

THE CHESAPEAKE ENGINEER

WINTER 2022

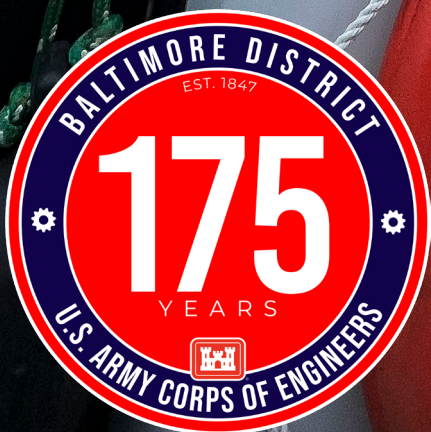
MAPPING
THE FUTURE

OPERATION
ALLIES WELCOME

ENVIRONMENTAL
EXPERTISE

SMALL BUSINESS
PARTNERSHIPS

ENGINEERING SOLUTIONS FOR OUR
NATION'S TOUGHEST CHALLENGES



THE CHESAPEAKE ENGINEER

MAGAZINE

Boat operators from Baltimore District's, D.C. Field Office conduct routine debris patrols in and around the nation's capital in November 2021. They respond to debris calls, and support navigation efforts by reducing damages, financial loss, and safety hazards to commercial and recreational vessels, operators, and docking facilities. (U.S. Army photo by Greg Nash)



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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COMMANDER, U.S. Army Corps of Engineers, Baltimore District
Col. Estee S. Pinchasin

DEPUTY COMMANDER, U.S. Army Corps of Engineers, Baltimore District
Lt. Col. David Myers

CORPORATE COMMUNICATION OFFICE CHIEF, EDITOR-IN-CHIEF
Sarah Lazo

EDITORIAL CONTRIBUTORS

Brittany Crissman
Christopher Fincham
Cynthia Mitchell
Greg Nash
Nicole Strong
Thomas Deaton

DESIGN & DEVELOPMENT
Christopher Fincham

Send change of address to:
U.S. Army Corps of Engineers,
Baltimore District, Corporate
Communication Office,
2 Hopkins Plaza, Baltimore, MD 21201

THE DISTRICT ENGINEER

Thanks to all our partners and employees for your extraordinary efforts in getting 2022 off to a great start!

Baltimore District executed a very demanding program in 2021 and supported several critical emergent missions. We quickly responded and supported the Department of State in Operation Allies Welcome, during which our Engineering, Real Estate, Resource Management, and Contracting divisions worked tirelessly to ensure the safe movement of Afghan evacuees and their families to transition and resettlement locations. This edition of our Chesapeake Engineer Magazine highlights this unique mission and some of our district's key contributors. It also touches on our diverse support to military installations and ecosystem restoration efforts.

Other outstanding efforts in 2021 included our Emergency Management Team supporting seven events during hurricane season, including catastrophic Hurricane Ida, and deploying debris team members to Kentucky to assist in tornado recovery. We marked the completion of the remediation and restoration efforts at the 4825 Glenbrook Road project area, located within the Spring Valley Formerly Used Defense Site (FUDS) in DC, after over 20 years of extensive work. Our Environmental team also began



Col. Estee Pinchasin stands alongside members of the District's Capital Area Office during the reopening of Belvoir's Dogue Creek Bridge, February 23, 2022. (Courtesy photo)

decommissioning the Army's first nuclear reactor on Fort Belvoir in Virginia. Our flood risk management and operations teammates, including our dam operators and park rangers, reduced flood risk to communities while keeping our recreation sites safely open. Our Washington Aqueduct team developed an asset-management-driven capital improvement plan, funded by our wholesale customers, embarking on the largest infrastructure improvement program at the aqueduct in decades. The Poplar Island expansion was completed, enabling dredged material placement until 2032. Design efforts continued on the Mid-Chesapeake Bay islands project, which is the future placement site of dredged material from the Port of Baltimore and approach channels. We completed initial oyster

restoration efforts in the Tred Avon River with our interagency partners. Our regulators re-issued two state programmatic general permits for Maryland and Pennsylvania. Interagency and military construction teammates continued delivering our enormous program in the most stellar fashion at Joint Base Andrews, Carlisle Barracks, Fort Detrick, Aberdeen Proving Grounds, Letterkenny Army Depot, Fort Belvoir and Fort Meade.

In addition to delivering our programs, the district is analyzing workload and workforce projections to plan and prepare for exciting new projects on the horizon. We have gladly welcomed so many new teammates to the district over the last year and continue to recruit talented individuals in all specialties to execute our upcoming work.

In 2022, please join us in celebrating Baltimore District's 175 years of service to our region and Nation. Our team members continue to embody the selfless service and dedication of those who came before us, along with our partners and stakeholders – working together to provide vital engineering solutions to our nation's toughest challenges.

BUILDING STRONG!

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

USACE SUPPORTS AFGHAN EVACUEES DURING OPERATION ALLIES WELCOME



In August 2021, the U.S. Army Corps of Engineers began supporting “Operation Allies Welcome.” The Department of State and Department of Homeland Security-led mission managed the relocations of more than 60,000 Afghan evacuees and their immediate families who supported the U.S. during the government’s 20-year presence in Afghanistan.

BY SARAH LAZO

One of the lesser-known capabilities of the U.S. Army Corps of Engineers is Real Estate, although through this role, our team members provide necessary leasing and property management support to high-profile partners. This includes ensuring the safekeeping of classified information for our Intelligence Community and securing leases for storefront recruiting offices for our military partners.

In Operation Allies Welcome, however, USACE, Baltimore District’s Real Estate mission was front and center and played a pivotal role in the operation’s success.

This monumental humanitarian effort ramped up

quickly with immense involvement from all facets of government and non-profit agencies.

“This truly was a whole-of-government effort, but there was also an incredible outpouring of support from volunteers, private sector entities like our airline partners, hotel chains and retail stores, and non-profit organizations like Save the Children and the American Red Cross,” said Col. Estee Pinchasin, Baltimore District commander.

USACE’s role in OAW was to assess and establish transient facilities that could be used for the efficient initial screening, processing and onward movement of Afghan evacuees and their families who arrived at Dulles and Philadelphia international airports.



Vacant cots await occupation before temporarily housing Afghan evacuees at a site near Dulles, Virginia, Aug. 22, 2021. (Courtesy Photo)

After staying in these facilities for typically less than 24 hours, evacuees would then travel to U.S.-based military installations to complete additional medical screenings and apply for immigration status.

“Not only did we have to move swiftly to secure and lease these facilities, but we had to quickly refurbish them to ensure safe living conditions,” said Pinchasin.

Leigha Arnold, Baltimore District contract specialist, felt the pressure of the fast-paced environment, but was driven by the end goal.

“The mission requirements changed literally from minute to minute,” said Arnold. “Execution strategies continued to change, which made the successful outcome of the procurements challenging but nonetheless rewarding. Although we worked many late nights, I don’t think that I even noticed because all that mattered were the people who needed our help the most.”

USACE team members worked with contractors and volunteer organizations to outfit the facilities, once leased, with features such as carpeting, cots, dining areas, medical stations, cell-phone charging stations and prayer spaces.

“We worked closely with our federal partners, especially U.S. Customs and Border Protection, as well as volunteers and private-sector entities, to ensure facilities met mission requirements while ensuring proper health and safety conditions. Our engineering assessments, followed by necessary construction and outfitting enabled efficient operations, which ultimately preserved the safety and dignity of the Afghan evacuees and their families,” said Mary Foutz, Engineering Division chief.

This mission wasn’t just accomplished through

interagency cohesion, but also the cooperation, collaboration and teamwork across Baltimore District’s internal divisions.

“Our military personnel and engineers performed rapid engineering assessments at many, many potential facilities – from former retail stores to airport hangars - to determine what could serve as suitable temporary living spaces; our real estate team members worked expeditiously to research, work with property managers and lease facilities; our resource management team worked to ensure funding was moved and obligated swiftly and accurately; and our contracting team worked around the clock to award necessary contracts to industry partners to assist in building out the facilities to ensure the needs established by our federal partners were met,” said Dave Morrow, Baltimore District deputy district engineer, Programs and Project Management. “Our emergency management team members also compiled comprehensive mission status updates and reported them up the chain.”

Wesley Wright, Baltimore District Capital Area Office, area engineer, also emphasized the vast coordination across USACE.

“It was remarkable to see the teamwork of almost every single division within Baltimore District pull together to accomplish this historic task, working nearly around the clock to stay ahead of the ever-changing requirements and priorities,” said Wright.

In the end, Baltimore District developed lease agreements for five facilities near the Dulles International Airport, including the 130,000 square-foot Dulles Expo Center. Baltimore District also developed lease agreements for the Southport facility in Camden, New Jersey, and additional



(Left to Right) U.S. Army Soldiers assigned to Task Force-Eagle transport supplies supporting the Department of State-led Operation Allies Welcome mission for Afghan evacuees at a site near Dulles, Virginia, Aug. 22, 2021. Contractors set up temporary layover facilities. (U.S. Army photos by Greg Nash) Bill Tully, U.S. Army Corps of Engineers, Baltimore District, Capital Area Office, program manager, at center, discusses mission specifics with team members at a temporary facility site walkthrough, Aug. 30, 2021.

space within the Philadelphia International Airport to support USACE, Philadelphia District.

“Our team of real estate, contracting, legal, and resource management specialists were truly heroes behind the scenes that enabled expedient mission execution, demonstrating the versatility of the Corps’ capabilities as the real estate agent for the Army. The work we performed in such a little amount of time to essentially augment and expand airport space is really unbelievable,” said Pinchasin. “I also want to acknowledge our team members who covered for those on this important mission by picking up additional responsibilities, to ensure our other essential missions continued seamlessly.”

“We know this won’t be our last call to support such a unique and dynamic mission, and we stand ready to answer that call when it comes,” concluded Pinchasin.

While the District stands ready to tackle whatever comes next, OAW left an indelible mark on those involved.

“One of the most rewarding things we do in Real Estate is get people out of harm’s way - whether it’s a flood risk management project or OCONUS leasing for our Special Forces,” said Stan Graham, a branch chief within Baltimore District’s Real Estate Division. “For this mission, we acquired and fit out leased space at an unheard-of speed, but what I’m most proud of is helping get our Afghan evacuees out of harm’s way.”

“This was easily the most unique experience of my career,” continued Wright. “One of the best aspects of being with USACE is knowing that our efforts are always in support of incredibly important overall missions, including support to the warfighter and securing our Nation. All our hard work throughout this mission was more than worth it once we got to see and interact with our Afghan partners and their families who were beyond grateful for our efforts.” ■

USACE SUPPORTS AFGHAN EVACUEES DURING OPERATION ALLIES WELCOME



PAULA BECK
CONTRACTING
DIVISION CHIEF

“Our Contracting Team, to include Contract Specialists Leigha Arnold and Patty Morrow, provided a variety of contracted services to support this critical humanitarian effort. Requirements were extremely fluid, requiring our ability to flex and find solutions in partnership with our industry and other agency partners. I worked alongside the best of the best within USACE and interagency teammates -- all with the single goal of helping others. The U.S. Army Corps of Engineers does amazing work. This humanitarian effort simply highlighted our team's incredible ability to work seamlessly with other agencies and industry partners with a kindness, generosity, and commitment to help others find comfort during a challenging time.”

CAPT. BRANCE WAGGOMAN
PROGRAMS & PROJECT
MANAGEMENT DIVISION
MILITARY BRANCH
PROJECT MANAGER

“Supporting Operation Allies Welcome has been the most rewarding mission I have participated in during my time with USACE because of how directly it connects with my previous experience in Afghanistan.

“I am incredibly proud to have been a part of this team, and it is hard to describe how humbling it was to support Afghan evacuees arriving in the United States so directly. I am inspired by the interagency teammates and volunteers I had the pleasure of working with.”

BENJAMIN ROONEY
REAL ESTATE
DIVISION CHIEF

“The most challenging aspect of Operation Allies Welcome was the dramatically compressed timeframe for identifying space and negotiating and executing leases.

“The mission required 10–16-hour workdays, seven days per week. Lease amendments were subsequently needed in response to evolving requirements on the ground and fluctuating volume of evacuees arriving each day. Exhaustion aside, it was invigorating to be part of this critical humanitarian mission. I’m proud of all our missions, but rarely can I say that my efforts directly play a role in saving lives, and I was able to say that about OAW. I can’t say enough for our team of real estate experts, like Gloria Hawkins, whose profound technical expertise, unwavering dedication to her work and passion for the mission at hand ensured no stone was unturned or ball dropped during this mission.”

CAPT. BRADLEY BUSS
EAST CAMPUS INTEGRATED
PROGRAM OFFICE
PROJECT ENGINEER

“I witnessed this war firsthand, conducting route clearance operations, and I returned from Afghanistan with memories of violence and general unpleasantness. Operation Allies Welcome created hundreds of positive memories, and I will never forget the amount of hard work, generosity, and kindness I observed as part of this mission. Individuals from every aspect of the government came together and worked tirelessly to make this mission possible.

“I was in a unique position to help shape the facility layout for one of the sites near Dulles, and the best use of space in the entire facility was establishing a children’s play space. A Humanitarian Aid organization managed this space, and each day hundreds of children would find happiness in this relatively small space. Colored pictures filled the walls, and we could typically hear the laughter from this area throughout the building. This space served as a simple reminder of the profound impact we have had on these individuals, which we will feel for generations.”



THE WASHINGTON AQUEDUCT MODERNIZATION

BY CYNTHIA MITCHELL

For nearly 170 years, the Washington Aqueduct, a division of Baltimore District, has provided potable drinking water for the District of Columbia, later expanding coverage to Virginia's Arlington and Fairfax Counties in 1927 and 1947, respectively. The federally owned and operated public water supply agency currently produces an average of 155 million gallons of water per day between two water treatment plants to meet regional demands, which amounts to less than half of their combined capacity of 320 million gallons per day. This production ensures that approximately one million citizens living in, working in, or visiting the area, including many critical government and military facilities, can access safe water and remain fully operable – a vastly different landscape from the late 1800s when Congress realized that a municipal water system was essential in order to meet the demands of rapid population growth.

The history of the Aqueduct is as rich as that of its local region. Commissioned in 1852 following a large fire the year before that nearly engulfed the entire

Capitol building, construction commenced in 1853 under supervision of Corps of Engineers Lieutenant Montgomery C. Meigs. This undertaking was one of the earliest U.S. military involvements in the civil sector.

Prior to construction, Meigs reported to Congress on water supply and identified the Potomac River at Great Falls as an ideal water source. His report covered water requirements such as storage, filtering, fire service and sanitation, as well as present and future city populations – important predictions given that water systems develop with the growth of a city.

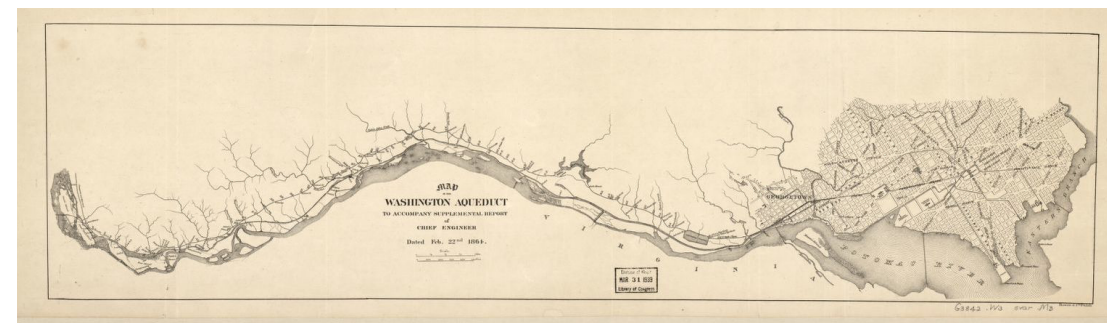
Despite his best efforts, Meigs failed to foresee the city's future water requirements. He estimated 22.5 million gallons of water would be needed per day in the year 1900, and the capacity of his suggested 9-foot conduit from Great Falls would not be exceeded for almost two centuries. Capacity was reached within less than one-third of that time. It quickly became clear that the Aqueduct would have to be willing to grow and change along with the city that surrounds it to properly meet demands.

The Aqueduct's mission is

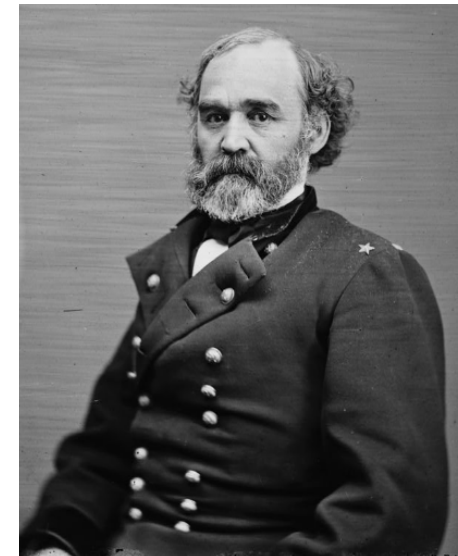
unwavering. Despite a booming population and modern-day water requirements, the skilled team of approximately 150 people continues to produce safe drinking water around the clock. And yet, the organization's rich tradition of adaptation is once again being put to the test as it faces many of the same readiness challenges that are impacting aging water systems throughout the country.

AMERICA'S AGING WATER INFRASTRUCTURE

Aging water infrastructure is at a crossroads nationwide. In a 2018 survey and assessment, the Environmental Protection Agency (EPA) found that drinking water infrastructure alone needed nearly \$500 billion in



Map of the Washington Aqueduct. (Courtesy of The Library of Congress)



Montgomery C. Meigs (Courtesy of the Library of Congress)

maintenance and improvements over the next 20 years to continue to provide safe and reliable service. The industry is also grappling with emerging problems such as water safety challenges, the deployment of new technology, and the inevitable need to address climate resiliency and water scarcity.

While many of the nation's water systems are working diligently to modernize toward greater infrastructure sustainability, local and federal funding for drinking water infrastructure has not kept pace with the industry's growing needs. Water and wastewater utilities are notoriously difficult to fund compared to other more visible aging infrastructure initiatives, given that system assets are most often buried or hidden from the public eye. These factors have resulted in a gap between the amount of

spending needed for critical updates and money available to support those needs.

The Washington Aqueduct is no exception. Readiness challenges mirror those seen throughout the industry. Subsequently, the organization is undertaking its most robust modernization effort to date – an evolution necessary to ensure continued success for a vital mission.

USHERING IN A NEW ERA OF MODERNIZATION

Under the direction of Baltimore District Commander Col. Estee S. Pinchasin and Washington Aqueduct General Manager Rudy Chow, the Aqueduct is several years into an evolutionary, mission-essential modernization plan that will usher in a new era for the historic water utility. The plan, or Evolution 2030, centers around an intensive asset management strategy, as well as data system upgrades that will result in critical infrastructure renewal, improved water security, and ensured continuity for the Aqueduct.

"I am excited to help usher in such a momentous period of change for the Washington Aqueduct," said Pinchasin. "The award-winning team of highly skilled professionals at the Aqueduct are committed to improving the processes that will ensure we will continue to provide safe, reliable and cost-effective drinking water to the region."

A major portion of the modernization efforts centers around the acquisition and implementation of comprehensive asset management practices that will enable planning for the "three R's": rehabilitation, renewal, and replacement. This will integrate Operations and Maintenance (O&M) and Capital Improvement Program (CIP) to enable strategic investment planning, funding and regulatory requirements. Ongoing CIP efforts include

maintenance and improvement efforts to the Aqueduct's 2nd and 3rd High Reservoirs that will result in improved function and increased protection and reliability, including demolition and replacement of the affluent and effluent control buildings; replacement of water sampling systems and control valves; and upgrades to reservoir drain lines. The Dalecarlia Water Treatment Plant's (WTP) clearwells and backwash water tank will also be receiving significant improvements that will result in improved function, increased protection, and reliability of the overall system.

D.C. locals may have noticed another improvement project as they drive down MacArthur Boulevard - the iconic Castle Gatehouse, built in 1900 to resemble the castle emblem of the U.S. Army Corps of Engineers, is undergoing renovation, along with four other structures at the Georgetown Reservoir currently receiving architectural, structural, electrical, mechanical and civil upgrades.

Other ongoing repairs and upgrades include replacement of the McMillan North Clearwell, improvements to flocculation and sedimentation systems at the Dalecarlia WTP, and repairs to deteriorated sections of the old conduit located under MacArthur Boulevard, which convey water from the Potomac River to Dalecarlia. Future projects include major upgrades to the East Filter Building at the Dalecarlia WTP; improvements to transmission mains that will address main leaks and replace critical valves to ensure reliable water service to respective service areas; and chemical building HVAC upgrades.

Additionally, a major employee relocation of the administration building is also in the works with a goal of providing improved workspace accommodations to meet staffing needs and make the entire space ADA compliant. These improvements will make



Pipes carry water to be tested at the Dalecarlia Water Treatment Plant. (U.S. Army photo by Christopher Fincham)

way for future staff growth and development, another major priority for the Aqueduct leadership team.

“We strive to be a national leader in the water treatment and supply industry,” said Chow. “Hiring and retaining experienced, qualified and talented people is a primary focus of ours throughout this modernization effort.”

Pinchasin agrees. “The current efforts to modernize this vital organization are not only limited to infrastructure. We also have to grow the engineers of the future who will operate, maintain and expand this operation for decades to come. The right people are just as critical to the mission as our infrastructure needs. They are the glue of an optimized organization.”

The second major portion of ongoing modernization efforts focus around system data upgrades. Overdue technological upgrades to digital water monitoring systems will provide consistent

The Washington Aqueduct won first place in the Water Taste Test Challenge at the American Water Works Association’s Chesapeake Section Tri-Association Conference in 2021. They will advance to compete in the National competition in Texas in June 2022.

automated and predictive data analysis and improve control of system operators throughout the Aqueduct. They will also enable for real-time problem identification, including physical and cyber security systems that are necessary in modern-day operations. Upon its completion, the Aqueduct will have a state-of-the-art security system that will help deter, detect, and deny unauthorized access as well as provide staff the ability to remotely assess situations and respond to incidents at critical infrastructure facilities.

Other major forward-planning considerations for the Aqueduct include climate change and source water resiliency planning. The Potomac River serves as the sole source of raw water for the region, and U.S. Geological Survey climate models project rising

temperatures in the Potomac River Basin, which may shift water availability. The EPA, which sets all standards and requirements for drinking water, also

reports that climate change is likely to increase water demand while shrinking water supplies.

“The wide range of possible changes in water availability increase uncertainty in water supply planning and require continual study of action to help us improve system performance and long-term resiliency planning,” said Pinchasin. “We cannot afford to overlook this issue as we look towards an Aqueduct that is prepared to keep the water running for many decades to come. I am confident that this team, along with our Wholesale Customer Board, wholesale customers, and other important stakeholders, will remain committed to moving this mission forward successfully despite the challenges that may come with modernization efforts. We will work diligently to keep the water flowing.” ■

WATER TREATMENT PLANT OPERATOR **ALONZO LAWRENCE**



(U.S. Army photos by Cynthia Mitchell)

The Washington Aqueduct’s 185 Authorized Personnel work around the clock to ensure that all aspects of the water treatment process are closely monitored and maintained. The team of highly skilled and trained professionals consists of water treatment plant operators, engineers, laboratory technicians, maintenance specialists, safety professionals as well as administrative and security staff.

Much has changed throughout the Aqueduct’s 170-year history and very few are as familiar with the organization’s modernization efforts as Water Treatment Plant Operator Alonzo Lawrence. A U.S. Army veteran, Lawrence began his career with the Aqueduct in 1982 as a laborer, the first of many titles held throughout his prestigious 40-year career. Lawrence is the last person on staff at the Aqueduct to have worked

within the McMillan Slow Sand Filtration Site, D.C.’s first large-scale water purification system built in the early 20th century. The facility relied entirely on sand to clean water, which was much more cost effective than using chemicals. Untreated water came in from the reservoir next door and slowly percolated through the 4-foot lining of sand in 25 vaulted underground cells before continuing to public pipes for consumption. This system, and the workers like Lawrence who maintained it, are credited with drastically reducing typhoid fever and malaria epidemics in the District at that time and played a critical role in the health of the local community for the next 80 years.

“I love my job, and I do it for the customers. I serve the people. I have relatives across the street, and they ask me frequently, ‘how is the water?’ And I can give them a response every time.” ■

WASHINGTON AQUEDUCT GENERAL MANAGER **RUDY CHOW**

Rudy Chow is currently serving as the General Manager of Washington Aqueduct. Prior to joining the Baltimore District in 2020, Chow served as the director of the Municipal Utilities and Engineering Department for the City of Redlands in California. He was previously appointed as the director of Baltimore City’s Department of Public Works and also spent more than 20 years with the Washington

Suburban Sanitary Commission, serving Montgomery and Prince George’s counties. In 2019, he was named “Top Ten Public Works Leaders” by the American Public Works Association, among several other awards.

“I look forward to continuing to work with staff to bring about performances that will propel Washington Aqueduct to the next level and live up to the rich and proud history of the Aqueduct,” said Chow. ■



(U.S. Army photo by Cynthia Mitchell)

The Washington Aqueduct is committed to recruiting and hiring talent – the leaders of the future – who will help usher the organization into this next era. Interested in joining the Washington Aqueduct team?

ENVIRONMENTAL EXPERTISE

Within the U.S. Army Corps of Engineers, Baltimore District’s Planning Division, there is a special interdisciplinary team that provides technical natural resources support and services to various Department of Defense and federal agencies across the Chesapeake Bay Region.

BY NICOLE STRONG

The Installation Support Branch provides environmental expertise and develops methodology for agencies to ensure compliance with environmental laws and regulations, allowing them to accomplish their critical missions without harming natural resources. This combined environmental expertise with GIS capabilities creates clear, accurate and timely maps that depict potential project impacts and helps the agency select a project option with the least environmental impacts. Projects can range from new construction, to existing project renovations to alteration of the landscape. Areas of expertise within ISB are broken into four categories: flora and fauna efforts include avian and reptile surveys, threatened/endangered species surveys, habitat mapping and pest management plans.

Water resources efforts include stream corridor assessments, water-quality monitoring and stream mapping. Forest efforts include invasive species surveys and management plans, forest conservation planning, forest stand delineation and wildland fire management plans. Finally, wetland efforts include wetland delineation, permitting, mitigation planning and agency coordination and consultation. Environmental laws from the 1960s drive the efforts of ISB. Any project completed is required to follow the regulations put forth to protect natural resources that may be affected. It is the responsibility of the ISB to work with agencies to identify potential impacts and to create a plan to mitigate for these impacts. Within ISB, there is additional National Environmental Policy Act (NEPA) expertise. The NEPA experts rely heavily on the subject

matter experts within ISB to ensure USACE and its partners follow legal processes. USACE receives projects from the installations’ Directorate of Public Works (DPW). The ISB then performs extensive surveys along with wetland delineations to determine precisely where wetlands are located within the installations’ project plans. These efforts aid in making informed decisions on how the installation can proceed. “Identification is the biggest part of the process; it takes a lot of time,” said Eva Falls, Baltimore District archaeologist. “We help determine the best project alternatives by informing the installations on what they need to proceed and how to minimize risk.” **KEY ISB PROJECTS** Baltimore District supports installations and interagency partners with their resource

needs all over the Chesapeake Bay region with a few key standout projects. Joint Base Andrews (JBA), located in Prince George’s County, Maryland, requested the assistance of Baltimore District to complete wetland delineation of the military base prior to airfield and runway renovations. JBA will use this information to determine where work can be done. Based on this wetland delineation, Baltimore District assisted the installation with securing and building a wetland mitigation site in Southern Charles County, which is being used to offset the environmental impacts from the renovations at JBA. Information gathered by USACE from 2010 through 2012 is aiding in the current re-delineation of each wetland on the installation, which will be used to determine future runway plans. Once plans are finalized, the ISB will then assist in the joint permit application, depending on the installation’s needs at the time. In addition to the wetlands themselves, there are rare species that may come into play that will need to be addressed in the plans. “The three steps in our process of support are always the same, regardless of the project,” said

Falls. “We find what is there, evaluate and look for alternatives and then have the conversation about mitigation if we cannot completely eliminate or minimize damage to natural resources.” Another key project that relied on the expertise of the ISB was requested by Aberdeen Proving Ground in Harford County, Maryland. Atkisson Dam, a low dam and weir built across a river to raise the level of water upstream or regulate its flow, was beginning to fail. Both the dam and weir were built in the 1940s and due to aging, were becoming a liability. Therefore, the installation wanted to proceed with removal. The ISB began work in 2019, starting with stream assessments above and below the dam. These assessments determine baseline data to compare the status of the area before and after the dam is removed. Initial surveys of the area and wetland delineation of both the dam and the weir were performed to determine any potential impacts to resources based on the action of removing the dam. Electrofishing was one technique used to obtain a complete picture of the fishery and accurately calculate data. “The fish work at Atkisson Dam was really cool,” said Dan Cockerham, Baltimore District ecologist. “We were able to count thousands of little fish in the area with the electrofishing technique.” Additional projects include the Fort Detrick Steam Sterilization Plant Replacement, where a path forward was determined by the ISB for the successful completion of the associated Environmental Assessment based on the NEPA process; the U.S. Department of the Treasury, Bureau of Engraving and Printing Environmental Impact Statement, where construction and operation was examined for the new, state-of-the-art currency production replacement facility; and the Humphreys Engineer Center Fence line Record of Environmental Consideration, where less than five acres had environmental disturbance and a streamlined review process was utilized. The diverse expertise and interagency coordination provided by the Baltimore District’s Installation Support Branch to ensure continued partner mission success while protecting natural resources are unmatched. ■



FLORA AND FAUNA

- avian and reptile surveys, threatened/endangered species surveys, habitat mapping and pest management plans



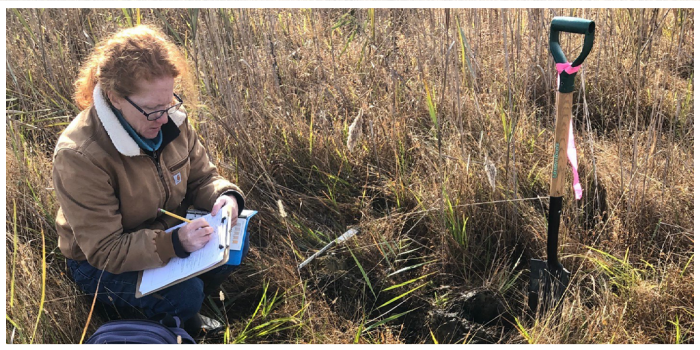
FOREST

- invasive species surveys and management plans, forest conservation planning, forest stand delineation and wildland fire management plans



WATER RESOURCES

- stream corridor assessments, water-quality monitoring and stream mapping



WETLANDS

- wetland delineation, permitting, mitigation planning and agency coordination and consultation

MAPPING THE FUTURE

Geographers at the U.S. Army Corps of Engineers center their careers around leveraging the latest geospatial technology to help facilitate various projects, protect the Nation, and uphold the USACE mission.

BY ROB KLARA

Since the organization's founding, USACE knows no history without geographers in pivotal rolls shaping our Nation. Originally, the U.S. Army Corps of Topographical Engineers was its own entity outside of USACE tasked to explore the western frontiers on the Lewis and Clark expedition, design lighthouses, and survey the Great Lakes. It merged with USACE in 1863.

Today, the life of a geographer looks much different. Using a tool called GIS, or Geographic Information Systems, geographers manage spatial layers of information across various disciplines, perform analysis and visualize vital information.

The day in the life of a geographer is never the same.

"One moment, I'm working on supporting clients on Aberdeen Proving Ground, and the next I'm on the phone with geospatial technical exchange from other district offices, talking about data management, as everyone manages data differently," said Jared Scott, GIS program manager for the Baltimore District and geographer for the Installation Support Branch of the Baltimore District Planning Division. "Later, I could be setting up apps online for projects."

GIS AT WORK

Geographers and GIS play a critical role in the planning and execution of a multitude of key USACE projects and programs in collaboration with our partners to engineer water resources solutions, reduce disaster risks and help secure our Nation.

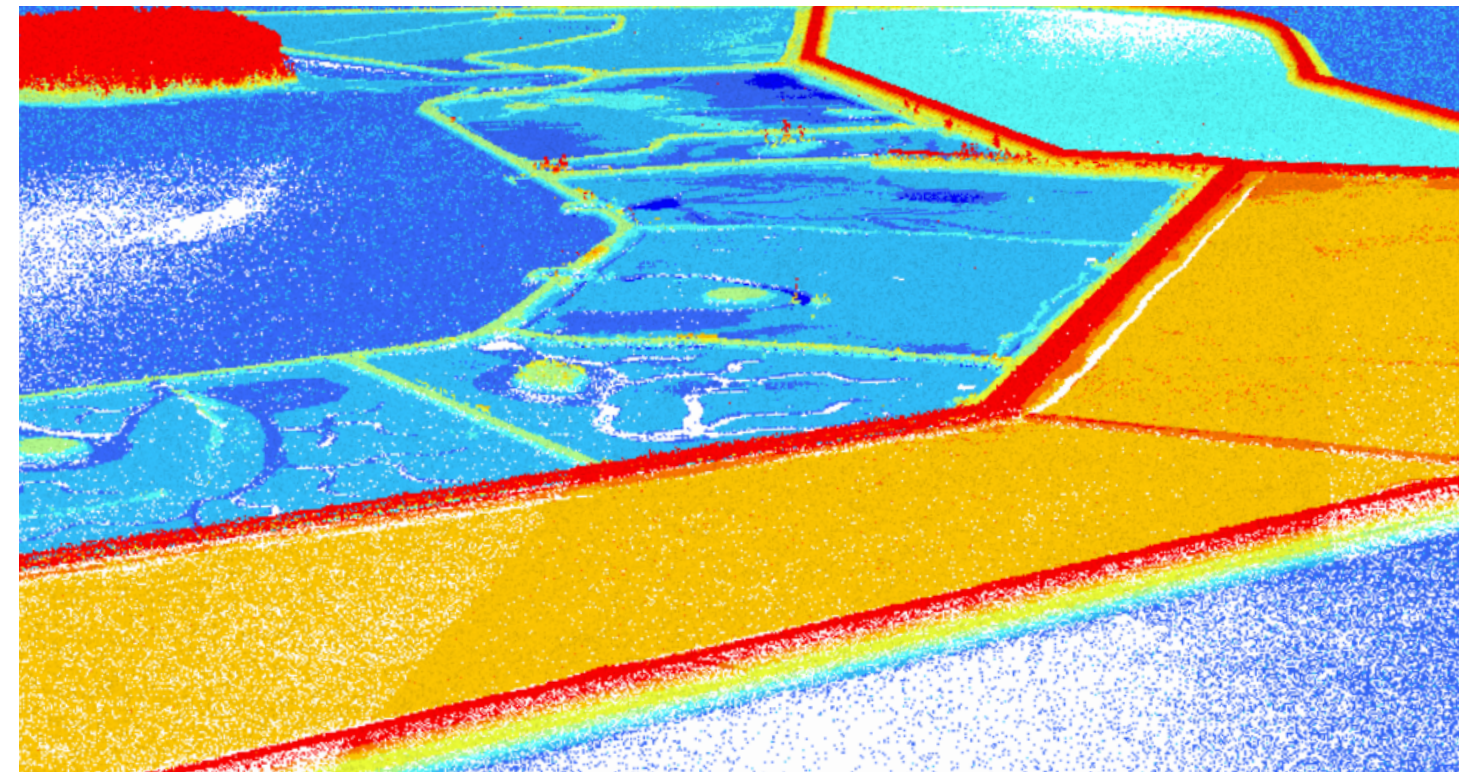
"Being able to map our current projects allows decision makers to not only know but understand the lay of the land and plan for necessary operations," said Scott. "Through GIS, we have the ability to show our partners the various features on their sites like stormwater drains to manage BMPs on military installations."

"GIS is a collaborative tool bringing many people together from across the District," said Geoff Tapalu, a geographer with the Baltimore District Engineering Section. "We [in Engineering], for example, work on maintaining the spatial and visual information in the National Levee database, which contains vital information for the public and emergency management regarding levee locations and flooding risk factors."

On the large Codorus Creek flood risk management project in Pennsylvania, GIS helps identify elevations and the locations of drainage conduits and pipe crossings to help determine additional property easements that may be needed to maintain the project.

The course of a real estate project can drastically change with the smallest changes.

"If we move part of a project 5 feet to the left, this could impact property lines and change the course of an entire project's Real Estate plan," said Geographer Ron Santos, chief of the Technical Services Branch of the Real Estate Division. "This type of spatial information can really determine if a project is built or not – or where it's built. GIS can tell us how we can achieve our goals, while mitigating



An image of a 3D LiDAR point cloud dataset of Poplar Island has been visualized in ArcGIS Pro, which allows for assessing micro changes in elevation in a Digital Elevation Model (DEM). This data is from a 2015 University of Delaware study provided by USGS National Map 3DEP.

potential costs – from time or land acquisition costs."

"Geographers across USACE work hard at providing practical solutions from the beginning to the end of a project."

THE FUTURE OF GIS

Most agree Landscape Architect Ian McHarg laid out the first concept of GIS in his book *Design with Nature*. Right here in Baltimore, McHarg brought together a team of planners, geologists, hydrologists, public health experts and water quality experts to preserve forested areas important for aquifer recharge of the entire region's drinking water.

Our ability to leverage GIS tools has evolved considerably since then and especially over the past decade — with the advancement of tools and algorithms to perform analyses.

Serving as the gatekeepers, geographers use a GIS software platform called ArcGIS to handle most of the heavy lifting.

"I think the power of GIS is not just making pretty maps, but the analysis it provides," said Tapalu. "You can bring in soil information, hydrology features, wetland areas and understand their relationships. We can look at buffers around certain features, distances, change-detection analysis, and suitable-location analysis. When we work with partners, we can show them not just

physically, but also temporally, how things have changed over time."

These tools also provide access to data in real time.

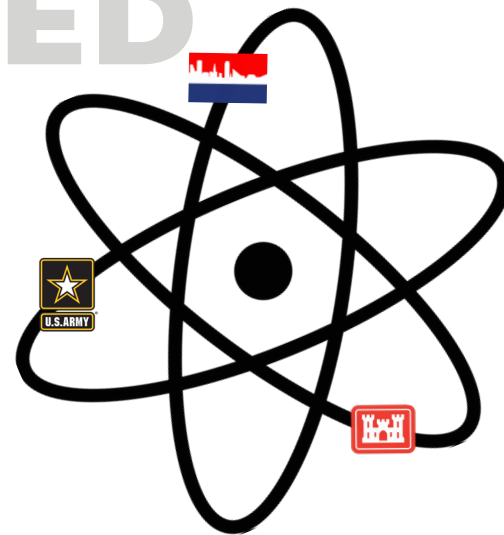
"Traditional features on these platforms are constantly upgraded for reporting and data analysis; it has improved our ability to capture information using tablets in the field," said Scott. "We can tune in to this live dataset from the office, and see real time what data is entered, and leverage this information onto a dashboard for leaders to view."

Tapalu, who began his Army career with the Army Geospatial Center, thinks the future of GIS is bright.

At the AGC, he worked on testing the interoperability of the Mobile/Handheld Computing Environment, which is one of several computing environments in the Common Operating Environment (COE). The COE is an approved set of computing technologies and standards that enable geospatial data to be shared securely and rapidly and provides soldiers in combat with a common operating picture — from the battalion to the commander.

"Our troops are able to view the line of sight, terrain and quickest, safety route from A to B. With the way GIS technology is continuing, we will be able to continue to do great things like secure our region and Nation." ■

THE DEACTIVATED NUCLEAR POWER PLANT PROGRAM



COMPILED BY THE DNPPP TEAM

From 1956 to 1976, the Army Nuclear Power Plant Program operated several small nuclear reactors to confirm their feasibility to meet military power needs on land. Three Army reactors were deactivated in the 1970s and placed into safe storage awaiting future decommissioning.

The U.S. Army Corps of Engineers (USACE), Baltimore District, is home to the North Atlantic Division's Regional Radiological Health Physics Regional (RHPR) Center of Expertise, which has successfully completed Army Reactor decommissioning projects and is leading the decommissioning on Army reactors.

The U.S. Army regulates the Army Reactor Program, and the Army Reactor Office issues deactivated nuclear power plant permits to USACE to manage the decommissioning of these plants, which is done by the Deactivated Nuclear Power Plant Program (DNPPP). Within the DNPPP, Baltimore District's team is managing the decommissioning of the Army's two remaining deactivated nuclear reactors — the SM-1 at Fort Belvoir, Virginia, and the SM-1A at Fort Greely, Alaska. The team also recently completed the decommissioning of STURGIS.

"Our team of experts has a combined total of over 60 years of experience in radiological project support and management," said Dave Watters, chief of the RHPR Center of Expertise. "We have demonstrated our experience at a variety of sites throughout the United States and internationally; our team can provide all types of radiological services to our various stakeholders."

Decommissioning includes all aspects of the project, including the removal of all reactor components; transportation and disposal of material; site cleanup; and restoration. The USACE team works hand in hand with the decommissioning contractor to ensure all aspects of the project are done with safety as the top priority.

MH-1A STURGIS

In 2019, USACE celebrated the completion of the decommissioning and dismantling of the historic

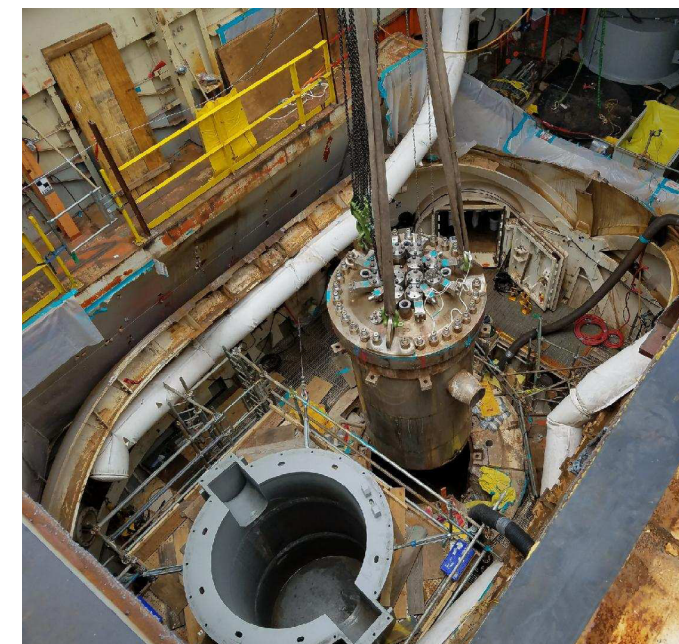
STURGIS Barge which was formerly the world's first floating nuclear power plant. The completion of the project was achieved when the final section of the former vessel was brought ashore for processing and recycling at the International Shipbreaking facility in the Port of Brownsville, Texas.

STURGIS had a unique life since first being built in the 1940s as a World War II Liberty Ship, the SS Charles H. Cogle. After serving in World War II, the ship was converted into the world's first floating nuclear power plant in the 1960s, housing the MH-1A nuclear reactor. The MH-1A was used to generate electricity in the Panama Canal Zone from 1968 to 1976.

In 2012, its formal decommissioning effort began as part of a broader effort to decommission the Army's retired nuclear reactors through the DNPPP. After award of the decommissioning project



The U.S. Army Corps of Engineers Nuclear Power Plant "STURGIS" enters the Panama Canal in 1968.



The Reactor Pressure Vessel aboard the STURGIS, the Army's retired floating nuclear power plant, is lifted in order to be placed in a specially designed shielded shipping container.

contract, the STURGIS was towed 1,750 miles from Virginia to Galveston, Texas in April 2015 for its final decommissioning.

That decommissioning effort was completed in summer 2018 with the safe removal of all components of the deactivated nuclear reactor and associated radioactive waste, in close coordination with Galveston District, the Marine Design

Center, and APTIM Federal Services. The vessel was towed to Brownsville, Texas for final traditional shipbreaking, which was completed in March 2019.

"The project to decommission and dismantle a floating nuclear power plant was truly unprecedented," said Brenda Barber, project manager. "This unique, one-of-a-kind, historical power plant was never designed

to be taken apart, and the available information about its construction was lacking in many details. The hazards that required mitigation dictated a painstaking and deliberate process to avoid any release to the environment and the health and safety of the workers involved."

SM-1

On the western shore of the Potomac River within the boundaries of Fort Belvoir in Fairfax County, Virginia, is the Stationary, Medium Power Model 1 Nuclear Power Plant (SM-1), which is the Army's first nuclear reactor and first in the country to provide nuclear-generated power for a sustained period to the commercial grid. In 2020, Baltimore District awarded a \$71.7 million contract to joint venture APTIM AECOM Decommissioning LLC (A2D) for the decommissioning, dismantling, and disposal of SM-1.

The team successfully performed the initial entry into the Vapor Containment (VC) structure in June 2021, which allowed them to perform initial safety and structural inspections to facilitate crews mobilizing to the site in fall 2021. The remainder of 2021 and a majority of 2022 will focus on site preparation, in close coordination with Fort Belvoir and the local communities. The early stages of decommissioning are scheduled to begin in 2022 and continue for two to three years. From there, the work will focus on site restoration and

final documentation, with an estimated project completion in 2025.

“The team is really excited to build on our record of success and safety with the STURGIS decommissioning project, as decommissioning moves forward for the SM-1,” said Rebecca Yahiel, project manager.

The construction of SM-1 at Fort Belvoir was completed in March 1957. The reactor achieved criticality in April 1957 and was operational until March 1973. The SM-1 was a single-loop, 10-megawatt-thermal pressurized water reactor delivering a net 1,750 kilowatts of electrical power. Developed by the Army as part of a movement to harness atomic energy for power generation, SM-1 was the Army’s first functioning nuclear power plant and served as a basis for the development of more reactor facilities in the years following.

Over the next several years, SM-1 provided partial power to Fort Belvoir, but was primarily a training facility for approximately 800 nuclear power plant technicians from all military branches before being deactivated in 1973 and partially decommissioned.

The partial decommissioning consisted of the removal of the majority of the site’s radioactivity, including the removal of nuclear fuel and control rods, minor decontamination, shipment of radioactive waste, sealing of the Reactor Pressure Vessel, and installing appropriate warning signs and monitoring devices. The majority of SM-1’s remaining low-level radioactivity is within activated metals and components of the reactor system, which are all secured within the walls of the facility’s containment vessel – greatly reducing any potential risks to human health of the environment.

“With the fuel and radioactive waste all removed in the 1970s, at this point our team will be dismantling and removing activated metals and

components, so this is likely not what people think of when they think of radiological work. There are no drums of liquid waste, no control rods, or anything like that,” explained Yahiel. “With the activated metals and large pieces of the old reactor, there’s also minimal risk of any sort of a ‘release’ into the air or a ‘spill’ of waste during the project. We will be working in a containment area to carefully dismantle, securely package and remove large components of the old system that have low-level residual radioactivity.”

SM-1A

Located at Fort Greeley, Alaska - approximately 100 miles southeast of Fairbanks and 225 miles northeast of Anchorage

- Stationary, Medium Power Model 1A Nuclear Power Plant (SM-1A) - was designed based on the concept of SM-1. The “1A” moniker designated it as the first field plant of its type.

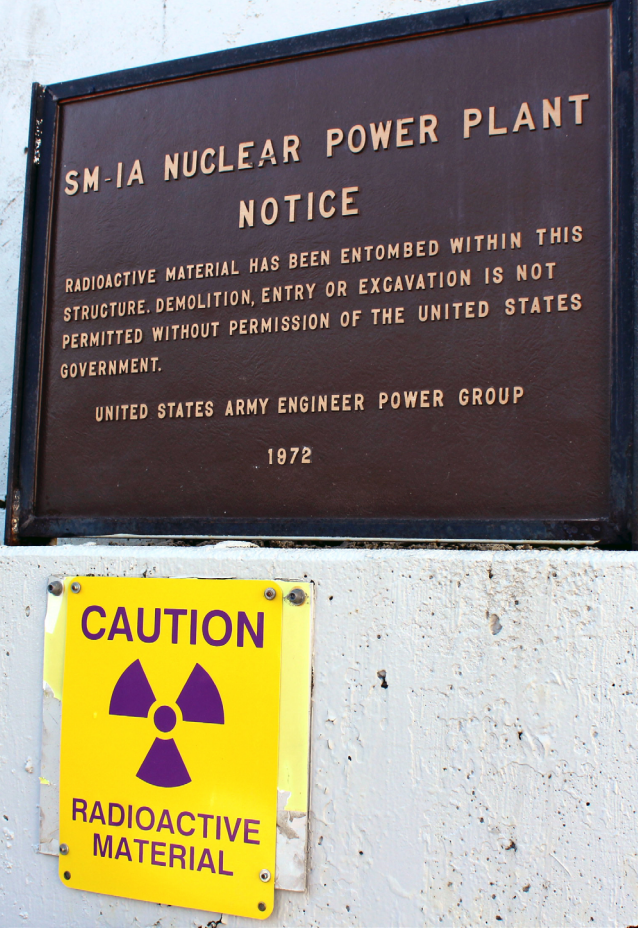
The team is nearing completion on the decommissioning planning, and in July 2021, the project team finalized the Environmental Assessment (EA) and Finding of No Significant Impact (FNSI) for the decommissioning and dismantlement of the deactivated SM-1A. Also, in a joint effort, USACE, the Alaska State Historic Preservation Office, the

City of Delta Junction, and Nuke Digest have finalized a National Historic Preservation Act Section 106 Memorandum of Agreement (MOA) for SM-1A that outlines how the history of SM-1A and its unique arctic mission will be preserved.

The project team is working towards the completion of the decommissioning planning documents while focusing on the decommissioning contract acquisition to support an award in 2022. In late 2021, the team began working with the Defense Logistics Agency, Fort



TOP: Aerial view of the former SM-1 nuclear power plant on Fort Belvoir in the 1960s. BOTTOM: Undated file photo shows U.S. Army, Air Force and Navy personnel in the control room of the former SM-1 nuclear power plant at Fort Belvoir.



TOP: A plaque signifying the SAFESTOR of the containment vessel of the SM-1A Deactivated Nuclear Power Plant during a site tour April 24, 2019. BOTTOM: The SM-1A Nuclear Power Plant is located in central Alaska, approximately 6 miles south of Delta Junction on the Fort Greeley Military Reservation.

Greely staff, and Doyon Utilities, to implement the separation of utilities between the north and south end of the facility that houses the reactor systems, which will allow for safe implementation of future decommissioning activities. The project team is also working on selection of a contractor for the future decommissioning and dismantlement for the site.

Based on the design of SM-1, construction of the SM-1A Reactor Facility at Fort Greeley began in 1958 and was completed in 1962 with first criticality achieved March 13, 1962. SM-1A was a single-loop, 20.2 megawatt-thermal pressurized

water reactor that used highly enriched uranium dioxide fuel to generate 2,000 kilowatts of electrical power and 37,850 pounds of extraction steam per hour. SM-1A’s primary mission was to supply electrical power and heating steam for on-post buildings and facilities at Fort Greeley; it was also used as an in-service test facility to understand how the equipment would function in an arctic environment. The secondary mission was to study the economics of operating a nuclear electric power plant as compared to a conventional oil-fired system in a remote setting where fuel costs are high and refueling logistics challenging.

In 1970, the Chief of Engineers decided the SM-1A reactor would be shut down for the last time following the normal end-of-life after its fourth core. The final shutdown, which included deactivation and initial decommissioning of the SM-1A reactor, was performed in March 1972, when the facility was effectively placed into SAFSTOR (safe storage). Much of the reactor’s primary system components were dismantled, and components inside the VC were encased in concrete and a grout-sand-soil mixture. Waste generated during the initial deactivation activities was placed in the spent fuel pit and waste tanks pit. These pits were then filled and capped with reinforced concrete.

“This will be the third and final reactor that our team will be decommissioning. We will be bringing a wide variety of expertise and lessons learned from MH-1A and SM-1 to this project to ensure success. Additionally, we are partnering with our counterparts at Alaska District to gain their expertise on working in this remote, interior Alaska location,” said Jeffrey Hillebrand, project manager.

Both remaining decommissioning efforts are slated to be complete by 2028. ■

ANACOSTIA WATERFRONT INITIATIVE

THE RIVER'S RESILIENT JOURNEY TO A BRIGHTER FUTURE

BY BRITTANY CRISSMAN

The Anacostia River watershed has been home to many throughout history. Before John Smith sailed up the Chesapeake Bay from Jamestown, Virginia, in 1608, the Anacostia River was home to the Nacotchtank Native Americans for more than 1,000 years. Once Maryland colonists arrived in 1634, the Anacostia River became a primary transportation route, and along its banks soon began the start of tobacco farming, which ultimately dominated the landscape and led to depleting soils and build up of silt in the river.

Generation after generation began to slowly witness what was once known as a prosperous river, home to more than 50 fish species, become a neglected, forgotten river due to decades of environmental harm from increased pollution, alteration and industrial development.

Beginning in the early 1900s, partnerships and plans emerged to try to transform the watershed. In 1901, the Senate Parks Commission initiated

the McMillan Plan to create open space to improve public health conditions due to the spread of malaria in the river's water, and to establish a parkland for the Anacostia River.

From 1902 to 1926, the U.S. Army Corps of Engineers (USACE) assisted with the McMillan Plan, performing extensive dredging, filling in of wetlands and mudflats, and constructing seawalls along the riverbank to create the envisioned Anacostia Park. Unfortunately, soon after, the Anacostia Waterfront became a location for neglectful land management practices.

After World War II, our Nation's capital grew at a substantial rate. In turn, the Anacostia watershed became the most urbanized watershed within the Chesapeake Bay Basin — further deteriorating the health of the river.

Starting in the 1990s, USACE's primary focus for the Anacostia River has been ecosystem restoration. Studies concluded that only 20 to

30 fish species and only about one-quarter of the original forest cover remained.

In the early 2000s, former Mayor of the District of Columbia, Anthony Williams, began and led the Anacostia Waterfront Initiative to restore and transform the river. This initiative set in motion the implementation of a comprehensive blueprint for transformation, including new mixed-income neighborhoods, environmental restoration, transportation infrastructure, enhanced public access, new connected parks, and cultural destinations.

The Anacostia Waterfront Initiative is a 30-year, \$10 billion Public-Private Partnership led by the District of Columbia government, with support from 19 regional and federal partners, such as USACE, the Federal Highway Administration, and the National Park Service.

In 2010, Baltimore District completed the Anacostia Restoration Plan.

"This was a great partnership with the Metropolitan Washington Council of Governments, several counties and D.C., and non-profit organizations that laid the groundwork for aligning interagency initiatives and streamlining communication and resources," said Amy Guise, Baltimore District Planning Division chief. "These partnerships have been sustained over the years, resulting in many successful projects and improvements to the watershed."

USACE continues to support the health and resiliency of the Anacostia Watershed through various flood risk management, ecosystem restoration and navigation programs and projects.

D.C. SILVER JACKETS FLOOD MAPPING

The D.C. Silver Jackets is a cross-disciplinary interagency team comprised of federal, District, and regional agencies and academia. This team leverages shared resources to identify and implement comprehensive, resilient and sustainable solutions to reduce flood risk management around the District and to assist local communities.

Recently, the D.C. Silver Jackets developed an online flood inundation mapping tool that helps government leaders, emergency managers and the public better predict flood impacts prior to high-water events in the D.C. metropolitan area. This tool

provides two sets of maps tied to the existing stream gauges: one that shows predicted riverine flooding along the Potomac River, and another that shows predicted tidal/storm surge flooding along the Potomac and Anacostia rivers.

"The flood inundation maps are an excellent tool to help emergency managers and stakeholders visualize where and how deep flooding will occur and enables them to make critical and timely decisions to reduce flood risk, such as road closures, moving critical assets, evacuations and more," said Stacey Underwood, D.C. Silver Jackets co-lead.

WATTS BRANCH

In another D.C. Silver Jackets initiative, USACE partnered on a flood risk management study for Watts Branch, which is a tributary of the Anacostia River in northeast DC. Significant portions of several neighborhoods in the study area are at high risk for flooding and consist of high-density residential and non-residential structures and critical infrastructure with vulnerable populations, including low-income housing developments.

As part of this study, the team assessed existing flood risks and future flood risks due to climate change; updated floodplain maps that will allow



The hull of the BD-5 reflects in the water while docked at Fort McHenry Yard. (U.S. Army photo by Christopher Fincham)



With storms increasing in frequency and severity, the DC Drift Program will continue to work to keep the waterways clear of debris. (U.S. Army photo by Greg Nash)



A small debris vessel, the BD-5, at the Fort McHenry Yard after collecting debris around Baltimore Harbor Oct. 21, 2020. The ship was in Baltimore to support patrols of the Baltimore Harbor. (U.S. Army photo by Christopher Fincham)

the community and local organizations to better understand their flood risk; identified individual and watershed-wide flood risk management strategies and neighborhood climate-resilience policies and strategies; and participated in outreach activities to raise awareness of flood risk and promote risk-reduction actions.

This study will help the District of Columbia achieve flood-risk reduction goals within their All-Hazard Mitigation and Climate Change Adaptation plans.

Various recommendations were provided to the District of Columbia that identify future initiatives and actions that can be taken to collectively reduce risk and increase resiliency for the area.

BUZZARD POINT & SOUTHWEST WATERFRONT

Multiple agencies are coordinating on flood risk management efforts in the Buzzard Point area, which is situated in Southwest DC and includes Fort McNair. This area will continue to be at risk from riverine flooding from the Anacostia and Potomac rivers, storm surge flooding, sea-level rise, and stormwater flooding.

The District of Columbia is interested in a multi-purpose project with a mix of structural and nature-

based solutions to address existing and future flood conditions. These solutions could also include several co-benefits, such as better multimodal connectivity between communities, additional open recreation space and ecological restoration of the river.

In partnership with the District of Columbia Department of Transportation (DDOT), USACE initiated a study through the Floodplain Management Services program for the Buzzard Point area. The purpose of the study is to evaluate the flood risk management alternatives that DDOT preliminarily identified in their feasibility study and to conduct a preliminary flood damage assessment.

This effort is anticipated to wrap up in spring 2022.

D.C. DRIFT NAVIGATION PROGRAM

USACE conducts drift removal operations in the Anacostia River on a year-round basis, providing benefits to navigation by reducing potential damages from large debris, financial loss and safety hazards to commercial and recreational vessels, their operators and docking facilities.

This program also protects environmental habitat, improves water quality and aesthetics, and expands

public access opportunities within the Chesapeake Bay watershed.

The DC Drift Program is planning to perform rehabilitation and modification of the mooring piers in the Anacostia River at the USACE DC Drift field office dock. USACE's Marine Design Center managed the design and construction of the NACOTCHTANK Floating Crane on behalf of USACE, Baltimore District. The NACOTCHTANK is an 85-foot crane barge and a 15-ton crane that works on removing large debris from the Anacostia and Potomac rivers that could become hazardous to navigation around the District of Columbia. The name of the new crane barge is in honor of the first people to occupy the Anacostia River shores, as it will spend most of its life in service on the Anacostia River.

With storms increasing in frequency and severity, the DC Drift Program will continue to work to keep the waterways clear of debris.

ANACOSTIA WATERSHED RESTORATION IN PRINCE GEORGE'S COUNTY

The Anacostia River and many of its tributaries flow through Prince George's County, Maryland, before they enter the District of Columbia. USACE and Prince George's County Department of the

Environment (DoE) signed a Design Agreement in late summer 2021 that allows for the next steps in restoring the Anacostia Watershed in the county.

"The Prince George's County DoE is excited to partner with USACE on one of the largest stream restoration and habitat improvement projects for the county," said Jeff DeHan, Prince George's County DoE Stormwater Management Division associate director. "The project will deliver substantial benefits to impervious area treatments, improve water quality, and promote community uplift while restoring and beautifying the Anacostia River."

This project includes restoring 7 miles of instream habitat, opening 4 miles for fish passage and connecting 14 miles of stream to previously restored stream reaches.

Construction is anticipated to begin in late 2022.

When the Anacostia Waterfront Initiative first launched, the impacts of climate change were just beginning to be understood. Through USACE's role and assistance, it is possible for more updated scientific data to be studied and incorporated in future initiatives.

It is imperative that projects and programs like these continue to prepare our people, property and the environment for the future and to ensure the resiliency of this great resource. ■



The Baltimore District's D.C. field office dock houses the newly arriving NACOTCHTANK Floating Crane in the District of Columbia alongside the Anacostia River. The DC Drift Program planned rehabilitation and modification of the mooring piers at the site location to help aid in the offloading of debris collected by the DC Drift Program vessels. (U.S. Army photo by Greg Nash)



DOGUE CREEK BRIDGE

The Baltimore District's Capital Area Office led a collaborative effort to replace Fort Belvoir's historic structure. BY MARGARET STEELE

Leadership from Fort Belvoir Garrison and the Army Corps of Engineers, Baltimore District, celebrated the reopening of Belvoir's Dogue Creek Bridge, February 23, 2022, which was replaced in a 2-year project.

"Along with our partnership we have with the Military District of Washington, we're thankful to have the chance to recognize a long-standing partnership with Belvoir," said Col. Estee Pinchasin, Baltimore District commander. "We're so glad to see the successful completion of

the bridge replacement."

She went on to say that it was fitting to happen during National Engineers Week and that it was good to be back at Belvoir, which was home to the U.S. Army Corps of Engineers, before their move to Fort Leonard Wood, Mo.

"We worked closely with contractors, public works, and stakeholders to deliver a fully modernized, functional, new bridge, that maintains it's historic aesthetic," Pinchasin said. "With the new bearings at each end and

the walkway on one side, this is a beautiful piece of infrastructure. This pays homage to the history of the old bridge, and is a real benefit to the Belvoir community.

"This is testament to the hard work and dedication of the Army Corps of Engineers, and its people, to honor their commitments to the installation community," she said.

Col. Josh SeGraves, the Fort Belvoir garrison commander, said, "With the contract awarded in November 2019, now, more than 1,000 days later, we're able to celebrate the bridge's reopening.

"Believe me ... this project was certainly a heavy lift," he said. "This means a great deal to garrison, but also to residents, especially those from River, Dogue and George Washington villages."

"Everyone who worked on this project can take great pride in their contributions that help move Fort Belvoir into the future, with a bridge that's expected to last another six decades," SeGraves said. "Now, the Dogue Bridge is, once again, an integral part to our operations and is safe for everyone who drives over it."

SeGraves said the new bridge will be a huge quality-of-life improvement for residents and commuters who can now access the installation more easily from the north and from the Mount Vernon area.

"The project was more than 4 million dollars," SeGraves said. "However, we know it was money well spent and will provide a generation with safe, necessary infrastructure." ■

CLOCKWISE FROM TOP: After the bridge was assembled (less stringers and flooring), a special pontoon cube barge was constructed to carry it four miles up the Potomac River. The barge was tied up in Dogue Creek, its final positioning, to await favorable tide conditions.

■ The photo on the right shows the bridge in its final place, with rough grading of the future Mt. Vernon Road. ■ Three photos from a Bridge Inspection Report conducted by USACE in November 2014, which determined that the bridge was in poor condition overall.

Areas of corrosion and section loss were found throughout the superstructure, possibly contributed to from road salt being transported over the bridge from vehicles. As a result of this report, recommendations were made for repair, with the long-term solution made by the department of public works to fully replace the bridge. The old bridge also contained remnants of lead paint found in testing completed in 2016, despite sandblasting and repainting in multiple rehab projects in 1981, 1989, and 1997. ■ A view of the Dogue Creek Bridge from Google Maps. (Courtesy Photos)



Leadership from Fort Belvoir Garrison and the Army Corps of Engineers, Baltimore District, celebrated the reopening of Belvoir's Dogue Creek Bridge, February 23, 2022. (U.S. Army photo by Margaret Steele)

SMALL BIZ = GOOD BIZ

Small businesses serve as key pieces for missions throughout our area.

BY CYNTHIA MITCHELL

Baltimore District leadership presented upcoming contracting and partnership opportunities during the Society of Military Engineers (SAME), Baltimore Post fiscal 2022 Federal Programs Briefings, held at Martin's West in Baltimore, Dec. 15, 2021. Approximately 350 prospective partners and local, state and federal agencies attended the event to discuss current-year and future business opportunities throughout the region.

Baltimore District Commander Col. Estee Pinchasin provided opening remarks and introduced a panel of subject matter experts from the district's Civil Works, Environmental and Military programs, International & Interagency Support, and the Washington Aqueduct. Small Business Deputy Tamika Gray provided a Small Business program overview and offered best practices.

"Day in and out, we work closely with our contractors and partners to successfully execute our wide-

ranging mission capabilities across our expansive area of operations in the mid-Atlantic region," said Pinchasin. "We cannot successfully execute our diverse and critical engineering and water resources work without our industry partners."

The Baltimore District obligated nearly \$1.8 billion in fiscal 2021 to provide essential water resources and engineering services to communities across the mid-Atlantic region. More than \$194 million were awarded to small businesses, exceeding the district's goals for Small-Disadvantaged and Service-Disabled, Veteran-Owned businesses.

Fiscal 2022 is projected to be even busier, with the Infrastructure Investment and Jobs Act providing \$17.1 billion for U.S. Army Corps of Engineers' Civil Works programs and projects across the nation — supporting waterway maintenance, flood risk management and aquatic ecosystem restoration projects.

Baltimore District offers

many business opportunities for individuals and firms, such as HubZone, Service-Disabled Veteran-Owned, Small Disadvantaged Business and Small Women-Owned businesses, through our engineering and construction management work.

"Our skilled contractors — from differing skill sets, company sizes and special designations — and partners are truly an extension of us and help us in meeting our commitments to our partners and communities," said Pinchasin.

Strategic partnerships with small and innovative businesses — including startups and minority-owned businesses — also help keep the Army and USACE abreast of state-of-the-art technologies and products that support and accelerate our modernization and readiness goals.

Visit our website to see a listing of current and forecast contracting opportunities, as well as information on our commitment to the Small Businesses industry. ■

Contractor: LRS Federal, LLC
From: Severna Park, MD
Project: U.S. Capitol Security Measures

Contractor: Cromedy Construction, Corporation
From: Philadelphia, PA
Project: Sayers Dam Stilling Basin Repairs



Contractor: Blue Forge, LLC
From: St. Petersburg, FL
Project: Maryland (Tred Avon) Oyster Restoration



Contractor: Tyson Project Management Group, LLC
From: SE Washington, D.C.
Project: Fort Myer Swing Space Bldg. 205/203



Baltimore District Deputy for Small Business Tamika Gray provides insight into Small Business opportunities with the Army Corps during the SAME Baltimore Post FY22 Federal Programs Briefings.

Contractor: Cromedy Construction, Corporation
From: Philadelphia, PA
Project: Flood Risk Management improvements in York, PA



\$194,263,758

BALTIMORE DISTRICT DOLLARS OBLIGATED TO SMALL BUSINESSES IN FISCAL 2021



The involvement of small business in our military and civil works programs is vital to our mission. Much of our success is due to the initiative, imagination, and productivity of thousands of small business concerns.

SMALL BUSINESS UTILIZATION IS JUST GOOD BUSINESS.

AROUND THE DISTRICT

USACE ENGINEER OF THE YEAR

Daria Van Liew, the chief of East Campus Integrated Program Office, receives the 2021 Headquarters Lt. Gen. Elvin “Vald” Heiberg, the third, Engineer of the Year Award, Nov. 12, 2021. (U.S. Army photo)



VETERAN TRIBUTE

Military Veterans from the U.S. Army Corps of Engineers, Baltimore District, pay tribute at the Arlington National Cemetery in Arlington, Va., Oct. 22, 2021. USACE Baltimore District employees reflected on their military service and mourned the unidentified service members who perished in war, while visiting the cemetery and Tomb of the Unknown Soldier site. (U.S. Army photo by Greg Nash)

NACOTCHTANK FLOATING CRANE

The U.S. Army Corps of Engineers, Baltimore District's, DC Field office dock will house the newly arriving NACOTCHTANK Floating Crane in the District of Columbia alongside the Anacostia River. It is a new barge mounted crane with a lifting capacity of 30 tons for the DC Drift Unit. The vessel is named after an Algonquian tribe that lived at the confluence of the Potomac and Anacostia rivers. (U.S. Army photo by Greg Nash)



SENIOR LEADER VISIT

The Honorable Michael Connor, Assistant Secretary of the Army for Civil Works, was introduced to the Baltimore District's operations during a visit in January 2022. Connor, alongside USACE senior leaders Maj. Gen. William “Butch” Graham, USACE, Headquarters deputy commanding general for civil and emergency operations; Brig. Gen. Thomas Tickner, USACE North Atlantic Division commander; and Baltimore District Commander Col. Estee S. Pinchasin toured the Chesapeake Bay and Ports America Chesapeake's Seagirt and Dundalk terminals to exchange best practices with mission partners on supply chain challenges, dredging to keep the port open and safe for business, ecosystem restoration, and budgetary improvements across the Chesapeake Bay Region at the Port of Baltimore. (U.S. Army photo by Greg Nash)



OCEAN CITY REPLENISHMENT

U.S. Army Corps of Engineers, Wilmington District's, Hopper Dredge MURDEN pumps slurry prior to beach replenishment efforts during 24/7 dredge operations in an inlet near Ocean City, Md., Sept. 20, 2021. Ocean City beaches are routinely replenished every four years with periodic emergency projects as needed following storms and other natural events. Beach replenishment in the area has prevented nearly \$920 million in damages since its completion in the 1990s. (U.S. Army photo by Greg Nash)

AROUND THE DISTRICT



SECURITY SPECIALISTS

From left, Karen McMullen and Denise Hurt, security specialists, and Racquel Cook, program support assistant, pose for a photo outside of the U.S. Army Corps of Engineers, Baltimore District, Real Property Services Field Office (RSFO) in Annapolis Junction, Md., March 24, 2022. RSFO officers handle both personnel and industrial-level management, working on physical, information and communication security. This includes leasing and facilities management for partners to ensure safekeeping of classified information. (U.S. Army photo by Thomas Deaton)



MID-BAY PROJECT FUNDING

Maryland Department of Natural Resources Secretary Jeannie Haddaway-Riccio, Col. Estee Pinchasin, Maryland Port Administration Executive Director Bill Doyle, and Senator Ben Cardin pose for a photo after a press conference on Kent Island, Md. announcing \$84 million in federal funding for the Mid-Chesapeake Bay Island Ecosystem Restoration project, April 4, 2022. (U.S. Army photo by Thomas Deaton)



ECOLOGIST & PROJECT MANAGER

Danielle Szimanski, a dual-role U.S. Army Corps of Engineers, Baltimore District, ecologist and project manager, and Engineering With Nature (EWN) Coastal Practice lead, visits the Masonville Cove ecological park in Baltimore, Dec. 21, 2021. In her role, she advances, evaluates and communicates environmental science that informs impactful decisions to protect the environment now and into the future. (U.S. Army photo by Greg Nash)



WASHINGTON, D.C. RECRUITING OFFICE

Lt. Col. David Myers, Baltimore District deputy commander, at left, cuts a ceremonial ribbon while celebrating the grand opening of the D.C. Army National Guard's first Storefront Recruiting Office in more than 10 years during a ceremony, March, 18, 2022. This project will ensure the U.S. Army continues to meet its critical personnel needs, ultimately supporting mission readiness and success. Baltimore District's Real Estate team members identified and secured an optimal location for the DC ARNG. (U.S. Army photo by Nicole Strong)

U.S. Army Corps of Engineers,
Baltimore District



2 Hopkins Plaza
Baltimore, MD 21201



A pelican pod positions alongside a low-profile stone protection structure engineered to protect an eroding section of coastline of Martin Island National Wildlife Refuge, at Smith Island, Somerset County, Md., Oct. 7, 2021. Martin Island National Wildlife Refuge is composed primarily of estuarine wetlands, submerged aquatic vegetation (SAV), and scattered upland habitats, appearing like islands of high ground within vast expanses of tidal marsh. These upland sites provide nesting habitats for wading birds and other colonial waterbirds, waterfowl, and raptors. (U.S. Army photo by Greg Nash)



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