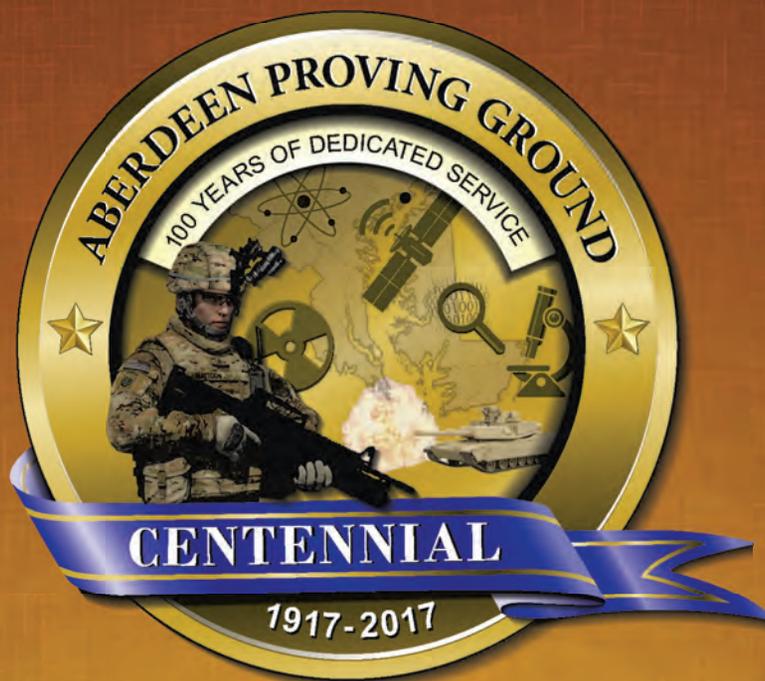


# ABERDEEN PROVING GROUND

1917 - 2017



*Celebrating a century  
of innovation*

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# Aberdeen Proving Ground Centennial Celebration Guide

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## COMMANDER'S CORNER

# Laying the foundation for a robust future



**Maj. Gen. Bruce T. Crawford**  
APG Senior Commander

**S**ince its inception in 1917, Aberdeen Proving Ground remains the Army's premier home of innovation, opportunity and readiness in support of the joint warfighter.

Established in World War I to answer an immediate national defense response in munitions testing, APG is now an internationally recognized entity for its groundbreaking accomplishments in research and development; testing and evaluation; and chemical/biological and radiological defense. As modernization experts, the civilians, Soldiers, and contractors who comprise Team APG have provided the Defense Department with solutions to some of our nation's emerging threats in cyber, electronic, software and network warfare.

In recognition of this centennial celebration, it's imperative we recognize the foundation of our success— our people.

Our employees are, as they always have been, this proving ground's true competitive advantage and what sets us apart from every other post, camp and station in our Army!

Each and every day, our APG military and civilian teammates are deployed worldwide supporting operations that enable joint force readiness. The APG workforce has developed and sustained military technologies that fought fires in California, Ebola in Africa and demilitarized chemical weapons in Syria. From the Great War to present day battle, if a Soldier uses a technology to shoot, move or communicate, chances are it was developed, tested and fielded by one of the more than 92 tenant organizations that call APG home.

The legacy of the APG journey is enhanced through our valued local, state, and federal community and industry partners who remain steadfast supporters of

our ever fluid missions. Please know, the celebration of this year's historic milestone is shared equally with your respective organizations.

On behalf of the entire APG leadership team, it's been an absolute privilege to work together as we strive toward shared goals in civic duty and national responsibility.

Our centennial celebration is not only about honoring the past 100 years of our history, but also preparing to lay the foundation for our robust future. On behalf of your United States Army, I want to offer my heartfelt appreciation to you, the APG friends, families, employees and supporters of this installation. Time and time again, you have consistently provided unyielding support to our Soldiers, our civilians, and to their families.

*Thank you! Trusted Professionals Always, Army Strong!*

## FROM THE GOVERNOR

# Home to the Army's oldest proving ground

**S**ince its establishment in 1917, Aberdeen Proving Ground has quickly evolved into a vital military post in the United States.

Over the past century, APG has provided the United States Army with a variety of essential services, ranging from weapon development and research, to developing new technologies to improve and maintain our nation's cybersecurity. This facility has proven to be a versatile asset, evolving over time to meet the changing needs of our armed forces in order to keep our citizens and country safe.

Maryland is extremely proud to be home to the Army's oldest active proving ground, and we could not be more excited to celebrate its 100th anniversary in 2017. Aberdeen Proving Ground, and all those who have served here, should be filled with pride knowing they have contributed to great advancements within the history of our state, our country, and the greatest military in the world.

I offer my congratulations, and my deepest gratitude, to the men and women who have served at Aberdeen



**Larry Hogan,**  
Governor of Maryland

Proving Ground since it first opened its gates during World War I. Our country is profoundly indebted to the service and sacrifice of you and those before you, on behalf of the State of Maryland and our great nation.



CHANGING

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*for the Better*

THANK YOU

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**PROVING GROUND**

*for 100 years of service*



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# A cornerstone of Harford County



COURTESY PHOTO BY EDWIN REMSBERG

**Barry Glassman,**  
Harford County Executive

**A**berdeen Proving Ground is a cornerstone of the Harford County community, and our histories are closely intertwined. In fact, the seal of county government features a hand with a sword representing APG's vital role in the defense of our nation. As the county's largest employer, APG has also touched the life of nearly every Harford County citizen, including my own.

My mother worked at APG and her name, Ella Glassman, may be familiar to many of her fellow retirees. Serving as a property book officer, she signed the necessary paperwork whenever they were issued a typewriter, camera, or other property during her 30-year tenure. Times have changed, and so has APG.

Originally established to design and test ordnance, APG was formed as the

**APG has a proud history and a bright future in Harford County. On behalf of county government and our citizens, I am honored to congratulate APG on its first 100 years.**

*Barry Glassman,*  
*Harford County Executive*

U.S. entered WWI. Since then, it has evolved into a premier science and technical hub for research, development,

and testing, employing 21,000 military and civilian professionals in critical fields including communications, electronics, network integration, chemistry, biology, public health and cybersecurity.

Throughout this evolution, Harford County government's support has remained a constant. By forming the Chesapeake Science & Security Corridor, we helped unify regional support for APG before, during, and beyond BRAC 2005. More recently, my administration has moved the Harford County Office of Economic Development closer to the Aberdeen gate, helping us work together on job creation and economic growth opportunities.

Clearly, APG has a proud history and a bright future in Harford County. On behalf of county government and our citizens, I am honored to congratulate APG on its first 100 years.

# A linked past and future



COURTESY PHOTO/PATRICK MCGRADY FACEBOOK

**Patrick McGrady,** City of Aberdeen Mayor

**T**he City of Aberdeen was first chartered in 1892—125 years ago this year. The special significance of Aberdeen's 125th year is enhanced by our long-standing partner, Aberdeen Proving Ground, and the men and women who work to advance the mission there.

The City of Aberdeen's history is one and the same with the military installation on our southeast border. For generations, the impact of the military installation has been felt in Aberdeen. In years past, this meant the visible presence of Soldiers all over town. Today, the smaller number of Soldiers and much larger civilian contingent brings great diversity, commerce, and opportunity to Aberdeen.

The great relationship between our organizations is evident, even today, as the leadership on APG answers the call to assist in solving some problems outside the gate in Aberdeen that have existed for years. Just a few months ago, we called, and the APG leadership answered to resolve some crucial transportation issues affecting the lives of Aberdeen residents. As a result, APG road, adjacent to the Aberdeen train station, was repaired and is now another great asset to our community.

**The City of Aberdeen's history is one and the same with the military installation on our southeast border. For generations, the impact of the military installation has been felt in Aberdeen.**

*Patrick McGrady,* City of Aberdeen Mayor

Just as our pasts are closely linked, the future of the city and APG are intertwined. The tremendous opportunities to attract additional missions to APG are supplemented by the work the city and State of Maryland have done to invest extensively in infrastructure to be ready for anything that comes our way.

On behalf of all the government of the City of Aberdeen and all her citizens, thank you for the long-standing and strong relationship between APG and the City of Aberdeen. We look forward to many more years of successful partnership and growth, together.

# A snapshot in time

## Harford County before Aberdeen Proving Ground

BY CAROL L. DEIBEL

Harford County Historical Society

At the turn of the twentieth century, Harford County was a quiet, rural community with fertile farm land and access to lucrative trapping, hunting and fishing sites along the Chesapeake Bay and the Bush and Gunpowder rivers.

Gently rolling hills and ridges west of Route 7 (Philadelphia Road) were ideal for farming and dairy operations. Mules, horses and oxen still provided the muscle for area farmers. Cars were a rare luxury. The towns and villages resembled Norman Rockwell paintings, with tree-lined streets and Victorian houses. Wooden bridges provided access across the rivers and creeks, and ferry service was still an essential part of travel along the Susquehanna.

The county's location midway between Washington, D.C., Baltimore, Philadelphia and New York brought tourists to the area seeking a respite from the heat of the cities in the summer and adventure along the coastline.

Huge flocks of geese and ducks provided sport for men like President Grover Cleveland, J.P. Morgan and the Cadwaladers, who owned 10,000 acres on the Gunpowder Peninsula. Cadwalader's beautiful home on the Gunpowder Peninsula, landscaped with specimen plants from around the world, enticed other wealthy men from New York and Philadelphia to the area to form hunting lodges along the coastline. Fishing, crabbing, boating and hunting parties entertained many of the lodge visitors throughout the season. While further inland in the Bel Air area, guest houses provided summer retreats for city dwellers.

Local residents, meanwhile, focused on the day-to-day toil of just making a living.

The Aberdeen area was one of the first in the county to initiate canning houses. Corn and tomatoes grew extremely well in this area, and the canneries prospered. At its peak, Harford County had more than 180 canneries.

Each year workers, primarily recent immigrants, would come from Baltimore on the B & O railroad in the Aberdeen area and the Ma & Pa Railroad in the central and northern part of the county to work at local canneries for the season. They lived in camps on the various farms where the



PHOTO COURTESY OF THE HARFORD COUNTY HISTORICAL SOCIETY

The hunting lodge known as the Rod & Gun Club on Gunpowder Peninsula. Several hunting lodges existed on land that is now Aberdeen Proving Ground in the early 1900s as this region of the Chesapeake Bay is historically known for its duck hunting.

canning took place, then returned to the city after the season. Compensation came in the form of tokens to be used at company stores and redeemed for cash at the end of the season.

Unlike today, travel was rare. Few had hours to spare from their farms, and roads consisted of dirt paths linking county villages with Bel Air, Aberdeen and Havre de Grace. The B & O, Pennsylvania and Ma & Pa railroads provided access to such distant places as Baltimore and Philadelphia.

Steamships transported passengers and materials to and from more distant shores. They also carried entertainers to the area allowing such fare as minstrel shows.

For many years these steamships provided access to resort beaches like Tolchester in Kent County, a treat to be anticipated all year. The river also provided jobs; in the spring herring and shad runs brought fishermen in 20-foot long floats propelled by 16 oarsmen. Seine nets weighted at the bottom were lowered down and corked at the top to float.

Barrels of fish caught in this way, along with barrels of ducks and geese shot by local hunters, were shipped to restaurants from New York to Washington, D.C. Ice cut from the Susquehanna River in winter months



PHOTO COURTESY OF THE HARFORD COUNTY HISTORICAL SOCIETY

Ladies wait for the Ma & Pa train for an excursion. The Maryland and Pennsylvania Railroad was established in 1901 by the merging of the Baltimore and Lehigh Railway with the York Southern.

was shipped to similar markets.

Few people outside of the municipalities had electricity, so ice was stored in spring houses or similar structures and covered with straw. Although still rare, by 1905 Harford County boasted 5,500 telephone

customers with a population of only 16,000 people.

Locals usually gathered in the nearest town on Friday or Saturday nights to get the latest news, pickup supplies and possibly celebrate a bit at area inns. Sundays were set

aside for church and family gatherings.

Social gatherings often centered around work. Events like husking bees, quilting parties and apple butter making served as entertainment. Of course, ice skating, sledding and sleigh riding provided winter entertainment and summers brought baseball competitions, the county's favorite sport and Chautauqua's, a week-long entertainment venue. Horse races at both the "Graw" in Havre de Grace and the Bel Air Race Track enticed locals and crowds from several states, filling area hotels and restaurants.

Industries flourished in outlying areas but most of these would soon be obsolete. The grist mills, blacksmith shops, carriage makers still plentiful in 1900 gave way to service stations, automobile dealers and supermarkets in the new century.

The European wars seemed far away in this quiet community. Then everything changed. On April 2, 1917 Congress declared war on Austria-Hungary, Germany and their allies. Six months later on Oct. 16, 1917 President Wilson authorized the takeover of the land north and east of the Bush River for an ordinance testing facility, to be known as Aberdeen Proving Ground, and the area along the Gunpowder Neck to be known as Edgewood Arsenal.

Harford County, and the world, thus changed forever.



PHOTO COURTESY OF THE HARFORD COUNTY HISTORICAL SOCIETY

Before Route 924 became the bustling artery into Bel Air it is today, it was nothing more than a dirt road known as S. Main Street.



PHOTO COURTESY OF THE HARFORD COUNTY HISTORICAL SOCIETY

The Masonic Lodge pictured here was a central meeting place in Bel Air during the 1800s and early 1900s. Situated next to the County Court House, it was demolished in 1982.

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# World War I history lesson

What you should know about the war that changed the world

BY YVONNE JOHNSON  
APG News

World War I will be mentioned frequently during 2017 as the community celebrates the APG Centennial. The proving ground was established just six months after the nation entered into what would become known as “The Great War.” But what do most of us know about this conflict? Who started it? Who were the players, and why did they “play?”

To brush up on your history, here’s a short synopsis of the players, impacts and famous firsts of this global conflict.

## The shot heard ‘round the world

World War I, for all intents and purposes, started with the “shot heard round the world” on June 28, 1914 when Archduke Franz Ferdinand, heir to the Austro-Hungarian throne, was assassinated in Sarajevo by a member of the Black Hand, a Serbian nationalist secret society. Austria-Hungary declared war on Serbia one month later, on July 28, 1914.

Political alliances then came into play; throughout Europe, nations sworn to protect and defend each other were throwing their hats into the ring. Thus, one lone assassin activated a series of decades-old alliances, sparking a range of political reactions that resulted in a war lasting until Nov. 11, 1918.

Ultimately, the war pitted the Allied Powers— France, British Empire, Russia, Serbia, Montenegro, Belgium, Japan, Italy, Portugal, Romania, Hejaz, the United States, Greece, and Siam— against the Central Powers of Germany, Austria-Hungary, the Ottoman Empire, and Bulgaria.

Each nation entered for its own reason.

## A domino effect

After Austria-Hungary declared war on Serbia, it set off a chain reaction which caused the world to erupt into war within one month.

As Russia mobilized to defend Serbia, Germany viewed this as an act of war against Austria-Hungary; as a result, Ger-



COURTESY PHOTO

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many declared war on Russia on Aug. 1, 1914. That same day, alliances began to take shape, with Germany and Turkey signing an alliance and France mobilizing to support Russia.

Germany invaded Luxembourg on Aug. 2, and declared war on France on Aug. 3 and Belgium on Aug. 4. Allied to France, Britain declared war on Germany on the 4th, while the U.S. proclaimed its neutrality, which would last for almost three years.

More declarations continued among the parties through the rest of the month. On Aug. 23, 1914, Germany invaded France, while Austria-Hungary invaded Russian and Poland, bringing Japan to declare war on Germany due to a military agreement with Britain.

The U.S. was brought in to the war through German aggression— most notably its use of submarine warfare that threatened international commerce and plotting with Mexico against the U.S. The U.S., under President Woodrow Wilson, declared war on Germany on April 6, 1917.

## The players

The major Allied players throughout all this were French Prime Ministers Georges Clemenceau and Raymond Poincare; Brit-



PHOTO BY LT. JOHN WARWICK BROOKE COURTESY OF THE IMPERIAL WAR MUSEUM

**A German trench occupied by British soldiers near the Albert-Bapaume road at Ovillers-la-Boisselle, July 1916 during the Battle of the Somme. The most famous use of trench warfare in history was along the Western Front during World War I.**

ish Prime Ministers H.H. Asquith and David Lloyd George; Italian Prime Minister Vittorio Orlando; King of Italy Victor Emmanuel III; Japanese Emperor Yoshihito; Russian Emperor Nicholas II; King of Serbia Peter I; King of Romania Ferdinand I; and U.S. President Woodrow Wilson.

The Central Powers were led by German Emperor Wilhelm II; Franz Joseph I, emperor of Austria, king of Hungary, Croatia and Bohemia; Karl I, nephew of Franz Ferdinand, emperor of Austria, king of Hungary, Croatia and Bohemia; Ottoman Sultan Mehmed V and Ferdinand I, Tsar of Bulgaria.

World War I changed history forever. It led to the fall of four imperial dynasties, in Germany, Russia, Austria-Hungary and Turkey, resulted in the Bolshevik Revolution in Russia, and laid the groundwork for World War II by destabilizing Europe and upsetting long-held roles across the world. Women in both England and the United States gained the right to vote after the War. With more than 30 million military casualties and untold millions of civilians, the world truly felt the effects for generations.

## Famous Firsts

This Great War had a series of firsts— or game changers— that should not go unmentioned in any conversations about this conflict.

- **Sedition Act:** The Sedition Act of 1918 was an Act of the U.S. Congress that extended the Espionage Act of 1917 to cover a broader range of offenses. Most notably speech and the expression of opinion that cast the government or the war effort in a negative light was outlawed. The act made it illegal for people to say negative things about the government or the war. The act was repealed Dec. 13, 1920.

- **Selective Service Act:** The Selective Service Act or Selective Draft Act, enacted May 18, 1917, authorized the federal government to raise a national army for the American entry into World War I through the compulsory enlistment of people. The act was cancelled at the end of the war in November 1918. It was the first time a “substitute” could not be hired in place of one’s service selection.

- **Submarine Warfare:** Submarine warfare in World War I was primarily a fight between German and Austro-Hungarian U-boats and Atlantic supply convoys

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COURTESY ILLUSTRATION

A propaganda poster from the Army's Ordnance Department encourages men to "Learn to make and test big guns" at Aberdeen Proving Ground.

bound for the United Kingdom, France, and Russia. British and Allied submarines conducted widespread operations in the Baltic, North Sea, Atlantic, Mediterranean and Black Seas. German submarine attacks on Allied merchant ships, especially the sinking of the *Lusitania*, turned American public opinion against the Central Powers and played a large role in the United States entering the war.

• **Trench Warfare:** Trench warfare prevailed on the Western Front throughout most of the war. It became a stalemated struggle of frontal assaults with inevitable high casualties on both sides.

• **Chemical Warfare:** The German Army was the first to use chemical warfare April 22, 1915, when it unleashed 160 tons of chlorine gas on opposing French forces. More than 1,000 French and Algerian soldiers were killed; about 4,000 more were wounded. The focus swiftly turned to a technology contest with counter agents as well as protective masks and gear as the focus. The U.S. moved quickly and offensively producing more than 30 tons of mustard gas per day. According to the National Institute of Health, by the war's end, the Edgewood Arsenal employed more than 10,000 men and women in its

production and along with nine other production facilities, produced more than 140 tons of mustard gas per day, "an amount greater than the production of Germany, Great Britain and France combined."

• **Propaganda Posters:** One of the more interesting lasting visual impacts of World War I are the posters that sold the war to the American public. Propaganda posters from World War I produced by the U.S. and Britain were so well illustrated, today they are collected and framed as art. According to *Smithsonian Magazine*, there were certainly propaganda posters before The Great War, but the organization and

mass distribution of World War I posters was unique. They compelled men to enlist and women and children to do all they could to support the war effort.

• **Daylight Saving Time:** The U.S. first observed Daylight Saving Time on March 31, 1918. By setting clocks forward one hour, it would be "saving" daylight along with other conservation programs, including food and fuel, for the war effort.

Source(s):  
<http://www.firstworldwar.com>  
[https://en.wikipedia.org/wiki/World\\_War\\_I](https://en.wikipedia.org/wiki/World_War_I)  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2376985/>



U.S. ARMY PHOTO

Soldiers at APG play a game of football in their free time in 1918. Each company formed a team that competed in a sports league on post.

# Life at the new proving ground

Challenges awaited enlisted men arriving at APG, Edgewood Arsenal

BY LAUREN FINNEGAN  
APG NEWS

*"The place God forgot."*

Those were the words locals used to describe Aberdeen Proving Ground and Edgewood Arsenal, in September 1918, less than a year after the government

officially took ownership of the land. Only in its infancy at the time, the area known today as APG North and South was working tirelessly to become the site of state-of-the-art weapons production on what had been farmland only a year before— all while battling an influenza outbreak.

This daunting undertaking meant rough conditions for the Soldiers stationed here. With few exceptions, they gave it their all to make sure the proving ground was up and running to meet the needs of their brothers defending the

nation on the front lines during World War I.

Construction on the area started almost immediately after the federal government took possession of the land in Harford County on Oct. 20, 1917, following President Woodrow Wilson's proclamation several days earlier. Barracks were desperately needed to house all the manpower required for the proving ground to have an impact on the war in Europe.

By December 1917, when the first Soldiers arrived from Sandy Hook, New

Jersey, the civilian laborers from the Maryland Dredging and Contracting Company had managed to complete four temporary barracks, constructed of tar paper and composition board. Most of the Soldiers arriving to the proving ground were assigned to these temporary barracks.

Permanent barracks would be constructed with tile bricks and include living rooms and fireplaces as luxuries to boost Soldier morale. As enlisted men awaited barracks, officers took over many of the abandoned farmhouses that still

dotted the land.

Joe Sleeper, one of the 150 enlisted men who arrived from Sandy Hook that December, recalled during a 1967 interview, his arrival to the proving ground with Company A, First Battalion.

“The contractors were using three of these [barracks] for living quarters and supplies, and the fourth was used for administrative personnel. Our entire company pitched in to help and by nightfall we had erected a fifth building, in which we slept without the benefit of heat.”

With the temperatures rapidly falling, civilians and Soldiers worked side-by-side to keep construction moving at a rapid pace. By December 1917, a total of 12 buildings were completed on the installation. That pace, however, slowed down considerably with the arrival of winter.

January 1918, one of the top five coldest months on record in Maryland, brought with it brutal temperatures that hovered around 24 degrees. Construction continued, but the mud used to aid transportation of heavy guns and supplies during the fall became rock-solid, slowing the building process extensively.

With delays and a shortage of Soldiers, those arriving at APG and Edgewood Arsenal were required to take on any type of duty that came their way. According to a 1918 yearbook produced by the Ordnance Department entitled, “The Big Gun,” officers had to play “chameleon,” by adapting themselves to whatever was required to get the job done.

“Blacksmiths were put on book-keeping and clerical jobs, while the lawyers and stenographers were put to digging ditches.”

Free time was in short supply for Soldier stationed at APG, but there were efforts made to keep up morale. The Army Y.M.C.A. Hut opened in April 1918. There, Soldiers could attend religious services, take classes in English, French and chemistry, watch movies, or pick up paper and envelopes to write their families back home free of charge.

Company ‘L’ made sure the Soldiers were well fed by running the Proving Ground Farm, which was in the middle of the Artillery Range. The mess halls were filled with peaches, tomatoes, sugar corn, potatoes and grain— all harvested from the farm to feed the Soldiers working nonstop for the war effort.

As construction continued, the installation started to feel more like home for the troops who had come from all over the county.

The Post Exchange was opened in January 1918, where Soldiers could go to



U.S. ARMY PHOTO

**Soldiers pose in front of the Y.M.C.A. Hut that opened on APG on April 1, 1918. The purpose of the "hut" was to strengthen the morale of the soldiers by giving them different forms of instruction and entertainment, including religious services, educational classes, and movie nights.**

buy cigars, pies, and even souvenirs, “for the girl back home.” With the addition of three more Exchanges that year, the combined total revenue reached \$153,000 (that’s equivalent to more than \$2.6 million today). Eighty thousand dollars of that was put back into the post for the purchase of pianos, books, pool tables, sports equipment and instruments.

By the summer of 1918, Walker Field, a large athletic field, opened on post as a home for the many sports teams formed by troops. Edgewood Arsenal had a championship baseball team, and sports such as football, boxing, wrestling, and track and field were activities Soldiers could participate in as well.

Although the population of APG continued to grow, the 1,300 enlisted men stationed here by May 1918 were far from enough to complete all of the tasks that remained. More men were desperately needed to fulfill APG’s mission to

test and manufacture ordnance in order to equip the Soldiers overseas with the best weapons possible.

There was an extreme shortage of men in the areas of building gun platforms and proof work, leading to constant overtime work at night and weekends. This shortage went on until more men were sent from Camp Dix and Raritan Arsenal in New Jersey and Camp Upton, New York to fill in where needed.

By September 1918, there were 5,000 enlisted men stationed at APG and 6,000 civilians. While the influx of people was good for the men who had been constantly working long hours and needed relief, it wasn’t for the Influenza epidemic that had been raging on the base since January.

New recruits were put into quarantine on arrival to APG and Edgewood due to the epidemic that also ravaged nearby Baltimore City, the newly estab-

lished Fort Meade, and the entire country. The post hospital on the arsenal was, at one time, packed so full patients had to be placed on cots in hallways. The epidemic eventually broke in November 1918, but by that time many Soldiers, civilians, and even Army Corps Nurses had succumbed to the disease.

Even with tough conditions and setbacks, the building of APG from a quiet countryside on the shores of the Chesapeake Bay to the world’s largest proving ground at the time is nothing short of impressive. In a little over a year, 500 buildings were erected, ten miles of concrete road were laid, 30 miles of railroad were in use, 300,000 square feet of concrete gun platforms were in use, and 70,768 rounds had been tested.

Though the Soldiers and civilians stationed at APG were not on the front lines of World War I, there is no doubt they buckled down and did their part for the country during the war.

# A century of support to the U.S. Soldier

COMPILED BY AMANDA ROMINIECKI  
APG News

## Establishing APG: 1917-1930s

Aberdeen Proving Ground was established in 1917 as an answer to an immediate need for national defense. As a result of entering World War I in April 1917, the Army urgently required a new site for testing war munitions.

The Army needed a larger, less populated space than what was then available at Sandy Hook Proving Ground at Fort Hancock, New Jersey. The search eventually landed on an area along the western shore of the Chesapeake Bay near the city of Aberdeen, Maryland.

It took an act of Congress and two presidential proclamations, providing financial compensation for the 35,000 acres of upland and 34,000 acres of swamp and tidal lands, to persuade the farmers to leave their property. The government took formal

possession of the land at Aberdeen on Oct. 20, 1917, and immediately began building testing facilities.

Beginning in January 1918, the new proving ground at Aberdeen would proof-test field artillery weapons, ammunition, trench mortars, air defense guns and railway artillery. The mission was later expanded to include operation of an Ordnance training school and developmental testing of small arms.

When World War I ended in November of that same year, APG's peacetime mission shifted to emphasize research and development of munitions. Military and civilian personnel conducted developmental testing of powders, projectiles and bombs, and the study of interior and exterior ballistics.

The airfield, named Phillips Army Air Field in honor of APG's second commander, was used by aircraft that supported the creation of bombing tables. The techniques these tables provided improved the adequacy of aerial bombing.

## New Beginnings: 1930s-1950s

A number of new and diverse activities were assigned to APG beginning in the 1930s and stretching into the 40s and 50s. Bldg. 328 was completed in 1941 to house the new Ballistic Research Laboratory, or BRL, and provided the facilities to conduct research and experimentation in ballistics and fire control.

By 1941, the need for testing facilities had grown so much that the government was forced to acquire additional acreage for APG. Seven thousand acres, which extended APG almost into the city limits of Aberdeen, were added in 1942, as were 1,800 acres when Spesutie Island was acquired in 1945.

During World War II, personnel grew to a peak strength of 27,185 military and 5,479 civilians as all fields of research, development, and training expanded and facilities were increased to meet the heavy workload of wartime.

Work at the Ballistic Research Laboratory

achieved increasing prominence in the nation's scientific community. The automotive and armor testing activities were greatly enlarged, and the anti-aircraft gun testing mission was expanded.

APG's technological contributions to the war effort include the world's first digital computer (the Electronic Numerical Integrator and Calculator or ENIAC), the first man-portable antitank weapons system (the Bazooka) and the first system-wide practical applications of Statistical Quality Control.

A sociological change of significant proportions, which was shared with industry, was APG's large-scale introduction of women in the workforce in non-traditional roles.

When the war ended in 1945, APG again reverted to its peacetime role of research and development. But the Korean conflict of 1950 reactivated many wartime activities.

During the 1950s and early 1960s, many technological advances were incorporated into the weapons research performed at APG. This was especially true of the Ballistic



An aerial view of Aberdeen Proving Ground in the 1920s.

U.S. ARMY PHOTO

Research Laboratory, which began to integrate work in electronic computers, space study and satellite tracking.

The continued dependence on science and technology to help produce better weapons led to the establishment in 1952 of the Human Engineering Laboratory.

## Reorganization: 1960s-1970s

A new center of excellence was established at APG in 1962, called the Test and Evaluation Command, or TECOM. From its headquarters at APG, it managed and controlled 10 test installations and activities across the country.

The late 1960s brought about the development of the Decision Information Distribution System, created by the Office of Civil Defense in the Department of the Army to deliver warnings to the public in the event of an enemy nuclear attack.

During the period of conflict in Southeast Asia, APG reentered a period of intense growth and new direction, including intensified developmental efforts and scientific contributions of the Ballistic Research Laboratory, the Army Materiel Systems Analysis Activity and the Human Engineering Laboratory, or HEL.

APG also contributed to the testing of NASA's Lunar Roving Vehicle used in the Apollo missions in the early 70s.

A significant change was made on July 1, 1971, when Edgewood Arsenal, the former chemical center and current chemical research and engineering center for the U.S. Army, was merged into APG. From this point on, APG was the common identifier for both areas.

## APG Transition: 1980s-1990s

In the mid-1980s there was considerable reorganization at the proving ground, including the establishment of the APG Support Activity (now U.S. Army Garrison Aberdeen Proving Ground) and the Combat Systems Test Activity, or CTSA. In 1986, the Army's chemical demilitarization program was activated at APG.

By the end of the 1980s, APG's workforce had grown to more than 14,000 military and civilian employees, making it the largest single employer in Harford County.

As the 1990s began, much had changed in the Army, the nation and the world with the end of the Cold War. APG participated in Operation Desert Shield/Desert Storm. All elements of the proving ground helped test and field equipment, and mobilize and train soldiers for the war in the Persian Gulf.

In 1992, the Laboratory Command at Adelphi, Maryland was re-designated Army Research Laboratory, known as ARL, BRL and HEL, both located at APG, were renamed and transferred to its control.



U.S. ARMY PHOTO

**Soldiers test the Bazooka at Aberdeen Proving Ground during World War II.**



U.S. ARMY PHOTO BY SEAN KIEF, USAG APG

**Brig. Gen. Lynn A. Collyar, commander of the U.S. Army Ordnance Center and Schools, and Regimental Command Sgt. Maj. Daniel A. Eubanks case the colors of the U.S. Army Ordnance Center and Schools during a May 8, 2009 ceremony, bringing an end of an era at APG.**

In 1994, the mission for storage of chemical agent and munitions at APG was transferred from TECOM to the Chemical Biological Defense Command, a new commissary was completed, the 389th Army Band (AMC's Own) was assigned to APG, and the Officer's Club (Bldg. 30) was renamed Top of the Bay.

CTSA became Aberdeen Test Center, as it is known today, in 1995; the organization traces its mission back to APG's founding and also celebrates its centennial this year. *(Read more about ATC's history on pages 22-23).*

## BRAC: 2000s

Following the events of September 11, 2001, APG North again mobilized, this time for the Global War on Terrorism throughout the rest of the decade. Testing vehicles against improvised explosive devices became a critically important new mission.

In 2004, the U.S. Army Research, Development and Engineering Command, called RDECOM, was created to include several APG organizations: ARL, Army Material Systems Analysis Activity, Edgewood Chemical Biological Center, and RDECOM Acquisition Center.

In 2005 the Base Realignment and

Closure Commission report, known as BRAC, was signed into law, which meant APG would lose and gain new tenants.

Fort Monmouth, New Jersey, was designated for closure. The movement and consolidation of the Command, Control, Communications, Computers, Intelligence, and Reconnaissance (C4ISR) organizations from Fort Monmouth; Fort Belvoir, Virginia; Redstone Arsenal, Alabama; and Fort Huachuca, Arizona, resulted in the construction of large new research facilities on APG North. The first of these new buildings became operational in 2010.

Other organizations moving to APG included: Army Test and Evaluation Command from Alexandria, Virginia.; the Non-Medical Chemical and Biological Defense from Brooks City Base, Texas; the Defense Threat Reduction Agency from Fort Belvoir, Virginia; Walter Reed Army Institute of Research from Forest Glen Annex, Maryland; the Army Research Institute from Fort Knox, Kentucky; the U.S. Army Research Laboratory Vehicle Technology Directorate from Glenn, Ohio; and Langley, Virginia.

While the post gained new organizations and approximately 8,500 new positions under BRAC, it also lost several long-time organizations. The Ordnance Center and Schools, as well as the Ordnance Museum, moved to Fort Lee, Virginia, and the Army Environmental Command relocated to Fort Sam Houston, Texas. By September 2011, all BRAC activities were completed at APG. *(Read more about the BRAC transformation on pages 26-27).*

## Today

Today Aberdeen Proving Ground is recognized as one of the world's most important research, development, testing and evaluation facilities for military weapons and equipment, and supports the finest teams of military and civilian scientists, research engineers, technicians and administrators.

APG is the Defense Department's Center for Excellence for C4ISR (Command, Control, Communications, Computers, Intelligence, and Reconnaissance); Chemical and Biological Defense; Research and Development; Test and Evaluation; Public Health; and Personnel Security Investigation.

A \$1 billion research and development resource, and a key player in the nation's homeland defense and international counterterrorism efforts, APG is an economic and technology resource for the region. With more than 18,000 civilians and Soldiers at the Army's oldest proving ground, APG remains Harford County's largest employers and one of the largest in the state of Maryland. *(Read more about current APG missions on pages 28-29).*

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## FROM THE EDITOR

# Remembering the past; sharing for the future

It is human nature to recall the past, to recount the legends of those who came before us and to tell our stories to those who will live on after us.

Nearly 100 years ago, the enlisted men who arrived at the newly established Aberdeen Proving Ground felt this same compulsion, in hopes to one day spark memories long forgotten and share their experiences with the next generation.



**AMANDA ROMINIECKI**  
APG News  
Editor

In "The Big Gun" published in 1919, these men wrote "In the official files at Washington, when the final records have been written, he who seeks may find in unromantic figures the tale of Aberdeen.

"Here, within the covers of this book, as time travels on his way and the youth of today climbs the hill of life and then drifts slowly to the shadows, ever fresh as on the afternoon he mounted the stand up at the Parade Ground, he can see himself in the midst of the men who shared the long year with him.

"Here, caught by the camera as it stood in the last month of the war, will unfold before him the panorama of the Proving Ground; the guns along the front, the company streets, some grotesque but business-like tank, the spread of the Handley-Page that crept droning over-head as he went about his duties at the Main Proof Battery or in the orderly room of his company.

"Here the older man of a score of years from now can read the names of his bunkies and refresh in memory, by association with the pictured faces of his comrades."

It is this same sentiment that drives the men and women planning numerous events in 2017, honoring Aberdeen Proving Ground's 100th anniversary and the countless individuals who lived, worked, or were connected to APG. (Read about APG Centennial Celebration events on pages 16-19).

Through this publication, and countless articles to be published in the APG News throughout 2017, we hope to honor the legacy of the men and women featured in the stories that filled the pages of our predecessors "The Big Gun," "Rapid Fire," "The Flaming Bomb," "The Flamethrower," "The Groundhog," and the more than 50-year history of the APG News.



U.S. ARMY PHOTO

The staff of "The Big Gun," a historical yearbook written in 1918 and published in 1919, chronicles the first year at the newly established Aberdeen Proving Ground. "When we undertook the task of editing and publishing THE BIG GUN we hardly realized what we had to face," the men recalled. "We have worked early and late. We have faced and surmounted numerous difficulties. Our aim has been to please; but we knew from the first that we could not please every one. Consequently we are prepared for criticism. We have done the best we could under existing circumstances, and we submit the volume with a clear conscience. Use it as you will."

As Team APG celebrates its centennial with the local community, the APG News aims to spark the memory of "the older man of a score of years" and remind former Soldiers, civilians and family members of times at the proving ground. We also hope to show "the youth of today, climbing the hill of life," about the accomplishments of those who came before them.

Today, we ask you to share your memories of APG. Reach out to us by phone at 410-278-1148, email us at yvonne.johnson5.ctr@mail.mil or connect with us on Facebook at [www.facebook.com/APGMd](http://www.facebook.com/APGMd), and share your photos and recollections of Aberdeen Proving

Ground, or those of your parents or grandparents.

Historical books and newspaper pages only document a segment of the human experience, and we are always seeking new stories— your stories— to share with our readers today and those in the future who will wonder what life was like at APG many years ago.

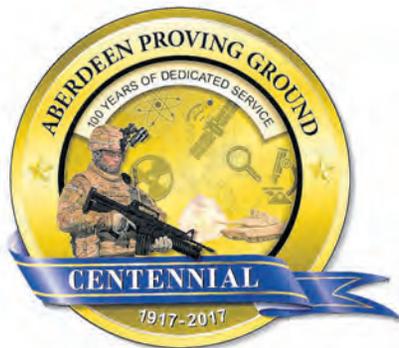
In 1918, the "Big Gun" authors wrote, "We are proud of the Proving Ground, with somewhat of the pride that one takes in the thing he has created. The Post as it stands today is the handiwork of every one of us whose name appears upon the roster of APG's personnel."

As the Army's oldest active proving

ground, APG's history and its future are entirely the result of the men and women dedicated to serving their country in or out of uniform. We are confident that countless men and women who have worked at APG in the last century have felt this same pride— as do the Soldiers, civilians and contract employees, who today, continue to forge APG's legacy of innovation and support the service members who secure our nation's freedoms.

As our counterparts said nearly 100 years ago, "If, in years to come, The Big Gun [or the APG News and this keepsake publication] brings back to us the sentiment we keep within our hearts today, it shall have fulfilled its purpose."

# APG Centennial Schedule of Events



From exhibits and speakers, to book clubs and balls, events will celebrate #APG100

## APG GARRISON PUBLIC AFFAIRS & THE APG CENTENNIAL CELEBRATION ASSOCIATION

Through a partnership with the APG Centennial Celebration Association, or ACCA, APG and the local community will host a variety of events throughout 2017 to celebrate a century of innovation at the Army's oldest active proving ground.

### JANUARY 2017

**Jan. 11**— 100th Anniversary “Coffee with Colleagues” hosted by the U.S. Army Edgewood Chemical Biological Center; *APG South (Edgewood)*

**Jan. 17**— Martin Luther King Day Commemoration hosted by the U.S. Army Communications-Electronics Command; *APG North (Aberdeen)*

**Jan. 31**— Centennial Kick-off Social; *APG North (Aberdeen), ticketed event*

### Throughout the month

- Harford County Public Schools begins WWI history curriculum

### FEBRUARY 2017

**Feb. 7**— Spring Exhibition Opening: APG as Catalyst: Harford County's Changing Landscape; *Hays-Heighe House at Harford Community College, 1 to 7 p.m.*

**Feb. 7**— “APG: Historical Highlights,” presented by Jeff Smart, Command Historian, RDECOM; *Hays-Heighe House at Harford Community College*

**Feb. 14**— Military Tea; *Hays-Heighe House at Harford Community College, 12:30 to 1:30 p.m.*

**Feb. 21**— “How Imminent is Eminent Doman? Protecting Your Backyard from the Likes of William the Conqueror, the Magna Carta, and the Fifth Amendment,” lecture by AnnMarie Profili, Paralegal Studies Coordinator, Harford Community College; *Hays-Heighe House at Harford Community College, 11 a.m. to 12:30 p.m.*

**Feb. 21**— Visitors Center opening celebration at Edgewood Chemical Biological Center; *APG South (Edgewood)*

**Feb. 22**— Science Café – APG or World War I science and technology topic. Presented through a partnership with the Northeastern Maryland Technology Council; *Bel Air Library, 7 p.m.*

**Feb. 25**— Genealogy Conference, featuring recording booths open to visitors, sponsored by Harford County Public Library; *Bel Air Armory*

**Feb. 28**— “I Remember When: Uprooting and Relocation,” Community Discussion, moderated by Iris Barnes, Curator, Lillie Carroll Jackson Civil Rights Museum and Executive Director, Hosanna School Museum; *Hay-Heighe House at Harford Community College, 12:30 to 2 p.m.*

### Throughout the month

- African American/Black History Month Commemoration; *on post*
- Veterans Reading Group featuring WWI books. Five sessions, every three weeks, into May; *Bel Air Library*

### MARCH 2017

**March 2**— “Stress on the Home Front: Life of a Military Family,” Lecture by Regina Roof-Ray, Assistant Professor of Psychology, Harford Community College; *Hays-Heighe House at Harford Community College, 11 a.m. to 12:30 p.m.*

**March 3**— Harford County Public Library Spring Exhibition Opening; Tech



U.S. ARMY PHOTO

A large crowd of members of the Army Ordnance Association wait for a live fire demonstration on the main front at Aberdeen Proving Ground Oct. 12, 1939.



(R)evolution: From APG Into Harford Homes; *Bel Air Library*

**March 5**— Screening of Top Secret Rosies, The Female Computers of WWII, and Meet the Director, LeAnn Erickson; *Aberdeen Library, 2 p.m.*

**March 9**— “Rosie the Riveter” Living History Presentation by Mary Ann Jung; *Harford Community College Student Center, room 243, 11 a.m. to 12:30 p.m.*

**March 12**— Ready to Serve, a one-woman show by Ellouise Schottler; *Abingdon Library, 2 p.m.*

**March 15**— “I Remember When: Women at Work” Community Discussion, moderated by Dr. Sharon Stowers, Professor of Sociology & Anthropology, Harford Community College; *Hays-Heighe House at Harford Community College, 12:30 to 2 p.m.*

**March 15**— Science Café - Topic TBD in partnership with the Northeastern Maryland Technology Council; *Bel Air Library, 7 p.m.*

**March 16**— Panel Discussion with APG Scientists: Science and Technology at APG; *Abingdon Library, 6:30 p.m.*

**March 21**— Military Tea; *Hays-Heighe House at Harford Community College, 12:30 to 1:30 p.m.*

**March 26**— Meet the Author: Elizabeth Foxwell, (Their Own Words: American Women in WWI); *hosted by Harford County Public Library, 2 p.m.*

**March 29**— “History of Women at APG,” presentation by Richard Wiltison, Deputy Command Historian, RDECOM; *Elkton Library, 7 p.m.*

#### Throughout the month

- Women’s History Month commemoration hosted by the Federal Women’s Program; *on post*
- Veterans Reading Group - WWI books - 5 sessions, every three weeks, into May; *Bel Air Library*

#### APRIL 2017

**April 6**— “Casus Belli: The United States Enters World War I,” Lecture by Andrew Kellett, Ph.D., Associate Professor of History, Harford Community College; *HCC Student Center, room 243, 12:30 to 2 p.m.*

## HARFORD COMMUNITY COLLEGE

**April 9**— “Last of the Romanovs” Tea; *Steppingstone Farm Museum, noon and 3 p.m. seatings*

**April 12**— Juried Photography Exhibition, opening reception and exhibition related speaker; *Jarrettsville Library, 6 p.m., open through May 14.*

**April 13**— “The Domestic Architecture of Aberdeen’s Canning Dynasties,” Lecture by Jacob Bensen, Local Historian; *Hays-Heighe House at Harford Community College, 6:30 to 7:30 p.m.*

**April 17**— “The Last of the Doughboys: the Forgotten Generation and their Forgotten World War,” by Richard Rubin; *Rising Sun Library*

**April 21**— “A Natural Habitat Managed Well: APG and the Environment.” Lecture by APG Natural Resources Branch staff; *Hays-Heighe House at Harford Community College, 12:30 to 1:45 p.m.*

**April 25**— “Chemical Weapons in World War I and Beyond,” Lecture by Jeff Smart, Command Historian, RDECOM; *Hays-Heighe House at Harford Community College, 12:30 to 1:30 p.m.*

**April 27**— 100th Anniversary Gas Mask 5K Run hosted by Edgewood Chemical Biological Center; *APG South (Edgewood), open to public*

#### Throughout the month

- Holocaust Remembrance hosted by Army Research Laboratory; *on post*
- State-wide World War I Centennial Commission Kick-off and recognition of U.S. entry into World War I

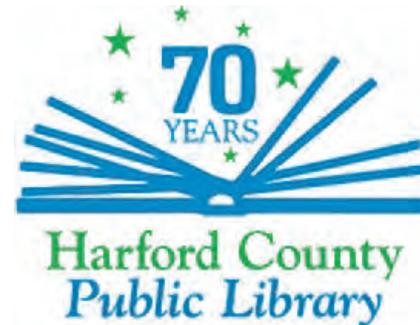
#### MAY 2017

**May 3**— Dedication of the APG Workers Memorial hosted by the ACCA; *Festival Park, Aberdeen*

**May 3**— “Military Careers Showcase” - Young civilian and active-duty military professionals discuss the wide variety of career paths available through the military and affiliated organizations; *Elkton Central Library, 6 p.m.*

**May 4**— “Gun Clubs and Waterfowling in the Upper Chesapeake Region,” Lecture by C. John Sullivan, Waterfowling Historian; *Hays-Heighe House at Harford Community College, 12:30 to 1:45 p.m.*

**May 5**— “Ragtime on the River” WWI Dance; *Steppingstone Farm Museum, 6 to*



10 p.m. with lessons first hour

**May 5-6**— “Safety from Sacrifice,” WWI Exhibit; *Steppingstone Farm Museum, opening weekend*

**May 6**— EOD Memorial 131 Workout - A Physically, Mentally, Emotionally (PME) event honoring National Explosive Ordnance Disposal Day. Hosted by 20th CBRNE Command; *APG South (Edgewood)*

**May 8**— Exhibition: Lost and Found: The Forgotten Communities of APG; *Aberdeen Library, through June 16*



**May 11**— Meet the Author: Mitchell Yockelson (Forty-Seven Days: How Pershing’s Warriors Came of Age to Defeat the German Army in WW I); *Bel Air Library, 6:30 p.m.*

**May 11**— Veterans Reading Group Discussion; *Bel Air Library*

**May 11-13**— Armed Forces Week 44th Annual East Coast Vehicle Rally, Militaria show and rally; *Ripken Stadium, 8 a.m. to 5 p.m. each day*

**May 13**— Military Retiree Appreciation Day ceremony; *APG North (Aberdeen), 8 a.m.*

**May 15**— Armed Forces Day Golf Scramble; *Ruggles, 8 a.m.*

**May 16**— Our Community Salutes, music, displays, and presentations for new recruits; *APG North (Aberdeen) recreation center, 1 p.m.*

**May 16**— “100 Years of APG,” lecture by Richard Wiltison; *Perryville Library, 7 p.m.*  
See **EVENTS**, page 18



U.S. ARMY PHOTO

Randy Molitor, age 3, looks over a big gun at the APG Armed Forces Day Open House in 1993.

EVENTS, *From page 17*

**May 17**— National Bike to Work Day; APG North (Aberdeen) recreation center parking lot, 6:30 a.m.

**May 18**— Run to Honor; APG North (Aberdeen) Shore Park, 6:30 a.m.

**May 18**— Harford County Military Appreciation Luncheon; Richlin Ballroom, 11:30 a.m.

**May 20**— Live Fire Demonstration hosted by U.S. Army Aberdeen Test Center; APG North (Aberdeen); ticketed event

**May 24**— Edgewood Chemical Biological Center 100th Anniversary Speaker Series, Jeffery Smart, US Army RDECOM Historian; APG South (Edgewood)

## Throughout the month

- Memorial Day Commemorations in local communities
- Asian Pacific Islander Heritage Month Observance; *on post*
- "Housing, Infrastructure, and Business: Accommodating APG's Growth through Planning and Development;" *Hays-Heighe House at Harford Community College*
- BSO Chamber Concert hosted by Maryland Center for the Arts

## JUNE 2017

**June 3-4**— "Hacking History- See it, Make it, Take it" Maker Festival; *Steppingstone Farm Museum, 11 a.m. to 4 p.m.*

**June 4**— Susquehanna Symphony Orchestra presents an original composition based on the Army hymn at its outdoor concert; *Humbert Memorial Band Shell, Bel Air, 7 p.m.*

**June 14**— Army 242nd Birthday Celebration; *APG North (Aberdeen)*

**June 15**— Edgewood Chemical Biological Center 100th Anniversary Time Capsule Dedication; *APG South (Edgewood), open to the public*

**June 30**— Military Appreciation Night; *Leidos Field at Ripken Stadium*

## JULY 2017

**July 10**— "History of APG," lecture by Richard Wiltson, Deputy Command Historian, RDECOM; *Chesapeake Branch, Cecil County Public Library*

## Throughout the month

- Independence Day celebrations in local communities

## AUGUST 2017

**Aug. 20**— "Mata Hari - Notorius WWI spy," Tea; *Steppingstone Farm Museum, 12 p.m. & 3 p.m. seatings*

**Aug. 26**— Women's Equality Day hosted by PEO C3T and the Federal Women's Program; *on post*



U.S. ARMY PHOTO

A crew perches on an M60 main battle tank while awaiting their turn in the Armed Forces Day firing demonstration in 1965. The show of Army weaponry drew 33,000 visitors to APG.

## SEPTEMBER 2017

**Sept. 11**— Harford County Public Library Fall Exhibition Opening: APG as Catalyst: Harford County's Changing Landscape; *Bel Air Library, through October 22*

**Sept. 14**— Fall Exhibition Opening: Tech (R)evolution: From APG Into Harford Homes; *Hays-Heighe House at Harford Community College, 1 to 5 p.m.*

**Sept. 15**— Hispanic Heritage Month observance hosted by Army Public Health Center; *on post*

**Sept. 21**— Army Public Health 75th Anniversary Celebration; *APG South (Edgewood)*

**Sept. 30**— Centennial /125th Anniversary 10K Run, in collaboration with City of Aberdeen; *Run to start and end in City of Aberdeen, course to go onto APG*

## OCTOBER 2017

**Oct. 1**— Edgewood Chemical Biological Center 100th Anniversary Golf Tournament; *APG South (Edgewood)*

**Oct. 9**— Harford Plein Air Painting Festival, week-long outdoor arts at historical locations across Harford County hosted by Maryland Center for the Arts

**Oct. 11**— Edgewood Chemical Biological Center 100th Anniversary Speaker



U.S. ARMY PHOTO

Members of the community look at the 16-inch gun, known as the "Big Gun" at the Ordnance Museum during APG's Armed Forces Day Open House in 1991. The Big Gun is all that remains at APG today of the Ordnance Museum, now at Fort Lee, Virginia.

Series featuring Dr. Freeman Hrabrowski, UMBC President; *APG South (Edgewood)*

**Oct. 16**— Time Capsule Opening Ceremony; *APG North (Aberdeen), open to public*

**Oct. 20**— Centennial Open House Tenant Tours hosted by Army Research Laboratory; *APG North (Aberdeen) and South (Edgewood), ticketed event*

**Oct. 20**— Centennial Ball; *Martin's East*



U.S. ARMY PHOTO BY RACHEL PONDER, APG NEWS

Attendees at the APG Armed Forces Day Open House and Live Fire Demonstration cheer as the newest and most lethal Abrams Main Battle Tank drives by during the parade of vehicles, May 19, 2012. Four thousand free tickets were given out to the standing-room-only event at the main front on APG North (Aberdeen).

banquet facility, 6 p.m., ticketed event

**Oct. 21**— APG Community Open House, a Centennial Expo featuring displays, equipment, vehicles; *APG North (Aberdeen), open to public*

#### Throughout the month

- National Disability Employment Awareness Month observance hosted by Kirk U.S. Army Health Clinic; *APG North (Aberdeen)*

#### NOVEMBER 2017

**Nov. 9**— Edgewood Chemical Biological Center 100th Anniversary Veterans Celebration; *APG South (Edgewood)*

**Nov. 10**— Dedication of APG Technology Heritage and Education Center; *Aberdeen, 9 a.m.*

**Nov. 11**— Veterans Day Commemorations; *local communities and APG South (Edgewood)*

#### Throughout the month

- Native American Indian Heritage Month observance hosted by RDECOM; *on post*

#### THROUGHOUT 2017

- Vintage Sewing Nights, 2nd & 4th

Tuesdays; *studio at Steppingstone Farm Museum, 5 to 8 p.m.*

- “Historic Harford,” a video series broadcast on HCN (Comcast Channel 21, Verizon Channel 31) Mondays at 4 p.m. and Thursdays at 7:30 p.m.; will feature stories on the history of Aberdeen Proving Ground throughout 2017

#### FOR MORE INFORMATION

For more information about the APG Centennial Celebration, visit [www.apg100.org](http://www.apg100.org) or [www.teamapg.com](http://www.teamapg.com).

Additional details about individual events can be found at the hosting organization’s websites: APG Facebook, [www.facebook.com/APGMd](http://www.facebook.com/APGMd); Harford County Public Library, [www.hcplonlin.org](http://www.hcplonlin.org); Cecil County Public Library, [www.cecil.ebranch.info/blog](http://www.cecil.ebranch.info/blog); Hays-Heighe House at Haford Community College, [www.harford.edu/community/hays-heighe-house](http://www.harford.edu/community/hays-heighe-house); Harford Community College, [www.harford.edu](http://www.harford.edu); Maryland Center for the Arts, [www.mdcenterforthearts.org](http://www.mdcenterforthearts.org); and the Steppingstone Museum, [www.stepsingstonemuseum.org](http://www.stepsingstonemuseum.org).

*Editor’s Note: All event dates, times and details are current as of press time and are subject to change.*



U.S. ARMY PHOTO BY RACHEL PONDER, APG NEWS

Kevin White, a contractor as representative soldier from Aberdeen Test Center, shows Phillip Tran, 5, a .50 caliber machine gun during the static displays at the APG Armed Forces Day Open House and Live Fire Demonstration May 19, 2012.



# ALL THINGS MARYLAND

An APG News original series exploring the history, cultural oddities, well-documented and lesser-known points of interest, and travel destinations that call the Old Line State home.

## Historic properties at Aberdeen Proving Ground

Three of Maryland's National Register of Historic Places reside within APG boundaries



U.S. ARMY PHOTO

The Presbury Meetinghouse, also known as the "Quiet Lodge," was listed on the National Register of Historic Places in 1974. With a brick frame dating to the 1720s, it is the oldest standing structure on APG.

BY RACHEL PONDER  
APG News

Many people don't realize that Aberdeen Proving Ground is home to three nationally-registered sites in the state of Maryland. These three properties are listed in the National Register of Historic Places, or NRHP, and were constructed before APG was established in 1917. According to Mark Gallihue, a cultural resources manager with the Directorate of Public Works, or DPW, all three - the Presbury Meetinghouse, the Gunpowder Meetinghouse and Pooles Island Lighthouse - are in "reasonably good shape."

### Presbury Meetinghouse

The Presbury Meetinghouse, also known as the "Quiet Lodge," was listed on the NRHP in 1974. With a brick frame that dates back to the 1720s, it is the oldest standing structure on the installation.

Located at Austin and Parrish Roads on APG South (Edgewood), the Presbury Meetinghouse is associated with early American Methodism, according to Gallihue.

The two-story home is frequently mentioned in journals of early Methodist preachers. Francis Asbury, one of the first two bishops of the Methodist Episcopal Church in the U.S., preached and stayed overnight in the home 14 times between 1772 and 1777.



U.S. ARMY PHOTO

**Built in 1828 or 1829, the Gunpowder Meetinghouse on APG South (Edgewood) is one of the oldest Methodist churches in America still standing. The one-room structure was added to the National Register of Historic Places in 1974.**

After the Army acquired the Presbury Meetinghouse in 1917, an addition to the home was built out of wood. The building has since been used as commander's quarters and offices.

According to an article published in the May 17, 2012 edition of the *APG News*, DPW oversaw a historic renovation project that added period appropriate cedar shakes to the roof, reproduction wood windows and a rebuilt chimney.

## Gunpowder Meetinghouse

The Gunpowder Meetinghouse was built around 1828 or 1829, and is one of the oldest Methodist churches in the country, Gallihue said. It was listed on the NRHP in 1974.

According to Gallihue, in the 19th century, the one-room brick structure located on Magnolia Road in APG South (Edgewood) was a church "for some time."

"There are congregations [in Harford County] that trace their ancestry into that church," he said. "At least three Methodist churches in Harford County - and in some cases these successor churches, are now more than 100 years old."

He said the structure also was used as a school. After the Army bought the building in 1917, it was used for religious services and then as an ammunition storage facility. Currently, the building is not occupied.

"That [the Gunpowder Meeting-

house] got some restoration money about 10 to 15 years ago, it is in fairly good condition," he said. "The big problem there is there is no plumbing."

## Pooles Island Lighthouse

Pooles Island Lighthouse, a 40-foot-tall granite tower, was built in 1825, and is located on Pooles Island at the mouth of the Gunpowder and Bush Rivers, in a secure area of APG.

According to Gallihue, Pooles Island Lighthouse is significant because it is the oldest standing lighthouse in Maryland, and the fourth oldest lighthouse on the Chesapeake Bay.

In 1824, Congress appropriated \$5,000 for a lighthouse on the northwest tip of the island. The beacon was built by John Donahoo and Simon Frieze, and is constructed out of granite from a Port Deposit, Maryland quarry.

"It was very well built," Gallihue said.

According to [www.lighthousefriends.com](http://www.lighthousefriends.com), the Pooles Island Lighthouse had 12 keepers. The last keeper, Stephen A. Cohee, maintained the beacon for 24 years until the lighthouse was purchased by the federal government in 1917. After the establishment of APG, the lighthouse was automated for 22 years and then decommissioned in 1939.

According to research information supplied by Gallihue, the Army submitted a proposal to have the lighthouse placed on the NRHP. To gain eligibility, a "major lighthouse restoration and stabilization project began in October 1995 and continued through the fall of 1996."



U.S. ARMY PHOTO

**Pooles Island Lighthouse, a 40-foot-tall granite tower, was built in 1825, and is located on Pooles Island at the mouth of Gunpowder and Bush Rivers in a secure area of APG. It is one of three Maryland National Register of Historic Places located on APG.**

"The project included mortar repair, sanding and painting by various organizations," he said.

After the completion of these projects, the Pooles Island Lighthouse was added to the NRHP in 1997.

In 2009, then APG senior commander Maj. Gen. Nickolas G. "Nick" Justice, ordered the relighting of the lighthouse and in 2011, the beacon was outfitted with solar lighting and was officially relit as part of the Team APG Armed Forces Day celebration.

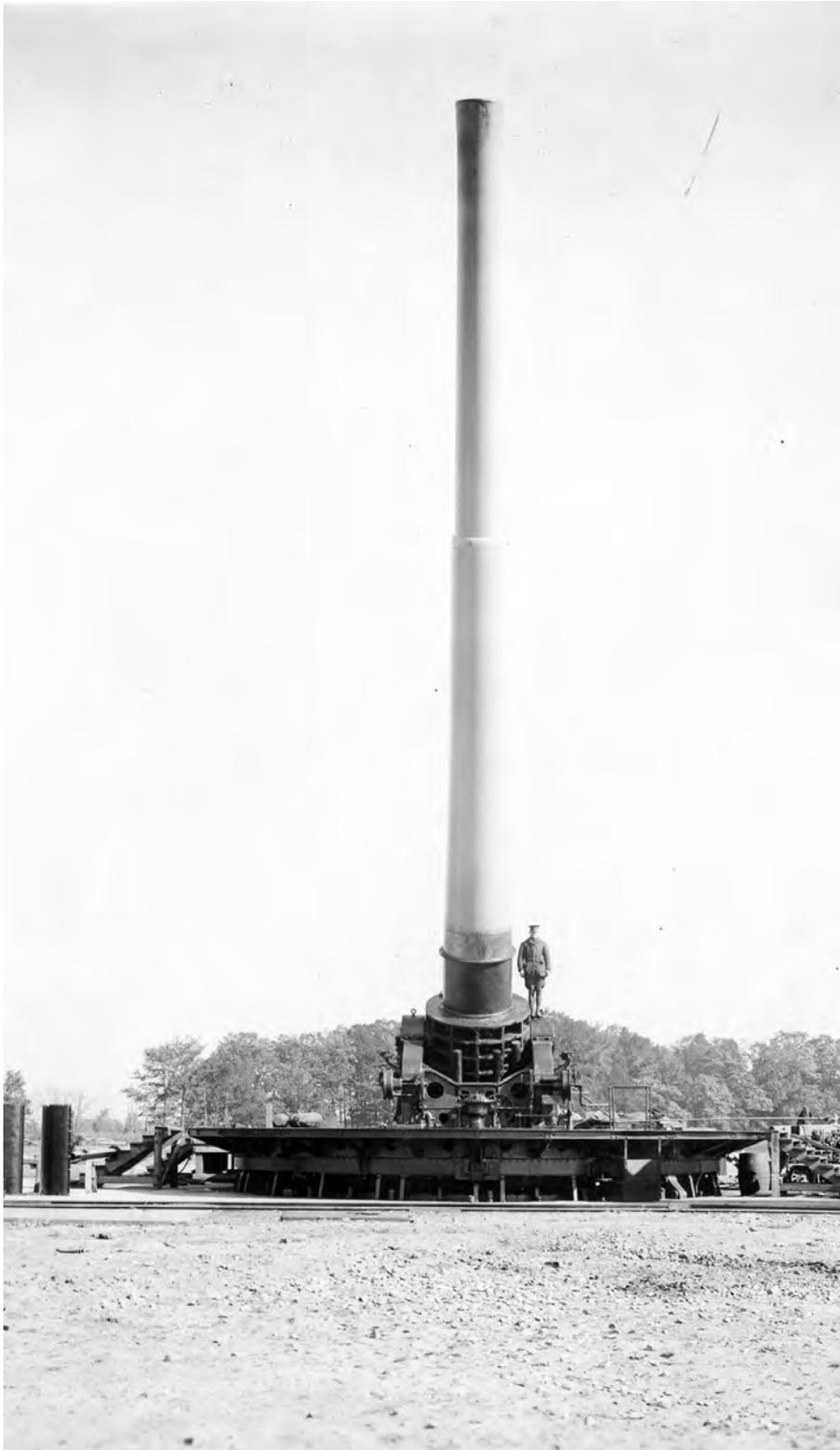
Because the island resides within the restricted area of APG, it is off limits to the public.

## About NRHP

The National Register of Historic Places— part of the National Park Service— is the official list of historic sites in the nation that are worthy of preservation. Authorized by the National Historic Preservation Act of 1966, the NRHP is part of a national program to identify, evaluate, and protect the nation's historic and archaeological resources. For more information visit <https://www.nps.gov/nr/>.

Sources: <http://mht.maryland.gov/>;  
[www.lighthousefriends.com](http://www.lighthousefriends.com);  
<https://www.nps.gov/nr/>;  
<https://en.wikipedia.org/>

# History of Aberdeen Test Center



U.S. ARMY PHOTO

A Soldier stands next to the 16-inch "big gun" in 1919. The weapon was tested at APG by the Ordnance Department.

**EDITED BY AMBURR REESE**

U.S. Army Garrison APG

Aberdeen Test Center came into existence as a result of the United States' engagement in World War I. Before 1917, all of the Army's proof testing, which was systematic testing to ensure the sound condition of munitions, was done at Sandy Hook Proving Ground, New Jersey. As wartime work and technology advanced, Sandy Hook's location and size proved to be inadequate for the Army's needs moving the mission set to northern Chesapeake Bay area now known as Aberdeen Proving Ground.

Construction of the proving ground began in December 1917 and the Proof Department, ATC's predecessor, began testing Jan. 2, 1918.

During those first days, ammunition and gun testing were the principle functions. Large quantities of ammunition manufactured for the war underwent acceptance testing before being released and shipped overseas.

When World War I concluded, APG took on a peacetime mission of research and development while the facilities and capabilities of the proving ground amplified at a steady pace.

Ordnance testing of artillery and ammunition persisted, and it was during this time period that the test mission of the Proof Department expanded to include automotive testing. From 1919 to 1940, new materials and items were brought to APG to be studied and proofed.

War clouds in Europe signaled a new testing era for APG. As the nation carefully followed the events across the Atlantic, U.S. Armed Forces stepped up defenses, creating more work for the Proof Department.

The attack on Pearl Harbor in December 1941 hurled the U.S. into war with Japan, and soon embroiled in the war in Europe. This heralded the expansion of the U.S. Armed Forces, which in turn created an even more urgent need for increased activity at APG. During this time, flamethrowers, bazookas, tanks and jeeps were tested at the proving ground before sent overseas.

Activity at APG slowed significantly after the war was over. The force was reduced and the number of projects taken on by the Ordnance Research and Development Center, or ORDC, dwindled. Facing a new period of peace, the organization threw itself into the task of redefining its purpose and mission.

The ORDC reorganized in 1946 into three distinct tenants: Development and Proof



U.S. ARMY PHOTO

Several iterations of the jeep were tested at Aberdeen Proving Ground from the 1940s into the 1970s.



U.S. ARMY ABERDEEN TEST CENTER PHOTO

Today, Aberdeen Test Center continues to test improvements to Army vehicles, including the Mine-Resistant Ambush Protected vehicle known as the MRAP.

Services, Ballistic Research Laboratory and the Aberdeen Ordnance Depot. D&PS became the central hub of testing for the U.S. Army. One of the most important advancements to come out of the proving ground was one of the world's first general-purpose electronic computers. Called the Electronic Numerical Integrator and Computer, or ENIAC for short, it was designed to calculate artillery firing tables.

In June 1950, North Korean forces invaded U.S. supported South Korea as Cold War tensions increased by the division of Korea at the end of World War II. As the U.S. moved to aid South Korea against the invasion, D&PS raced to pick up the pace of testing in support of the most recent war effort.

Armistice negotiations in Korea eventually led to a ceasefire in 1953. At that time, the proving ground had tested thousands of vehicles over nearly six million miles, fired over one million weapons using more than one billion rounds of ammunition, and spent

over one hundred-million man hours in perfecting new weapons and equipment.

During the 1950s, the proving ground tested new mortars, jeeps, machine guns and the Walker Bulldog, the first tank built around a gun rather than an engine.

In order to accommodate the ever widening scope of D&PS' mission in the early 1960s, testing was split in three directions; Engineer Design, Engineering Testing and Quality Assurance Testing.

In 1968, D&PS re-formed into the Materiel Testing Directorate, or MTD. MTD was arranged into four branches the Operations Branch; Supply Branch; Engineering Services and the Engineering Measurements/Analysis Branch. In 1985, MTD underwent reorganization and became the U.S. Army Combat Systems Test Activity, or USACSTA.

Live fire testing was one of the major developments in the early years of USACSTA. This new testing process was launched into the spotlight with the controversy surrounding the Bradley Fighting Vehicle, a

light and swift moving troop carrier.

In addition to the Bradley Fighting Vehicle, the M1 Abrams tank underwent extensive live fire and vulnerability testing during the 1970s and 1980s. Designers and engineers working on this tank strived to fulfill the three main design areas: mobility, lethality, and survivability.

The First Gulf War began in August 1990 and immediately boosted testing activity. The Gulf War lasted a little less than a year, but in that short span of time, many of the weapons systems and vehicles tested at USACSTA were proved competent in theater.

On June 2, 1995, USACSTA became the present day Aberdeen Test Center, or ATC. The name change expanded the potential of the testing activity and regained the historical link to the Proof Department of APG. As a principle test facility, for the Developmental Test Command, ATC tests all military materiel as assigned by the Army Test and Evaluation Command.

After the World Trade Center attacks on September 11, 2001, the U.S. entered into the Global War on Terrorism and a new era in testing at APG began and continues today.

More than ninety nine years have passed since the Army occupied the flat and fertile farmland on the northwest coast of the Chesapeake Bay. Nearly a century of changes have transformed that land from a few ranges dedicated to the firing of arms and ammunition, to a heavily wooded expanse where tests are conducted on every piece of equipment a Soldier touches.

ATC's mission is constantly expanding to adapt to the needs of the modern Warfighter according to the current battlefield. From vehicle survivability to body armor testing, the dedication and hard work of the people at ATC is steadfast and confirms Aberdeen Test Center's place as a center of excellence in testing.

Source: Nelson, Lauren E., "History of Aberdeen Test Center," 1917-2011.

# A chemical and biological history

## Edgewood's tie to chemical warfare and defense

EDITED BY USAG APG PUBLIC AFFAIRS

Since 1917, a peninsula in Maryland formed by the Bush and Gunpowder Rivers has played a major role in the United States' chemical and biological defense program.

Once named Edgewood Arsenal, the U.S. Army organizations—renamed and restructured countless times—at APG South (Edgewood) have researched, designed, developed, engineered, produced, tested, or worked on almost every chemical and biological defense piece of equipment, smoke/obscuration system, medical-related tool, flame and incendiary weapon, riot control device, retaliatory chemical weapon, and demilitarization device that was standardized or approved for fielding or use by the U.S. Armed Forces.

The U.S. Army Edgewood Chemical Biological Center, known as ECBC, traces its lineage back to 1917 and the creation of the Army's first chemical warfare research and development facility.

## The Creation of Edgewood Arsenal

After the U.S. entered World War I, the War Department made additional plans to prepare for chemical warfare, including the investigation of noxious gases, the generation of chemical warfare agents, and the discovery of antidotes for war purposes.

President Woodrow Wilson issued a proclamation that designated Gunpowder Neck in Harford County, adjacent to the Ordnance Department's new Aberdeen Proving Ground, for the plant on December 14, 1917.

## The Creation of the Chemical Warfare Service

In 1918, the War Department centralized chemical warfare functions and established the Chemical Warfare Service, or CWS, with full responsibility for all facilities and functions relating to toxic chemicals. This responsibility included Edgewood Arsenal, among other locations across the country.

Among the chemical shell filling plants

and chemical warfare agent production facilities, Edgewood also established its first research laboratory for purity verification.

Some noteworthy innovations during the early years of Edgewood include the first produced large batch of U.S. gas masks during the war, later deemed inferior to the British mask it was modeled after. By 1918, the CWS created an improvement to the British mask. Edgewood was also responsible for protective gear for military working dogs, horse and mule masks and carrier pigeon protection. With the help of personnel at Edgewood, the Army successfully recovered from its early poor performance and survived repeated toxic chemical attacks against its troops.

The Armistice of November 1918, however, ended the world's first chemical and biological war.

After the end of the war, the mission of weapons and defensive equipment research at American University in Washington, D.C. and protective mask production in Long Island, New York, were both moved to Edgewood.

## World War II and the Growth of the CWS at Edgewood

The start of World War II in Europe in 1939 led President Roosevelt to declare a limited national emergency, resulting in a major increase in the rate of American rearmament. Edgewood began a major construction program, increased production of both defensive equipment and retaliatory weapons, and expanded the Chemical School program.

When the U.S. entered World War II in 1941, Edgewood commanded a large and rapidly growing organization, with thousands of personnel and facilities. Its products were also in urgent demand by a rapidly growing Army. The Army's primary facility for both chemical defense and retaliatory capabilities resided at Edgewood, for chemical, flame, incendiary, and smoke items.

During World War II, the main threat to Edgewood was whether Germany or Japan would initiate chemical or biological warfare against military or civilian targets. Reported use of cholera, dysentery, typhoid, plague, anthrax and paratyphoid by the Japanese against the Chinese led to an American decision to conduct biological warfare research and establish a retaliatory biological warfare capability.



U.S. ARMY PHOTO

Shells are filled with mustard agent on Edgewood Arsenal Nov. 11, 1918.

Edgewood provided technical support in defensive aspects of that research.

Noteworthy innovations developed during World War II were the M1 Noncombatant Mask; Mickey Mouse Mask; Chemical Agent Detector kits and the Incendiary Bomb.

## After the World War II: Chemical Weapons Demilitarization

At the end of the war, Edgewood organizations were demobilized, however the Army continued its existence as a peacetime entity. The testing ranges at Edgewood were littered with old U.S., German and other foreign chemical weapons. It was also designated to receive additional captured German chemical munitions from Europe. As a result, a new mission at Edgewood was added: chemical munitions demilitarization and disposal.

After the end of the war, U.S. national defense became increasingly based upon the threatened use of nuclear weapons. This led to another expansion of Edgewood's mission, to include radiological protection.

## The Korean War

In June 1950, with the onset of the

Korean War, Edgewood quickly implemented an increased procurement program to supply the Army with a retaliatory chemical capability, if needed, and improved defensive equipment.

Like World War II, the United States did not change its policy about no first-use of chemical weapons. Although the action in Korea brought up the subject of whether to initiate chemical warfare to save lives, neither side chose to initiate chemical or biological warfare.

The Chemical Corps at Edgewood supported the war through its many other programs, particularly smoke, incendiary, and flame. Napalm proved to be a key weapon. It was first used three days after the North Koreans crossed the 38th parallel and proved very effective against tanks and personnel. It was also used as a ground weapon to help defend camp perimeters.

## Vietnam War

The growing guerrilla war in South Vietnam during the early 1960s led to, again, many demands for Edgewood's research and development capabilities.

Although chemical and biological warfare agents were not used, the Army did utilize flame, incendiary, smoke, chemical defoliants, and riot control agents in large quantities. The use of these items caused a



U.S. ARMY PHOTO

**Nurses participate in a gas mask training at Aberdeen Proving Ground during World War II.**

worldwide concern that required the Army to explain the differences between defoliants and riot control agents and lethal chemical warfare agents. The public opinion of flame and incendiary weapons also changed during the conflict.

## The 1970s, 1980s and Edgewood Arsenal Reorganization

In 1971, Edgewood Arsenal was consolidated with Aberdeen Proving Ground and was designated the Edgewood Area of APG.

The binary chemical weapons program, in which the toxic agent in its active state is not contained within the weapon, began in the 70s. Due to world events, production of binary weapons started in 1987. This eventually led to the Soviet Union agreeing to end chemical weapon production and eliminate them.

Perhaps the most significant development occurred during the 1980s was the standardization in 1987 of a new protective mask for the military to replace the M17 series masks. The new mask, designated the M40, returned to a canister design that provided increased protection against everything from chemical agents to toxins, smokes, and radioactive fallout particles.

## Chemical Weapons Destruction Agreement

As communist governments in Eastern Europe fell in June 1990, the United States and the Soviet Union signed a bilateral chemical weapons destruction agreement known as the Chemical Weapons Convention. In support of this agreement, the U.S. canceled most of the new chemical retaliatory program. The treaty went into effect in 1997.

Shortly after the signing of the agreement, the Army began Operation Retrograde to remove all U.S. chemical weapons from Germany. During this time the Army researched demilitarization options for chemical weapons, from incineration to neutralization and biodegradation.

In the mid to late 90s, several other organizations were created to address chemical stockpile destruction, while others were merged or reorganized, resulting in the establishment of Edgewood Chemical Biological Center, or ECBC, as it is still known today.

The old chemical stockpile at Edgewood took its first step toward destruction in 1999 when construction of the Aberdeen Chemical Agent Disposal Facility (ACADF) began. The stockpile destruction was complete on March 11, 2005; Edgewood was the first stockpile to complete destruction in the continental United States.

## The 2000s and BRAC

The beginning of the 21st Century saw a sudden and dramatic increase in the



U.S. ARMY PHOTO

**APG's chemical and biological defense mission continues today, as the Joint Service Aircrew Mask for Strategic Aircraft undergoes testing at APG South (Edgewood) to ensure that it meets joint service requirements.**

interest in chemical and biological warfare.

Originally feared but not experienced on the battlefield, the events of 2001 and the first significant use of an antipersonnel biological agent as a terrorist weapon in the United States put the front lines of bioterrorism in U.S. Post Offices, government buildings, hospitals, media headquarters, and even civilians neighborhoods.

Homeland Defense suddenly ceased being a training exercise for a "what if?" scenario and became a theater of operation in the new war against terror. All of the chemical and biological defense organizations at APG South took on new and increased responsibilities for national defense.

The 2005 Base Realignment and Closure plan called for both additions and subtractions for APG. In 2010, the Joint Program Executive Office for Chemical and Biological Defense moved to APG to join sub elements already there. The Chemical Biological Directorate of the Defense Threat Reduction Agency also moved to APG South.

## Syrian Chemical Weapon Destruction

In 2013, reports emerged of supposed chemical weapons use by the Syrian government. To avoid retaliatory military strikes from the U.S., Syria agreed to dispose of about 1,300 tons of chemical

weapons. Arrangements were made for the removal of the Syrian stockpile and destruction at sea.

The destruction mission was a joint effort between three Edgewood organizations, which outfitted the MV Cape Ray and deployed the ship to the Atlantic Ocean near Europe. Actual operations to destroy the various types of chemical weapons in the Syrian stockpile started in July 2014 to destroy about 600 tons of chemical warfare material, ending in August of that same year.

## The CBRNE Center of Excellence

The many reorganizations and name changes since 1917 did not change the primary mission of the various organizations located in APG South: to provide the best chemical and biological defense equipment, supplies, and procedures. Today, APG South is renowned for its expertise in chemical and biological defense, and is known as the Army's Chemical, Biological, Radiological, Nuclear and Explosives, or CBRNE, Center of Excellence. The primary organizations, ECBC, CMA, PEO ACWA, MRICD, JPEO-CBD, and 20th CBRNE Command, all carry on the century-long legacy of the APG South chem/bio mission into the future.

*Editor's Note: This article is based on an original document provided by the Edgewood Chemical Biological Center.*

# A proving ground transformation

BRAC expanded mission areas of APG, with a focus toward the future

BY AMANDA ROMINIECKI  
APG News

American society— alongside global society— has changed immeasurably in the last century. As society changes, so does conflict and so does the U.S. Army.

Arguably the biggest change to occur at APG in recent memory, or at least the past 25 years, is the impact of the 2005 Base Realignment and Closure, or BRAC, Commission.

Based on the commission's recommendations, a number of longtime APG organizations moved to new locations, while at the same time, many more relocated here.

## A fond farewell

Then APG's oldest organization, the Ordnance Center and Schools relocated to Fort Lee, Virginia. With 92 years of APG history, the last Ordnance AIT Soldier departed the installation in August 2011. The much-revered Ordnance Museum also relocated to Fort Lee. Awaiting Ordnance Soldiers at Fort Lee were brand new training facilities and consolidated training resources.

The 389th Army Band relocated to Redstone Arsenal, Alabama and the Army Environmental Command joined Installation Management Command headquarters at Fort Sam Houston, Texas.

## New faces at the proving ground

As several organizations relocated, countless new organizations arrived at APG. Diverse elements combined to form the Army's Center for Excellence for C4ISR. The following organizations relocated from Fort Monmouth, New Jersey to APG.

- Communications-Electronics Command
- Communications-Electronics Research, Development and Engineering Center
- Program Executive Office Command, Control and Communications-Tactical
- Program Executive Office Intelli-



Construction is underway on the new Army Test and Evaluation Command headquarters at Aberdeen Proving Ground, Md. in this BRAC file photo. Employees moved into the new building in August 2011. DEFENSE DEPARTMENT PHOTO BY DONNA MILES

gence, Electronic Warfare and Sensors.

"Aberdeen Proving Ground has been, but will be to a greater extent, one of the Army's major hubs of research and development of new technologies, and the testing and evaluation of those new technologies that lead to fielding new systems to support the warfighter," said then-APG deputy commander for transformation Col. Andrew Nelson, in a 2011 interview discussing the near-completion of BRAC.

"This is the center of all of that— the technology development that is leading to Soldiers being better equipped and better supported in the operational environment where they are," he said. "It's the clothes they wear, the radios they speak through, the computer system that tracks where individual vehicles and soldiers are on the battlefield, to having [unmanned aerial vehicles] that give them the best intelligence of what the enemy is doing.

"That is what Aberdeen Proving Ground already is, and what it will be about," Nelson said. "Everything we do

here is all about ensuring that the individual soldier and the combat leader have the best possible equipment and systems and technology that is giving them the advantage on the battlefield."

Other organizations moving to APG included:

- Components of the Army Test and Evaluation Command moved from Alexandria and Fort Belvoir, Virginia to APG.
  - The Vehicle Technology Directorate of the Army Research Laboratory relocated from Hampton, Virginia and Cleveland, Ohio to APG.
- APG South (Edgewood) saw the development of the Joint Chemical/Biological Center as a component of Chem/Bio defense research, development and acquisition missions, including the relocation of the Joint Program Executive Office for Chemical and Biological Defense from Falls Church, Virginia to APG.

## Demolition, upgrades and construction

Concurrent with the departure and arrival of organizations at APG, numerous large-scale demolition and new construction projects took place, vastly altering the landscape of the installation.

The C4ISR campus, constructed as a result of BRAC, houses many of the sophisticated technologies and processes that provide enhanced capabilities to tomorrow's Army.

Contractors completed more than \$1 billion in design and construction work, delivering nearly 3 million square feet of state-of-the-art facilities that support research and development, production and integration, command and control, and administration critical defense missions. That's equivalent to more than 14 Aberdeen Wal-Mart Super Centers.

Eighteen new buildings were constructed and one facility was completely renovated for its new mission. APG



U.S. ARMY PHOTO BY YVONNE JOHNSON, APG NEWS

APG Garrison Directorate of Public Works employees remove unit emblems and the Ordnance Center and Schools signs from buildings on post in 2011 following the OC&S relocation to Fort Lee, Virginia as a result of BRAC.



U.S. ARMY PHOTO

Movers prepare some of the 60 ordnance treasures at Aberdeen Proving Ground, Md., for a 200-mile trip down Interstate 95 to Fort Lee, Va., during Phase 1 of the Ordnance Museum relocation in September 2009.

demolished 146 old and tired buildings, as well as constructed new access control points and visitor centers.

Also upgraded and improved were roadways and utilities like power, water, sanitary drains and storm water management, in order to support the new facilities.

## A change for the future

Today, APG is recognized as one of the world's most important research and development, testing and evaluation facilities for military weapons, equipment and personnel.

APG tenants perform critical missions in direct support of America's Global War

on Terrorism and employ a diverse workforce comprised of more than 13,000 civilian government employees, 6,500 contractors, and 4,000 military personnel, making the Proving Ground the largest employee in Harford County.

The transformations at APG during BRAC served to keep APG at the forefront of research, development, engineering, testing and training well into the 21st century.

Source(s): "The New Team APG: BRAC 2005 to 2011" by the APG Garrison Transformation Office; "The End of BRAC: 2005-2011 by the APG News; and "BRAC transforms Aberdeen Proving Ground Mission" by Donna Miles, American Forces Press Service.

## BY THE NUMB#RS

# The BRAC impact at APG

The transformations at APG during BRAC served to keep APG at the forefront of research, development, engineering, testing and training well into the 21st century. Check out these impressive numbers from the BRAC transformation and construction efforts.

## 2.8 million+

Square feet of new construction were completed as a result of BRAC at APG.

## 117,100

Number of fluorescent light bulbs installed in the newly constructed buildings at APG during BRAC. 534,000 ceiling tiles and 1.96 million square feet of carpeting were also installed.

## 40,000+

New IP addresses created during BRAC for new personnel and mission requirements. 20,000 new telephone numbers were also delivered during this time.

## 8,200

Positions at APG were gained as a result of organizations relocating to APG. When considering the positions that left the installation, it resulted in a net gain of 6,500.

## 1,400

Number of engineers, managers and tradesmen working daily at APG during the height of BRAC construction.

## 906

Miles of data cabling were installed for mission requirements during BRAC construction.

## 18

New buildings were constructed as a result of BRAC. One additional facility was renovated for re-use.

By Amanda Rominiecki, APG News

Source: "The New Team APG: BRAC 2005 to 2011" by the APG Garrison Transformation Office

# Continuing a legacy of innovation

APG missions continue to evolve, keep pace with technology of war

COMPILED BY AMANDA ROMINIECKI  
APG News Editor

Since its founding 100 years ago, Aberdeen Proving Ground has brought the latest technological discoveries to fruition as state-of-the-art equipment for the U.S. warfighter.

In desperate need for newer and larger ammunition after entering World War I, the Army established APG on Oct. 20, 1917 to proof and manufacture ordnance. Concurrently, Edgewood Arsenal was founded as a separate installation, with the sole purpose of providing the Army with the weapons needed to fight in a war in which chemical weapons were used.

Since that time, the Army and APG have changed alongside American and global society. The proving ground has supported military technologies through both world wars, the Korean War, the decades of Cold War, Vietnam Conflict, Persian Gulf War, and the wars in Iraq and Afghanistan.

Despite many reorganizations and name

changes, APG tenants and missions have constantly evolved to keep pace with the growing technology of war.

Over the course of a century, however, one thing has remained constant: the goal to provide superior equipment and support to the U.S. warfighter.

As the Army looks to 2030 and beyond, APG continues to make critical contributions to the Army and national security through its diverse centers of excellence, including:

## Research & Development (R&D)

As the Army's hub for research and development, APG is a \$1 billion research and development resource, making it key player in the nation's homeland defense and international counterterrorism efforts, and an economic and technology resource for the region.

From basic and applied research, APG engineers and scientists advance the areas of supercomputing, cyber defense, energy-harvesting, personal protective equipment, pathogen detection, and unmanned vehicles and aircraft. They keep APG at the forefront of maintaining the U.S. warfighter's battlefield advantage well into the future.

## Command, Control, Communication,

## Computers, Intelligence, Surveillance and Reconnaissance (C4ISR)

APG directly supports the verification, accreditation and integration of network and cyber systems into a unified, functioning and secure network.

Organizations at the proving ground develop, manage procurement efforts, field and sustain the Army's tactical network systems and intelligence gathering and analysis tools.

The Army's state-of-the-art C4ISR research and integration laboratories and facilities located at APG play a critical role in validating capabilities before they reach the hands of a Soldier. This ensures service members have the secure, effective and intuitive communications tools needed to complete their missions.

## Test & Evaluation (T&E)

The test and support facilities at APG allow instrumented firing of weapons on a variety of state-of-the-art ranges, testing of tanks and other tracked vehicles over specifically engineered courses, and a wide variety of laboratory-type investigations.

Newly designed weapons and other combat material are put through the most grueling field and laboratory workouts conceivable.

In 2016 alone, the personnel behind APG test missions—fired more than 3 million rounds of 61 different types including static detonations, tank rounds, and small arms munitions. Automotive and watercraft testing covered more than 139,000 land and 35,000 nautical miles.

## Chemical, Biological, Radiological, Nuclear & Explosives (CBRNE) Research and Defense

APG is the Army's primary center for development, fielding, sustainment and deployments of CBRNE threat reduction and protection capabilities.

APG South (Edgewood) serves as the nation's principal research and development resource for non-medical and medical chemical biological defense, and supports all phases of the acquisition lifecycle.

The Army's key Soldier formation dedicated to combating CBRNE threats facing the nation, who identify, assess, render safe, dismantle, exploit, decontaminate, transfer, and dispose of CBRNE hazards, including weapons of mass destruction, unexploded ordnance, and improvised explosive devices, also resides at APG.

Organizations work closely with the Organization for the Prohibition of Chemical Weapons, and recently assisted in the demilitarization of Syrian chemical weapons. Countless individuals have deployed worldwide in support CBRNE operations in combat and civil assist roles.

## Public Health Sciences

Army readiness is enhanced through efforts of APG's Public Health Sciences Center of Excellence, which identifies and assesses current and emerging health threats, develops and communicates public health solutions, and assures the quality and effectiveness of the Army's public health enterprise.

Supporting the Army's Medical Com-



U.S. ARMY PHOTO

APG is the Army's primary center for development, fielding, sustainment and deployments of Chemical, Biological, Radiological, Nuclear and Explosives threat reduction and protection capabilities.



U.S. ARMY PHOTO

As the Army's Test and Evaluation Center of Excellence, APG personnel test a variety of wheeled and tracked vehicles. In 2016 alone, automotive testing at APG covered 139,000 land miles.



U.S. ARMY PHOTO

**APG's Public Health Sciences Center of Excellence promotes and supports all facets of comprehensive public health services. In 2016, Soldiers and civilians monitored mosquito populations for the Zika virus.**

mand, APG is home to medical, dental and veterinary units and the Army's Public Health Center. APHC promotes and supports all facets of comprehensive public health services, including: environmental health; epidemiology; health risk management; and occupational health.

From water quality, food protection and disease surveillance, to stress management, hearing loss prevention, and laboratory sample analysis, the Army's diverse public health mission is centered at APG.

#### The next 100 years

If a Soldier uses a piece of technology to shoot, move, communicate or improve their situational awareness, chances are it was developed, tested and fielded by an APG organization.

Team APG continues to advance the techniques and equipment of tomorrow's weapons into today's tasks.

As the Army prepares to field its two new combat and tactical vehicles and looks to unmanned, or driverless, vehicle prototypes, APG will serve as the focal point to put these vehicles through their paces to provide the best capability to the warfighter.

As the face of war shifts from a kinetic battlefield to cyberspace, APG organizations work diligently to address the full life cycle of cyber, electronic warfare and network development, test, acquisition and



U.S. ARMY PHOTO

**From basic and applied research, APG engineers and scientists advance the areas of supercomputing, cyber defense, energy-harvesting, personal protective equipment, pathogen detection, and unmanned vehicles and aircraft.**

sustainment.

To meet the Army's evolving cyber materiel needs, the Army's Rapid Capabilities Office has positioned entities at APG help prioritize, integrate and contract for capability while also prioritizing requirements across APG based program executive offices for execution.

It is through these missions that APG is recognized as the most diversified military installation in the nation. It is one of the world's most important research and development, testing and evaluation facilities for military weapons and equipment, and supports the finest teams of military and civilian scientists, research engineers, technicians and administrators.

From the earliest concepts of a battlefield requirement, through basic research and on into development and proofing, APG no longer devotes its attention exclusively to ordnance items, but tests and proofs all Army materials with which U.S. service members defend this nation and the free world.

Reflecting on the past 100 years and eyeing the future, Team APG remains dedicated to continuing its legacy of innovation at the Army's oldest proving ground.



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**APG's Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance Center of Excellence directly supports the verification, accreditation and integration of network and cyber systems into a unified, functioning and secure network.**



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