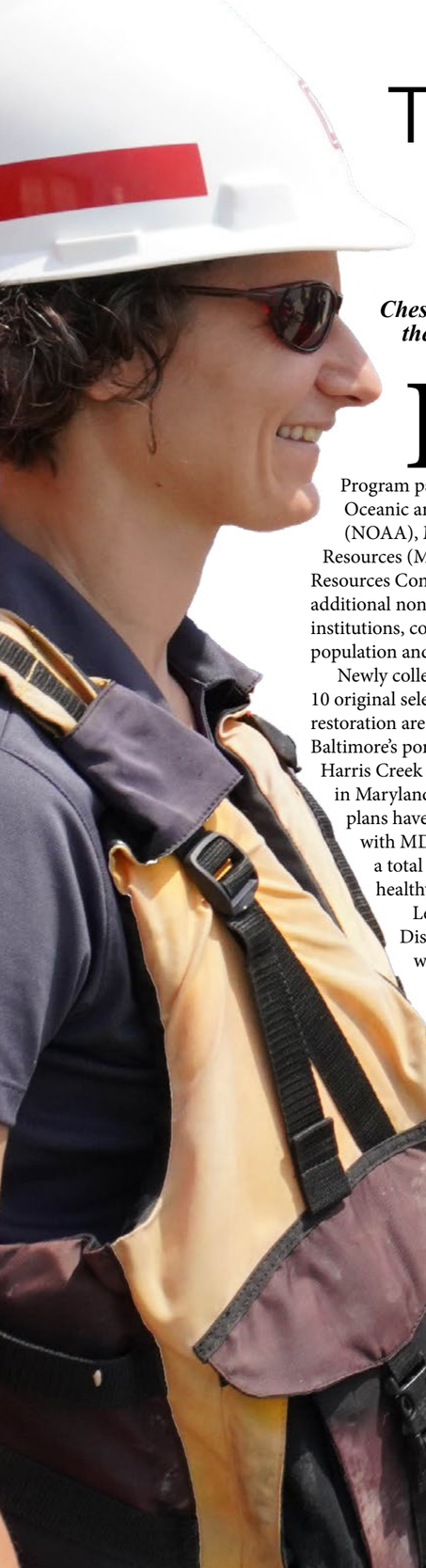


During the project initiation and planning phases, USACE officials identified an opportunity to restore free-flowing streams and rivers and provide significant improvements to water quality and fish passage. Implementing an environmentally compatible solution in a risk-informed and systems context would also bring the dam into compliance with U.S. Army regulations and Chesapeake Bay restoration goals. Through physical stream assessments, wetland surveys, forest stand delineations, bog turtle surveys, and fish, benthic and water quality sampling, environmental restoration opportunities were incorporated into an evaluation of a range of dam-removal alternatives. Ultimately, these analyses will support decision-making for the preferred solution to benefit the site and the surrounding ecosystem.

In 1984, the Maryland General Assembly enacted the Critical Area Act to address the increasing pressures placed on Chesapeake Bay resources from an expanding population. While Atkisson Dam does not fall within the critical area, the surrounding study area did meet the critical area definition. Therefore, a systems perspective was warranted. The Nature Conservancy, in coordination with the Chesapeake Bay Program's Fish Passage Workgroup — made up of federal, state and local partners — developed a geographic information system model to help identify barriers to fish passage. The Freshwater Network of the Chesapeake Bay Region GIS model ranks barrier data from Tier 1-20 with Tier 1 indicating the "highest priority" and "most potential from a passage restoration project." Four species of diadromous fish were found downstream of Atkisson Dam, and the dam was given a Bay-wide Anadromous Tier 3 designation, indicating the prioritization of potential for anadromous fish with the dam removal.

Pursuant to Section 106 of the National Historic Preservation Act, tribal consultation was an important part of the project and decision-making process. The Eastern Shawnee Tribe of Oklahoma and the Stockbridge-Munsee Community Band of Mohican Indians responded that there were no known sites at this location that were of interest to the tribes. In addition, ongoing coordination with several federal and state government agencies, as well as non-governmental organizations, will ensure diverse perspectives are included in the design process, especially related to impacts to submerged aquatic vegetation.

Comprehensive and life-cycle planning facilitated a design and construction approach to be developed to maximize environmental and cultural benefits on-site and downstream, reduce costs and increase safety. Incorporating environmental principles, risk management and systems thinking in the earliest stages of the project life cycle enabled the proper surveys, outreach and design disciplines to be part of the formulation and implementation process. It is through such examples that the U.S. Army can demonstrate its commitment to shared environmental goals and results.



TRED AVON RIVER
OYSTER SANCTUARY

By Nicole Strong, Baltimore District PAO

Newly released data from June 6, 2024, on oyster reef restoration in the Chesapeake Bay and its tidal tributaries indicates that the Oysters Outcome in the Chesapeake Bay Watershed agreement will be met by the 2025 deadline.

In 2014, the U.S. Army Corps of Engineers (USACE), Baltimore District, in coordination with additional Chesapeake Bay Program partners including the National Oceanic and Atmospheric Administration (NOAA), Maryland Department of Natural Resources (MD DNR), Virginia Marine Resources Commission (VRMC), and several additional nonprofit organizations and academic institutions, committed to the restoration of oyster population and habitat in 10 tributaries by 2025.

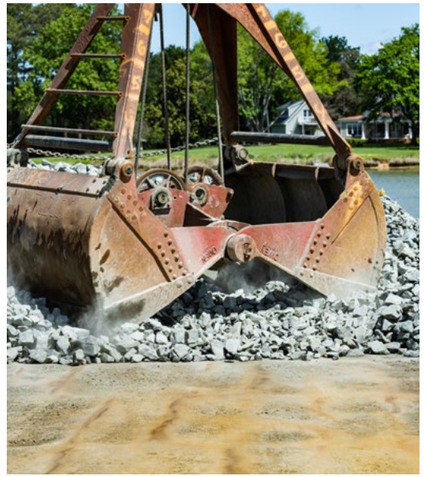
Newly collected data shows that eight of the 10 original selected tributaries for large-scale restoration are considered to be complete. USACE Baltimore's portion of the agreement includes the Harris Creek and the Tred Avon tributaries, both in Maryland. The two tributary restoration plans have been completed in partnership with MD DNR, the non-federal sponsor, for a total of 473 acres, including pre-existing healthy reef acreage.

Leading the effort for the Baltimore District is Dr. Angie Sowers, integrated water resources management specialist. Since coming onboard with USACE in 2003, Sowers has overseen the restoration of oyster bars in Maryland and is a recognized expert in the oyster restoration field in the Chesapeake Bay.

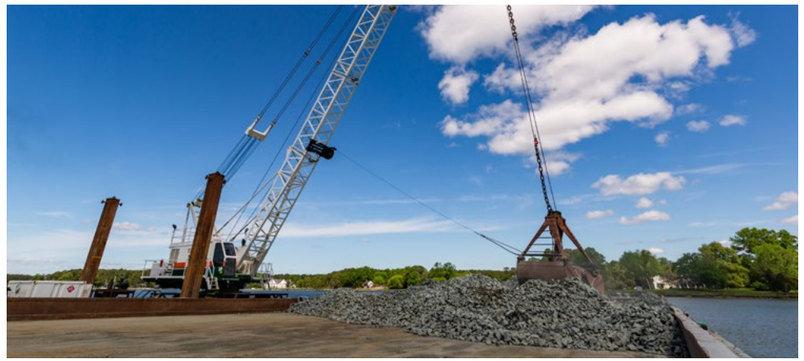
"Angie's personal and unique subject matter expertise in oyster restoration, as well as her adept collaboration skills, have elevated USACE's role in Chesapeake Bay restoration implementation," said Baltimore chief of Planning Division, Amy Guise.

Oyster populations in the Chesapeake Bay have declined dramatically in the last century, largely due to parasitic diseases, overharvesting, declining water quality, and a loss of habitat. Oyster restoration is important because oysters provide several unique environmental benefits, including reef habitat that is significant to the Bay ecosystem for animals like blue crabs and fish. Additionally, oysters are filter feeders that improve water quality.

"I am extremely proud to be a part of the work that has been accomplished to implement large-scale oyster restoration in the Chesapeake Bay," said Sowers. "The project is both challenging and rewarding. Oysters, as ecosystem engineers, are a critically important component of both a healthy Chesapeake Bay estuary and the socio-economic identity of the Chesapeake. Reaching this milestone speaks to the strength and commitment of the partnerships forged over the past 20+ years. I look forward to continued restoration efforts after the 2014 Bay Agreement commitments are complete."



Baltimore District's partner-based efforts to restore reef structure and re-establish oyster habitat in pre-existing sanctuaries include the Maryland Department of Natural Resources, who produce the spat-on-shell (baby oysters) at the state-owned Horn Point Laboratory, shown here. The planting at restoration sites is conducted by the Oyster Recovery Partnership, who planted over one billion oysters in 2023 alone. (U.S. Army Corps of Engineers photos by Chris Fincham)



WASHINGTON AQUEDUCT

OLD CONDUIT OVERHAUL

By Christopher Fincham, Baltimore District PAO

Washington Aqueduct crews have been conducting repairs and updates to sections of the utility's first conduit - commonly referred to as the "Old Conduit," — since November 2023.

The Old Conduit is a 12-mile-long circular tube structure carrying water from the Potomac River near Great Falls to the Dalecarlia Reservoir.

Located under MacArthur Boulevard, the conduit was placed in regular service in July 1864 and — thanks to the qualified professionals that have overseen its operations and maintenance throughout the past 160 years — remains a vital component to providing drinking water for approximately 1 million citizens living, working, or visiting in the District of Columbia, Arlington County, Virginia, and other areas in northern Virginia.

Aqueduct staff conducted a visual inspection of the Old Conduit in March 2022 and determined that repairs and maintenance work were required to address compromises to the conduit's structural integrity caused by violations of imposed vehicle weight restrictions on MacArthur Boulevard.

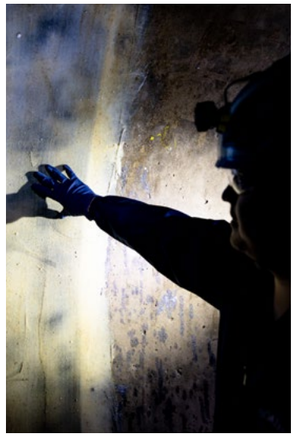
Originally appropriated by Congress in 1853, the conduit was built of brick, stone, and mortar and is 9 feet in diameter. It was the largest single structure involved in the construction of the Washington Aqueduct. The conduit design was based upon the early New York and Boston aqueducts, completed a decade earlier in the 1840's.

Construction broke ground for the conduit in November 1853, with a force of 300 to 400 men at any given time. Labor was intensive but plentiful. The only machine available for construction purposes during that time was the steam-driven hoist. Aqueduct historical reports include mention of a steam-operated rock drill trial, which led to a determination that drilling by hand was far superior and faster.

Water from the Potomac River was first introduced into the conduit in December 1863.

Teammates walk inside the Old Conduit inspecting newly installed carbon fiber. (U.S. Army photos by Christopher Fincham)

(Right) Headlamps from teammates inside a 300-foot stretch of the Old Conduit. This perspective highlights just how dark it is inside the tunnel. (Below) Crews use strategically placed access areas along MacArther Boulevard to climb down into the conduit. (U.S. Army Corps of Engineers photos by Christopher Fincham)



(Above) A teammate points out where the newly installed carbon fiber meets the original material of the conduit. (Right) A wider perspective from inside the conduit showing where the carbon fiber installation meets with the older material. (U.S. Army Corps of Engineers photos by Christopher Fincham)

MILITARY PROGRAM

The Baltimore District has a robust, multi-state, and multi-installation military construction program, supporting service members in Maryland, Virginia, Washington, D.C., Pennsylvania, and West Virginia – managing $1B+ annually in support of one of the largest and most visible military missions in the country.

By Christopher Fincham, Baltimore District PAO

The Baltimore District's Military Program is responsible for the overall project management, financial management, project controls, and schedules of a variety of military construction projects, from the initial design phases, through construction and fiscal close-out.

The program works with teams of senior program managers and technical managers who actively support a wide variety of missions throughout the entire region. Projects include everything from the design and construction of administrative spaces, medical and laboratory facilities, to training facilities, childcare centers, and barracks.

"The work we provide to and for our military partners is so expansive and diverse. I'm incredibly proud of the work we do to improve the quality of life for our service members, ensure their safety and support our Nation's military readiness and security," said Dave Morrow, the deputy district engineer for program and project management.

In addition to the military construction mission, Baltimore District provides real estate, design, and construction services to the nation's classified community. These services support an ever-growing list of emerging security requirements including cyber security and homeland security that engage sensitive information, serve the warfighter, and, ultimately, protect the nation.

"We are making a difference not just locally but on a global stage," Morrow said.

The U.S. Army War College officially opened its state-of-the-art academic building October 25, 2023, commemorating the completion of the $92 million project.

FY 23

RIBBON CUTTING

- Delivery of the U.S. Army War College's new Root Hall at Carlisle Barracks

  Public Health Laboratory - Defense Centers for Public Health, Aberdeen Proving Ground, MD

GROUNDBREAKING

- Joint Cyber Operations Group Facility at Fort Meade
- Minnie M. Kenny Center (ECB4) at Fort Meade
- Freedom Center IV Barracks at Fort Meade

FY 24

- Construction Completion of a new Dining Facility at Joint Base Myer-Henderson Hall which will support the service members including the Soldiers of the 3rd U.S. Infantry Regiment known as The Old Guard
- Along with the new DFAC, the team led the renovation of the entire 37,000 square feet of Building 404 at JBM-HH. The new space will include office space, and the Army Transition Assistance Program will have admin and classroom space
- $185M Office Annex at Fort Belvoir North Area, which represents the cornerstone for the initial stages of the future Intelligence Community Campus environment.
- A Joint Missile Maintenance Facility at Letterkenny Munitions Center
- Partnership with the Naval Facilities Engineering Systems Command (NAVFAC) to deliver projects at the Naval Research Lab (NRL) and the Naval Surface Warfare Centers at Indianhead and Pax River

GROUNDBREAKING

- Cantonment Area Roads (Cooper Ave), Fort Meade
- Munitions Load Crew Training Facility (MLCTF), Join Base Andrews

FROM WATERWAYS TO BEACHES

The MURDEN dredge helps provide safe passage for boaters and transports material to nourish sand-starved beaches

STORY & PHOTOS BY DAVID ADAMS, BALTIMORE DISTRICT PAO

In the waterways of Maryland's Eastern Shore, the hard-working crew of the U.S. Army Corps of Engineers Dredge MURDEN navigate their way through the shallow water, cleaning up the channels near Ocean City, dredging the project inside what teams call the 'clam dock' or the 'inside projects.'

"It is very shallow in there," explained Barry Stull, first mate on the Dredge MURDEN. "I used to work on a side caster dredge when I first started here about 14 years ago, and the sand and water would come out the side, but you didn't have a hopper to look at." Stull said it was amazing the first time he actually got to see the amount of sand that's taken out of the channel off the shoals.

Crew of the MURDEN dredge the inlet at Ocean City, MD, Aug. 24, 2023. Regularly scheduled dredging assists with sediment transport south to Assateague Island mitigating impacts to natural sediment transport caused by the Ocean City Inlet and its jetties.

The MURDEN has dredge pumps that get lowered into the water, sucking sand and water up through the drag heads. The sand and water then travel through the drag pipes, down the manifold, and into the hopper. The sand stays in the hopper as the water gets drained out.

Paul Salib, dredge control officer, ensures everything runs smoothly.

"My responsibility is to operate the drags to help suck up the sand and sediment on the bottom of the channel," Salib said. "We have to pump it up into the hopper so we can remove it. I can actually see the sand and the sediment I'm taking up out of the channel and bringing it down to Assateague to wash it up onto the beach there."

This dredging process helps make the shallow waterways deep enough for all the fishermen, both commercial and recreational, to get in and out of the harbor while simultaneously slowing the erosion of the ocean side of Assateague Island. USACE reuses the sediment it pulls out of the waterways and drops it off as close to the Assateague beach as possible, which allows the sand to be pulled toward the beach with the tide. The MURDEN is a unique vessel and handles the near shore disposals, unlike most ships.

"I would say about ninety percent are near-shore disposals, and we can ease right up to the beach pretty close with about three feet of clearance underneath the keel, and the ship opens with hydraulics," explained Victor Nelson, captain of the MURDEN.

Unlike most ships, the MURDEN hull is split down the middle and held together with hydraulics. When the MURDEN drops off the sediment, the ship opens completely, dumping out 350-400 cubic yards of sediment within two to three minutes.

"I come from a commercial fishing family," said Nelson. "My father was a fisherman, and my grandfather was a fisherman. That gives me a really good perspective, I feel, about what the community or public needs in some of these smaller inlets — because it is their livelihood.

The MURDEN can transport roughly 50 dump trucks worth of material and deposit it in the surf zone to nourish sand-starved beaches. (U.S. Army Corps of Engineers photos by David Adams)

COMMUNITY RELATIONS
BUILDING STRONG OUTREACH

By Nicole Strong, Baltimore District PAO

The Baltimore District takes pride in actively building relationships throughout our area of operations in the Mid-Atlantic region – spanning across five states, the District of Columbia, and the Susquehanna, Potomac, and Chesapeake Bay watersheds. One way we achieve this is through community outreach, which increases public awareness of our missions and capabilities, and helps us foster positive relationships with stakeholders and partners.

Our team is diverse – not only with our personnel's backgrounds and demographics, but in the skillsets, expertise, and projects we support. Engagements provide opportunities to share this diversity with the various communities that we serve; highlighting our partnerships, programs, and projects; and showing that what we do matters by connecting our work to the bigger picture.

Washington Aqueduct & Morgan State University

On February 21, 2024, Baltimore District hosted an event for local engineering students at Morgan State University at the Washington Aqueduct to celebrate National Engineers Week. The Washington Aqueduct supplies an average of 155 million gallons of drinking water daily to the District of Columbia; Arlington County, Virginia; and a portion of the Fairfax County Water Authority service area in Northern Virginia.

The engineering students were given a tour of the Dalecarlia water treatment plant by Washington Aqueduct staff and received an engaging session from Mr. Pete Perez, the USACE, Headquarters Chief of Engineering and Construction.

Our partnership with Morgan State University is part of our participation in the Advancing Minorities Interest in Engineering (AMIE) program, which supports increasing resources at HCBU institutions for personal and professional development toward a more diverse future in the engineering field.

Visit to Dyke Marsh

On September 20, 2023, we hosted an on-site and immersible visit for 48 engineering students from The Catholic University of America to our project at Dyke Marsh. We partnered with The National Park Service and the Friends of Dyke Marsh group to discuss our efforts on one of the largest remaining freshwater tidal wetlands in the Washington metropolitan area.

The students received an overview of the project from Chuck Frey, chief of Baltimore District's geotechnical branch, and Carol Ohl, chief of the district's civil works program office, followed by an open discussion opportunity with subject matter experts and our partners. The students were able to get an up-close encounter with the marsh by kayaking the area where they could connect the information they received to the physical project.

Poplar Island Tour

On October 23, 2023, we utilized our AMIE program participation and HCBU partnership with Morgan State University to provide 23 engineering students a tour of Poplar Island. The project, recently on the verge of disappearing, is a national model for habitat restoration and the beneficial use of dredged material. Off the Chesapeake Bay coastline, Poplar Island is being returned to its former size and important ecological function while helping to ensure the economic vitality of the region.

Baltimore District AMIE Program Manager, Geoff Tapalu led the engineering students around the project to provide on-site instruction of the project at scale. This engagement allowed us to further build our relationship with potential future USACE engineers.

Speaking Engagements

In addition to visits and tours, speaking engagements are an effective way for us to reach our community – with both formal panels featuring leadership and subject matter experts speaking to a niche group.

Recently, Baltimore District Commander, Colonel Estee Pinchasin, spoke on a Women in Leadership Panel sharing her path to success and tips and tools she learned along the way; Baltimore District Program Manager Dan Noble presented history and information on the Spring Valley Formerly Used Defense Site in Washington, D.C., to students at American University; and Chief of Baltimore District's Civil Project Management Branch Justin Callahan is set to speak to students at the Berlin Intermediate School and discuss USACE's work of dredging in the Ocean City, Maryland area and how the spoils could be used for artificial island habitats for select birds.

These opportunities allow us to speak on both the USACE, Baltimore District mission as a whole or focus on specific projects that are targeted to the location and those communities in which we are trying to reach.

Career Outreach

With recruitment and building mission awareness as top priorities, student outreach in schools is a vital channel for the Baltimore District. We have participated in multiple STEM career days and fairs to highlight our diverse portfolio and the career options within USACE and the Baltimore District. Within the past year, we have attended Shippensburg University's Career Day, a Public Service Job Fair and Reception at Howard University School of Law, Cecil County Community College STEM Career Education Expo, Arbutus Middle School's 8th Grade Career Fair, and a STEM Symposium at Howard Community College. These engagements allow us to have direct connections with future recruits and share our mission with a large number within the local community.

PIER UPGRADE

By Christopher Fincham, Baltimore District PAO

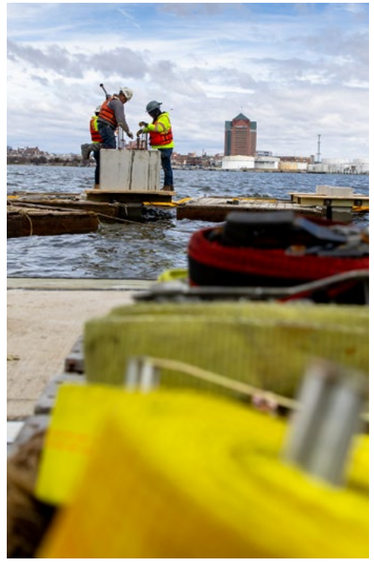
The Baltimore District, Survey/Debris Section is replacing the approximately 50-year old timber pier at Fort McHenry with a pier of a similar footprint but to be made of concrete instead of timber. The new pier is intended to last another 40+ years to service the Survey Vessel CATLETT (60ft survey catamaran) as well as the Debris Vessel Reynolds and her soon to be replacement (~2025).

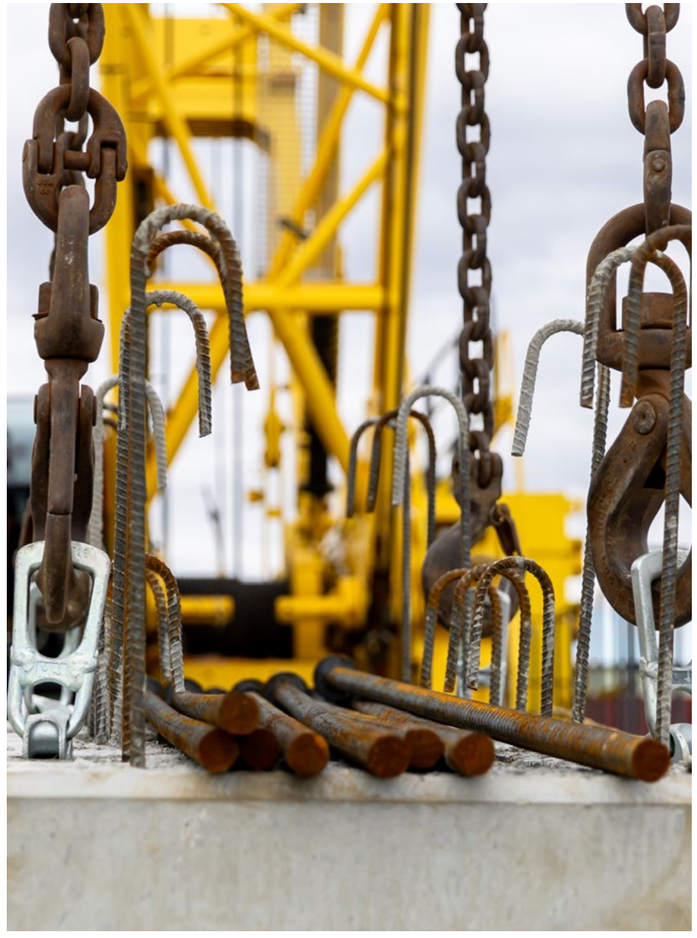
The full design is being built by Ballard Construction in FY 2024 through a DLA contract with a cost of $5,000,000. All of the funds sought for this project came from the Plant Replacement Improvement Program (PRIP) Revolving Fund.

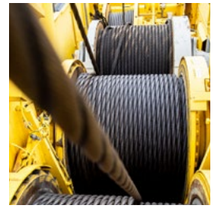
The overall scope for the project includes the demolition of the existing timber pier, construction of a replacement concrete pier, and landside improvements to provide utilities and an access ramp to the pier.

The design calls for 43 square, precast, prestressed concrete piles with pre-cast pile caps to be installed through the use of a test pile program to confirm the production pile capacity and depth that will safely support the pier design loads.

The project is anticipated to be completed by June 2024.







The U.S. Army Corps of Engineers, Baltimore District Survey/Debris Section is replacing the 50 year old timber pier at Fort McHenry Yard with a new concrete pier intended to last another 40+ years to service the survey vessel CATLETT (our 60ft survey catamaran) and the debris removal vessel REYNOLDS, both of which make sure Baltimore-area waterways are clear & navigable. (U.S. Army photos by Chris Fincham)

BEYA

February 15-17, 2024: Baltimore District teammates joined leadership from the U.S. Army Corps of Engineers Headquarters for this year's Black Engineer of the Year Awards conference in Baltimore for networking and career exploration opportunities — and to welcome some of our newest USACE employees.

SAFE REHOMING OF 50,000 BEES

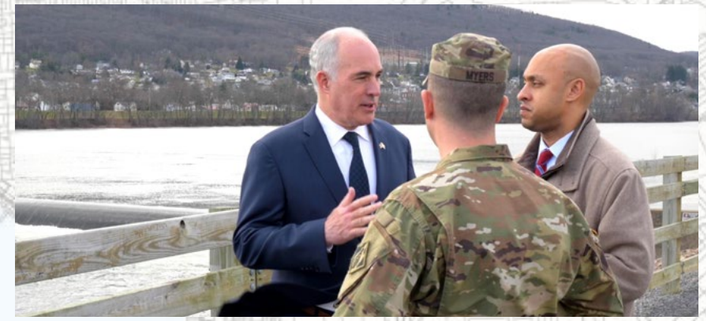
During the abatement and demolition services at the Beltsville Agricultural Research Center in Beltsville, Md., Baltimore District safely rehomed over 50-thousand honeybees to a local apiary.

DUTCH EMBASSY VISITS POTOMAC PARK LEVEE SYSTEM PROJECT

March 18. 2024: Baltimore District hosted guests from the Embassy of the Netherlands, including Director-General for Water and Soil Affairs Jaap Slootmaker, for a tour of our Potomac Park Levee System project (which runs parallel to the Lincoln Memorial Reflecting Pool and includes the permanent post and panel closure at 17th Street and Constitution Avenue) led by civil engineer Alex Baldowski.

WILLIAMSPORT LEVEE FUNDING ANNOUNCEMENT

Jan. 5, 2024: Baltimore District and project leadership join Senator Bob Casey and Williamsport mayor Derek Slaughter for a site visit and the announcement of an $8 million earmark for the second largest levee system in the Baltimore District.



POPLAR ISLAND CONGRESSIONAL AERIAL TOUR

Baltimore District project teams and leadership hosted staff from the offices of United States Senators Ben Cardin and Chris Van Hollen for a briefing and aerial tour of the Poplar Island and Mid-Chesapeake Bay Island ecosystem restoration projects, August 31, 2023. Poplar Island, once on the verge of disappearing, is now an international model for habitat restoration and the beneficial use of dredged material. Mid-Bay, located adjacent to James and Barren Islands off the coast of Dorchester County, follows in the footsteps of Poplar's success, eventually providing hundreds of acres of wetland and terrestrial habitat for fish, shellfish, reptiles, amphibians, birds, and mammals through the beneficial use of dredged material over the next several decades.

BREAKING GROUND AT FORT GEORGE G. MEADE BARRACKS

Lt. Col. David Myers, Deputy District Commander, joined Gen. Paul M. Nakasone, Commander of U.S. Cyber Command, Director of the National Security Agency, and Chief of the Central Security Service; and Col. Michael A. Sapp, Garrison Commander, Fort Meade, for a groundbreaking ceremony at the Freedom Center IV Enlisted Personnel Housing Barracks, which will accommodate 380 personnel in two, 4-story buildings with 190 rooms each.

US Army Corps of Engineers®
Baltimore District

WELCOME THE NEW COMMAND TEAM

By Kurt Rauschenberg, Baltimore District PAO Chief

Col. Francis Pera became the 70th commander and district engineer of the U.S. Army Corps of Engineers (USACE), Baltimore District, during a change of command ceremony at the Washington Aqueduct in Washington, D.C., July 25, 2024.

Pera assumed command from Col. Estee Pinchasin, who had served in the role since July 2021.

A graduate of West Point, Pera takes command of one of the largest USACE districts following his role as Deputy Director of Operations for the Tradecraft and Technology Group at the National Geospatial Intelligence Agency. With a staff of approximately 1,200 employees, the Baltimore District delivers a program of over $4 billion annually, providing vital engineering, design, construction, and water resources management solutions to the mid-Atlantic region. The district's area of responsibility spans the Susquehanna River, Potomac River, and Chesapeake Bay watersheds and 7,000 miles of coastline.

Pera also formally takes on the title of "Supervisor of the Harbor" for Baltimore Harbor, overseeing the USACE missions supporting the efficient operations of the Port of Baltimore. Earlier this year, Baltimore District was part of the Unified Command response to the Francis Scott Key Bridge collapse and played a critical role in re-opening the Fort McHenry Federal Channel to commercial maritime traffic through the Port of Baltimore.

Additionally, he will oversee the Washington Aqueduct, which produces an average of 135 million gallons of drinking water daily at two treatment plants for approximately one million citizens throughout the National Capital Region. A division of the Baltimore District, The Washington Aqueduct is the only federally owned and operated water utility.

"I am honored to be the newest member of this amazing Baltimore team," said Pera. "I look forward to continuing upon the great success with our partners in support of our communities and our nation's security."

Pinchasin's next assignment is at Fort Meade, Maryland, where she will work on planning and construction for National Security Agency facilities.

"It has been a true honor and privilege to serve on this team," said Pinchasin. "I am so proud knowing this is who we have doing the work and building our country. I wish all our citizens knew who they have working for them all the time. It is unbelievably inspiring."

In addition to Pera, the Baltimore District welcomed Lt. Col. Mark W. Pollak to serve as deputy commander. Pollak assumed the role from Lt. Col. David Myers.

A Virginia Tech alum, Pollak joins Baltimore District following an assignment as a research engineer at the U.S. Army Engineer Research and Development Center (ERDC) in Vicksburg, Mississippi. After completing Engineer Officer Basic Course, Pollak was assigned to the 4th Brigade Special Troops Battalion, 1st Infantry Division, Fort Riley, Kansas. He deployed to Tooz, Iraq, as a combat engineer platoon leader. He first served with USACE in 2011 as an Operations Officer and Mechanical Engineer at the Fort Campbell Resident Office, part of the Louisville District.

In 2014, he assumed command of the Headquarters and Headquarters Company, 27th Engineer Battalion (Combat) (Airborne) at Fort Bragg, North Carolina. Following command, he served as an Assistant Professor of Military Science, Army ROTC at the Massachusetts Institute of Technology. After completing Command and General Staff College in 2019, he served as Battalion Operations Officer and Executive Officer, 8th Engineer Battalion, 2nd ABCT, 1st Cavalry Division, Fort Hood, Texas. During this time, his unit was deployed to Poland as a regionally aligned force unit.

Colonel Francis B. Pera

Commander

U.S. Army Corps of Engineers, Baltimore District

Lieutenant Colonel Mark W. Pollak

Deputy Commander

U.S. Army Corps of Engineers, Baltimore District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