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Navigation of the USACE as an Army Officer

Sawyer Towery
sawyertowery42@gmail.com

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By
Sawyer Towery

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Abstract

The navigation of becoming an Army officer does not guarantee certain roles, positions, or a specific job in any regard. It may seem as though it can be very specific to lead soldiers with the many different aspects of the Army Corps of Engineers. However, it is very broad in terms of the many different ways an engineering officer may lead a group of individuals and make plans for success. Some officers will see the most success in themselves as a leader who is in the action and a part of a combat-focused job set. Whereas other officers will find the most success in less stressful environments that require less physical stress and more mental stress to be a successful leader. Neither of these characteristics is more important than the other, yet it is apparent that no matter what path you choose, or which path you end up with as an Army officer, all paths can be used cohesively for a lifetime in and out of the service.

Keywords: Army Officer, Corps of Engineers (USACE)

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Introduction

The United States Army Corps of Engineers is one of the oldest and most diverse branches of the armed forces to date and has been a part of many domestic and international conflicts and efforts for the United States since its introduction on June 16, 1775. For reference, the longevity of the U.S. Army Corps of Engineers has stretched to be a part of every American war and was made relevant through George Washington's appointment of the first engineer officers during the American Revolution. In current times the U.S. Army Corps of Engineers is not only doing work on the military side of operations in our nation but domestic operations alike. In war and military efforts, there is every range and scope of engineering, and they all work together cohesively in their respective manner. Since the introduction of the U.S. Army Corps of Engineers, they have responded to changing defense requirements and played an integral part in the development of the country. Throughout the 19th century, the Corps built coastal fortifications, surveyed roads, and canals, eliminated navigational hazards, explored, and mapped the Western frontier, and constructed buildings and monuments in the Nation’s capital (USACE, n.d.).

The focus of this paper is centered around a new second lieutenant’s career as an engineer officer in the United States Army, as well as the civilian considerations and exploitations that can be utilized during and after time in service. An in-depth look at the commitments and responsibilities of a new Army engineer officer will be exploited as well as the different subbranch categories of the Corps of Engineers. The research will cover what each subbranch of the U.S. Army Corps of Engineers is used for during service and retired civilian life alike. Additionally, this research paper will tie together the military and the civilian world together and show how close each can work together. Not only will the research cover the armed

services side of the U.S. Army Corps of Engineers, but it will also cover the Corps of Engineer's wildlife conservation and preservation in the civilian world.

Origin of the Engineers

18th Century

According to the United States Army Corps of Engineers Headquarters Website (n.d.), The history of the United States Army Corps of Engineers can be traced back to June 16, 1775, when the Continental Congress organized an army with a chief engineer and two assistants. Colonel Richard Gridley became General George Washington's first chief engineer; however, it was not until 1779 that Congress created a separate Corps of Engineers. Army engineers, including several French officers, were instrumental in some of the hard-fought battles of the Revolutionary War including Bunker Hill, Saratoga, and the final victory at Yorktown. At the end of the Revolutionary War, the engineers mustered out of service. In 1794, Congress organized a Corps of Artillerists and Engineers, but it was not until 1802 that it reestablished a separate Corps of Engineers. The Corps' continuous existence dates from this year.

19th Century

From the beginning, many politicians wanted the Corps to contribute to both military construction and works "of a civil nature." Throughout the 19th century, the Corps supervised the construction of coastal fortifications and mapped much of the American West with the Corps of Topographical Engineers, which enjoyed a separate existence for 25 years (1838-1863). The Corps of Engineers also constructed lighthouses, helped develop jetties and piers for harbors, and carefully mapped the navigation channels (USACE, n.d.)

Congress in the early 19th century was responsible for the gradual expansion of the Corps of Engineers and ultimately reduced the number of soldiers in some branches such as the infantry

and artillery to build up the increasingly meaningful efforts of the Corps of Engineers. Whether it was fortification expansion along the coastal lines of the United States or the restoration and rebuild of some prior existing forts, the Corps of Engineers were called upon all over the nation. Not only was the Corps of Engineers responsible for the refortification and fortification of posts but the Corps was arguably most responsible for its work with canals, rivers, and roads.

From building new roads/railroads to reshaping preexisting waterways, the Corps of Engineers allowed for greater western expansion and for goods and commercial services to be exploited in new land. The United States was such a young nation during the early 19th century that without the constant upbringing and work from the Corps of Engineers, the United States expansion would have been at a significantly slower rate. Although the Corps of Engineers was responsible for the fortification of new and preexisting posts, most notably the Corps of Engineers was responsible for expansion via waterways.

Rivers, Canals, and Lakes

According to the U.S. Army Corps of Engineers Headquarters Website (n.d.), Both commercial development and national defense, as shown during the War of 1812, required more reliable transportation arteries. Congress expanded the Army engineers' workload in 1826. New legislation authorized the president to have river surveys made to clean out and deepen selected waterways and to make various other river and harbor improvements. Although the 1824 Act to improve the Mississippi and Ohio Rivers is often called the first rivers and harbors legislation, the 1826 Act was the first to combine authorizations for both surveys and projects, thereby establishing a pattern that continues to the present day.

The innovative work to clear the nation's rivers of navigation obstacles continued after the Civil War. In 1871, engineer Major Quincy A. Gillmore chartered a steamer and converted it

for suction dredging. Named the Henry Burden, the converted boat was the Corps' first hydraulic dredge, and one of the first in the country. Within 3 years, the government purchased another propeller-driven steamer, the Woodbury, and converted it into a suction dredge to deepen the Cape Fear River below Wilmington, North Carolina. More than half a dozen hydraulic hopper dredges were constructed for the Corps just before the turn of the century (USACE, n.d.).

The reason behind the dredging process and why it was so crucial to have a hydraulic dredger to deepen the existing waterways was the ever-expanding fleet of ships from the Army and Navy as well as larger cargo ships that would access major waterways in the continental United States. With the expansion of technology and machinery during the 19th century, the Corps of Engineers took full advantage of the improved tools and methods and eventually would go on to do more and more work on the dredged waterways to maintain structural integrity and prevent erosion. After the Civil War, a special Army Engineer Board concluded that a system of locks and dams on the Ohio River was preferable either to continued dependence on wing dams and dredging or to the construction of a system of canals to by-pass the Ohio's obstacles (USACE, n.d.).

During the 19th century, Army engineer officers were also heavily involved in the planning processes of construction, maintenance, and rehabilitation of canals and river navigation features in the continental United States. Additionally, survey work on waterways and canals was a crucial point for engineering officers. Two important surveys were of the Great Lakes and the Mississippi Delta.

The necessity for a good survey of the Great Lakes had long been recognized, for the uncharted lakes posed significant navigation hazards. Army topographers had surveyed some of

the Great Lakes as early as 1823, but Congress did not appropriate funds for a systematic survey until 1841 (USACE, n.d.).

The survey of the Great Lakes was a daunting task for Army engineers of this time with over 6,000 miles of shorelines to survey. The shoreline was only half of the battle however considering the officers also needed to figure out the discharge of water into the Great Lakes via rivers as well as creating depth charts and maps, coordinating safe routes, and longitude and latitude lines throughout the entirety of the Great Lakes. With the information gathered the U.S. would be able to navigate from the Atlantic ports on the East Coast into central continental United States at a fraction of the time. Before this survey and the information gathered, boats of military and civilian alike would have to travel down the Eastern Atlantic coast and up into the Gulf of Mexico to reach certain major ports such as New Orleans.

Road Construction

Although the most notable advancement was the improvement, construction, and survey of our nation’s waterways, the Corps of Engineers was also heavily involved with the roadway expansion. In the 19th century, the Corps of Engineer's most famous project was the Cumberland or National Road which was constructed between 1811 and 1841. The road extended from Cumberland, Maryland, across the Appalachian ridges of western Pennsylvania to Wheeling and then across the midsections of Ohio and Indiana to Vandalia, Illinois. The Corps' involvement on the road occurred in large part because civilian superintendents failed (USACE, n.d.).

With the United States slowly growing it was difficult to collect funds through taxes and such. Wealth was increasingly difficult to establish across the nation making it increasingly difficult to effectively build a set of roads for land travel throughout the continental United States without the resources and funds of a private entity such as the U.S. Corps of Engineers.

In constructing the National Road, the Corps applied the techniques developed in England by John McAdam, and it engaged in some innovative bridge building. At Brownsville, Pennsylvania, Captain Richard Delafield, a future chief engineer, built the first bridge in the United States with a cast-iron superstructure, an 80-foot span that remains in use today. By 1840 engineer officers had overseen the construction of 268 miles of macadamized surface with bridges across all but the widest rivers (USACE, n.d.).

Rail Construction

Railroads were a critical aspect of Western expansion and considered the driving factor for civilization passed the Rocky Mountains. In 1824 the Corps of Engineers superintended the railroad work for the foreseeable future. Not only were the Corps of Engineers responsible for the survey of potential avenues of approach moving west, but the manual construction was also a task the Corps of Engineers were tasked with.

According to the U.S. Army Corps of Engineers Headquarters Website (n.d.), in the 1850s, westward expansion generated interest in a rail link from the Mississippi to the Pacific coast, and topographical engineer officers surveyed and evaluated four alternative routes for the road, gathering a great deal of scientific information at the same time. The Corps of Engineers sponsored two more surveys after the Civil War to gather knowledge about the American West. One survey, led by a civilian, Clarence King, explored the 40th parallel route across the "Great Basin" that extended from the eastern slope of the Sierra Nevada to the western fringes of Wyoming and Colorado, while Major George M. Wheeler led another scientific expedition into the Southwest. Both expeditions produced a wealth of data on the natural history of the West.

USACE Civilian Relations

Throughout the history of the Corps of Engineers, being in good standing and relation with the public has been a major focal point for success. The civilian considerations in our nation create the driving force for new expansions and additions to an ever-growing nation.

According to Military-Civilian Working Relationships AD-A283 538 (1994), positive military-civilian working relationships are critical to the successful functioning of the Army. Military personnel are used in the Table of Distribution and Allowances (TDA) positions that require military incumbents by reasons of law, security, maintenance of morals and discipline, rotation, combat readiness, and training, or that require military background for successful performance of the duties involved.

Moreover, this refers to the civilian considerations needed and how consideration can be achieved. Civilian consideration is such an important aspect of mission success for the Corps of Engineers and the Army at large because, without the support through public appeal, revenue through tax dollars, and civilian jobs to support the effort of those within the service, the job at hand may not be completed at the highest level of efficiency and effectiveness. Likewise, if there are domestic problems and or problems that affect more than just the people within the United States, the appeal of the civilian workers in the eyes of the Corps of Engineers must be in good standing as well.

The additional lines of work that stem off the Corps of Engineer's direct line of influence such as dams, canals, etc., need to be viewed by the Corps of Engineers as threatening to national security or survivability and or of relevance to a better way of life for the civilian population within the country. For example, whenever there is a dam built by the Corps of Engineers there is often a butterfly effect that occurs. Whether it is loss of water in some areas or flooding in others, the civilians within said area may bring these issues to the attention of the Corps of

Engineers to reconsider and or mitigate the loss or destruction of whatever has occurred based upon the actions made. One of the biggest issues that occurs within dams along some of our major river systems such as the Mississippi River is the loss of flooded land and breeding grounds for waterfowl and avian alike. Conservation of these breeding grounds is crucial for more reasons than just civilian consideration for wildlife, the avian population affects so many aspects of our daily lives that we rarely ever take into consideration.

USACE Environmental Relations

The Corps of Engineers has always considered the environment when performing maneuvers and or changing the landscape/waterways. The Corps' role in protecting the country's water resources has evolved over the last century. Whether it be through multi-role bridge companies to prevent the permanent alteration of the landscape by creating bridges quickly that are easily maneuverable on dry land or across a body of water. Or with more sophisticated methods to change aspects of the landscape permanently while simultaneously preserving the environment around, Engineers take in all considerations before performing a mission or an exercise.

In the 1880s and 1890s, Congress directed the Corps to prevent dumping and filling in the nation's harbors, a program that was vigorously enforced by the engineers. At the port of Pittsburgh in 1892, for instance, the Corps took a grand jury on a boat tour of the harbor and obtained some 50 indictments of firms dumping debris into the harbor. In 1893 the Corps forced one Ohio community to build an incinerator and burn refuse rather than dump the garbage into the river where, the Corps insisted, it obstructed navigation. (USACE, n.d.).

This is only one account of the many ways the Corps of Engineers helps to consider the environment. Consideration for all environmental tasks has been a focal point in operations since

the beginning of the Corps and into the present. In more recent times the Corps of Engineers, which had already begun providing engineering assistance to the Environmental Protection Agency for its civilian toxic waste removal under the Superfund program enacted in 1980, assumed program management in 1984 of the environmental restoration programs for all former military sites, regardless of service (USACE, n.d.).

This just solidifies how involved the Corps of Engineers is in assistance to environmental preservation. Additionally, the Corps of Engineers works hand in hand with the U.S. Department of Fish and Wildlife Services to preserve and grow the current state of wildlife across the country. The Corps of Engineers is often credited for many refuges built in certain breeding areas and the installation of Wildlife Management Areas (WMA). For example, in 2014 the Department of Fish and Wildlife in Missouri devised a plan to restore wildlife refuge land of some 3,750 acres of wetland ecosystems along the Mississippi River. Benefits of the proposed plan include restoration of native wetland plants, improved floodplain connectivity, decreased habitat fragmentation, and improved water delivery and drainage achieved by degrading interior berms; constructing a levee setback, water control structures, and a pump station; restoring historic river meanders and planting floodplain trees and other wetland plants. Once complete, the proposed project will mimic the historic seasonal flooding and drying cycles required to provide food and habitat resources to fish and wildlife (Markos, 2014).

Current Roles of Engineers

In today's current Army, the role of engineers has not changed drastically. However, the Corps of Engineers still maintains its efforts domestically and internationally with respected allies. Up until this point, we have just explored the homeland efforts of the Corps of Engineers, more specifically the 19th century when the Corps of Engineers was first being exploited to a

high degree. In the 20th and 21st centuries, however, the Corps of Engineers seemingly does almost as much for our international allies and territories as it does for the homeland.

The culture of the engineers in today's force is primarily focused on support and maneuvering. There are three large categories of engineers within the Army that are responsible for all engineer tasks and Military Occupational Specialty (MOS) which are Geospatial, Combat, and General Engineers. Although these three main categories of engineers seem to be unique and individualized to the preference of a new soldier picking what he/she may want to do, all engineers will eventually within their careers utilize tools that the other spectrums of engineers utilized. The Army Engineers must be adaptable and able to overcome obstacles to always support the efforts of domestic and international issues. For example, there may be a combat engineer company that is doing a building clearance in a neighboring town, in a foreign country, and cannot get to the town because of an unimproved road in the middle of the forest. Needing to figure out a way to create a new path, the combat engineers may be inclined to use the knowledge from general engineers to scalp the new path and the geospatial engineers to map out the appropriate path. All jobs within the Corps of Engineers have cohesion, even if it is not directly related to their three major categories.

Geospatial Engineers

Geospatial Engineers have been around since the beginning of our nation and continue to play a pivotal role in the Corps of Engineers and the Army at large. Within the Army, the MOS title for Geospatial Engineers is 12Y and is the only MOS associated with the Geospatial Engineers. The primary focus of geospatial engineers is to be a part of the support echelon of engineers. Support is provided for the combat engineer MOSs and the general engineer MOSs to efficiently conduct tasks and training.

According to the U.S. Army Human Resource Command (2023), Geospatial engineers are responsible for using geographic data that supports military/civilian operations for Disaster Relief and Homeland Security. They collect, analyze, and distribute geospatial information to represent the terrain and its possible effects. Geospatial engineers extract geographic data from satellite imagery, aerial photography, and field reconnaissance; create geographic data and compile them into maps; help commanders and staff officers visualize the battlefield and advise them on topographic operations and special map product planning, create and maintain multiple geospatial databases and prepare military-style briefs covering all aspects of the terrain.

Without the constant effort to effectively and efficiently plan and conduct reconnaissance of an area, devise plans, and formulate solutions for common mistakes, Army Combat Engineers and other branches would be struggling. Geospatial Engineers often get pushed out of the spotlight because of the lackluster job that is associated with support. However, without the support of the Geospatial Engineers, warrior tasks and drills would not be able to be conducted at the highest level.

Combat Engineers

Within the Combat Engineer field, two MOS jobs can be chosen; 12B Combat Engineer, and 12C Bridge Crewmember. These are the only two combat focus engineer MOS in the Corps. Although it may seem like there isn't much to choose from creating a lack of diversity and capability, the job descriptions of both MOSs state otherwise. The two job descriptions of a combat engineer (12B) and a bridge crewmember (12C) often find themselves being interchangeable and able to perform each other's duties in a combat environment as well as in everyday functions while in garrison. And although these are the only two combat-focused

MOSs or jobs for the engineering field, they will often be tasked with jobs that are engineer-focused, but not specific to their intended training as a combat engineer or a bridge crewmember.

12B

According to the U.S. Army Human Resource Command (2023), Combat Engineers conduct mobility, counter-mobility, and survivability in support of combat forces. The Combat Engineer works as a member of a team, squad, or platoon performing basic combat construction and reconnaissance missions. Directs the construction of fighting positions and wire entanglements. Directs minefield emplacement, and removal, and submits minefield reports for both scatter-able and hand-in-placed minefields. Conducts hasty and deliberate breaching operations. Supervises and operates engineer-wheeled and track vehicles. Calculates, prepares, and installs priming and firing systems for demolitions.

Combat Engineers are most referred to nowadays as a Sapper however they've also been known to be referred to as pioneers. Combat Engineers are known as such because they set the stage often for other units to maneuver and complete missions in areas that are unsafe or unable to maneuver through. In Layman's terms, "pioneers" embody the premise of a Combat Engineer easier than saying that they are Sappers. Sapper is a term within the engineering field that has a dual meaning. On one hand, everyone is a Sapper, at some level of proficiency, and possesses skills that are required to execute the job properly. However, there is an elite version and school that combat engineers and bridge crewmembers can attend called the Sapper Leader Course which separates the average soldier from the elite soldier. The Sapper Leader Course is truly what makes the "Sapper" and is a 28-day academically and physically challenging school meant to reinforce critical engineering skills and increase the proficiency of engineer soldiers.

Combat Engineers are used in all facets of the military all over the world. Whether being in the National Guard for homeland security or on a special forces team for top secret security clearance operations, Combat Engineers are used for all things. The vital role in which combat engineers play as a whole stretches farther than maneuverability and security, without Combat Engineers modern wars would not be fought the same and the results would be drastically different. It is with Combat Engineers that so many operations can be performed, and national security can remain at a high level on a global standard.

12C

Alongside the Combat Engineers are another combat-focused MOS in the army, Bridge Crewmembers. The U.S. Army Human Resource Command (2023) also speaks on the soldier tasks and duties of the 12C or the bridge crewmember. It states that A Bridge Crewmember commands serves, and assists as a member of a squad, section, or platoon. A bridge crewmember directs the loading, off-loading, assembly, and disassembly of float and fixed bridges for wet and dry gap-crossing operations. Bridge Crewmembers operate and supervise the use of Bridge Erection Boats (BEB) and rafting operations during wet operations and install and supervise the placement of kedge and overhead anchorage systems during some operations.

Bridge Crewmembers are few and far between making up for a very small portion of the nation's fighting force. A Bridge Crewmember or 12C often will have to be proficient in more than just their bridging abilities and will have to have similar sapper tasks as the combat engineers have. The narrow numbers within the MOS field do not mean that the job itself is insignificant within the Army, "bridging" is just a job that is very specific and doesn't necessarily require an excess of soldiers to make operations run smoothly such as infantry soldiers or combat engineer soldiers do. The numbers allocated for other respective components

rely on the violence of actions and sheer size, whereas the numbers within a bridge crewmember's operations do not justify the importance that they bring to the battlefront or home front.

Within all components of the Army, there are only a total of 26 companies specific to the 12C MOS or Bridge Crewmember, that being an MRBC or a multi-role bridge company. The active component maintains only 4 of the 26 total multi-role bridge companies, meaning the remaining are attached to the National Guard. To put these numbers into perspective there are roughly on average 60 to 200 soldiers in a company. The median value of the left and right limit is 130 soldiers, if we take that number and multiply it by 26, we get a total of 3,380 soldiers in active duty, national guard, and reserves that make up the 12C MRBC (multi-role bridge company). The total number of soldiers in the United States Army is roughly 1.4 million soldiers across all three components of the Army. To put the sheer minuscule size into context, the soldiers that are directly attached to an MRBC in the army make up 0.0024% of the Army which is less than 1% of the number of total soldiers in the entire Army. These simple numbers show just how small of a portion Bridge Crewmembers in a multi-role bridge company make in the Army. They are one of the smallest MOS fields in the entire army and they become increasingly narrower as the specific job companies (MRBC) get filled.

General Engineers

General Engineers are essentially all other forms of engineering within the army and are more tailored to a specific role and job. The fields are as follows: Carpenter, Technical Engineer, Horizontal Construction Engineer, Vertical Construction Engineer, Diver, Plumber, and Firefighter. Although there are many general engineer MOSs listed, none of them come close to the size and sheer numbers of soldiers that combat engineers and geospatial engineers have apart

from horizontal engineers. However, just like with a Bridge Crewmember, the remaining MOSs still hold the same importance as the rest. All components of the engineering field rely heavily on the success of one another to perform at the highest level. It goes without saying that in most cases you can see an engineer soldier function at a proficient level at a MOS that is not directly tied to their job description. This is because the way the Corps of Engineers tailors their soldiers allows for a cohesive relationship and shared understanding of tasks across almost all MOS fields in the Corps of Engineers.

Carpenter

According to Army Credentialing Opportunities On-Line (2023), The carpentry and masonry specialist performs general heavy carpentry, structural steel, and masonry duties, including fabrication, erection, maintenance, and repair of rigging devices, trusses, and other structural assemblies. Known specifically as a 12W, carpenters are often attached to a horizontal or vertical engineering company and work cohesively with building operations both foreign and domestic. A carpenter in the army is just the same as a carpenter in the civilian world, using the same tools to accomplish similar building tasks.

Technical Engineer

According to Army Credentialing Opportunities On-Line (2023), The technical engineer supervises or participates in construction site development including technical investigation, surveying, drafting, development of construction plans, and specifications, and performing quality control inspections. The 12T MOS is a very academically driven MOS requiring map knowledge and highly proficient surveys of materials and geographical features. Often working with horizontal and vertical engineers, technical engineers are not only known for creating and

refining topographical maps but also blueprints and diagrams for plumbing and electrical wiring for structures and training areas.

Horizontal Construction Engineer

According to Human Resource Command (2023), Horizontal Construction Engineers supervise construction equipment, quarry, paving, and plant equipment operations, and crew maintenance of equipment. Horizontal Engineers also organize and direct well drilling operations; Estimate equipment for specific jobs devise network flow diagrams such as the critical path method and coordinate work activities of supporting units. The construction equipment supervisor provides mobility, counter mobility, and survivability in support of combat forces. Horizontal Engineers are most notably credited for the creation of improved and unimproved roads in combat zones and in the homeland as well. Roadways and main supply routes in foreign and domestic settings are crucial for mission resupply and movement and without Horizontal Engineers being able to create roadways, other components of the Army cannot function as efficiently.

Diver

According to Army Credentialing Opportunities On-Line (2023), the diver performs or supervises SCUBA or Surface-Supplied diving operations for underwater reconnaissance, demolition, port construction and rehabilitation, harbor clearance, ship's husbandry, river crossing, hydrographic survey, and salvage operations. Engineer Divers, or 12D, are a niche field to work in and always require elite physical and mental agility. While a diver's main role is search and survey, they are also known to work autonomously with other countries to aid in recovery after major weather and climate damages. In recent years such as in 2010 there was an Earthquake in Haiti that left thousands of Haitians dead and or homeless. Most of the time you

would assume that a vertical/horizontal engineer would be at the heart of restoration within a country. However, if it wasn't for the efforts of the scuba engineers during this crisis, the Haitians would have been completely without ports for imports of goods to help restore the country. The divers restored and repaired a major port on the southern pier in Haiti allowing for restoration to take place.

Plumber

A 12K or a Plumber and Pipefitter, are responsible for similar roles in military operations and civilian operations alike. Plumbers are responsible for the installation of pipes and repairs on pipes as well as placement and repairs on drainage systems, water purification systems, hydraulic and pneumatic systems, and more. A plumber in the army is a thankless job description for most operations but is vital in the success primarily on the home front. Just like a civilian plumber, without the proper placement of pipes and drainage, it can lead to a very messy situation for everyone involved ranging from inadequate ways to move clean drinking water or the removal of bodily waste.

Firefighter

An Army Firefighter (12M) is very similar to a plumber in that these are both jobs that are interchangeable with civilian styles of firefighting. In the Army, firefighters are tasked with the protection of people's lives and property from fire just like in the civilian world. According to GO ARMY (2023), as a firefighter, you'll control and prevent fires, not only in Army structures but also aboard aircraft and ships. You'll supervise and conduct firefighting, rescue, salvage, and fire protection operations, and you'll perform emergency response duties during hazardous materials incidents. In recent years one of the more major incidents that firefighters deal with within the Army is forest fires, more specifically in California. California's natural

wildfires cause an increased amount of people on the scene to prevent the destruction of further landscapes. Firefighters from active duty and national guard components both came together to aid the civilian firefighters and the civilians in the community that was affected by the fire.

Army Officer

The history of an Army Officer dates back to the beginning of the United States when George Washington was the commanding general for military operations for the Continental Army. Ever since the introduction of the leader of operations, more specifically the officer, the army has produced some of the most renowned military leaders across all branches of service in the United States. An officer's role in the army is to plan, problem-solve, and empower soldiers to become greater leaders themselves. An officer has several tasks and responsibilities that are not listed within a job description but are implied tasks that must be completed to ensure the mission of an officer is completed.

Louisiana State University College of Humanities and Social Science (2023) says; the officer plans the work of the organization, assigns tasks to subordinates, and sees that the work is accomplished to the highest standard. In that regard, an Army officer is similar to a manager in a corporation. But that is where any comparison to the corporate world ends. Officers lead by example. An officer must be willing to personally undertake any task that is assigned to a soldier. Even the most junior officer routinely has forty or more soldiers working directly under his or her control. In the corporate world, it could take decades for an individual to achieve that level of responsibility. The level of integrity and personal conduct required of an officer are quite high — with very good reason. Officers daily make decisions that involve millions of dollars of resources. Their judgment and skill can mean the difference between life and death for the soldiers they command.

An Army officer can expect to have, on average, a 2-to-3-year assignment for their initial commission however it is indictive of the performance and abilities the officer possesses to move him/her up in the ranks. Promotions are not cookie cut like they are in the enlisted world often taking several more tasks to accomplish and things to set yourself apart from your peers. Since the officers in the Army make up such a small percentage of the Army as a whole, it is increasingly important for an officer to take his/her career seriously and with good intentions as officers essentially write their script as to whether they will advance through the ranks or not.

Basic Officer Leader Course

Upon completion of commission, whether it be through OCS (Officer Candidate School) or ROTC (Reserve Officer Training Corps), each new 2nd Lieutenant will have to go what's called their Basic Officer Leader Course. BOLC for short, is a required training for all new officers that embodies each officer into their branch of choice and brings them the skills and knowledge necessary to lead a group of soldiers. BOLC is not a school that is hosted at just one military duty station but rather is spread across the country. For example, Fort Benning is the installation where the infantry officers and infantry enlisted soldiers go for all their initial training. Likewise, Fort Leonard Wood is the Army installation in which all engineer soldiers go to train. Every Branch has a specific installation in which they choose to send their respective branches to tailor their training in the best way to fit the job description of said officer.

BOLC first evolved into what it is known as today in the late 20th century and early 21st century. The concept of BOLC however dates to the early 20th century when the name of the program or schooling may have been used with interchangeable terms. Although all these terms meant the same things, as officers would learn how to become more refined in their leadership

attributes and competencies, it wouldn't be until later in the century when the term Basic Officer Leader Course would remain the official title for new Lieutenants.

Engineer Basic Officer Leader Course

Engineer Basic Officer Leader Course is the tailored version of officer training for newly commissioned engineer officers. According to U.S. Army Home (2023), EBOLC is an intense 19-week 4-day program that will challenge you physically and mentally. The course provides all newly commissioned Engineer Officers with the technical and tactical knowledge and skills that are essential to success as a platoon leader. EBOLC is broken up into 3 large phases and 6 sub-phases over the 19-week course. The 3 large phases are dictated by field training exercises to put what you've learned in the classroom to the test in a real-world scenario. As far as criteria within the smaller phases they are categorized in order: professional indoctrination, fight, fight as a sapper leader, fight to build, think and lead in combinations, and sustain the lead.

The first two weeks of EBOLC are filled with the professional induction sub-phase of training. During this phase newly commissioned engineer officers will learn and re-learn rifle marksmanship to include different types of weapon systems and be qualified and proficient on all weapon systems. Additionally, new lieutenants will re-learn land navigation and reconnaissance of points to secure sought-out points and conduct battle drills accordingly. The first two weeks of training are a refresher for new lieutenants and set the foundation and criteria for the rest of the training.

Moving into weeks 3-5 lieutenants are now in the "fight" subphase of the first main phase. During this phase, lieutenants will learn the planning process by the book on how to conduct operations in a briefing format. Prior training on how to construct a brief and how to perform a brief has already happened to a lesser degree for lieutenants as they either learn these

skills in OCS or ROTC. However, it is still necessary for new lieutenants to learn how to give a briefing in such a manner that is tailored to the Corps of Engineers. Critical aspects of a briefing or an OPORD are different for each branch within the Army. Engineers are no exception to this as they require special attention to detail in some aspects. These first 5 weeks of EBOLC ensure that lieutenants understand and implement these tactics to their skillset.

Weeks 6 through 15 are the start of the second phase comprised of "fight as a sapper leader" and "fight to build". During the first phase, "fight as a sapper leader" lieutenants will learn engineer support defense tactics such as obstacle emplacement and removal and support offense tactics such as breaching. Lieutenants will spend 5 weeks in this phase and will additionally conduct tactical recons during a field training exercise to refine their skills for when they will have to lead their soldiers in the coming months. The overall goal of the first phase is to instill the engineer motto into the new lieutenants. The motto is "Essayons" or "let us try" referring to the never-ending approach to always finding a way to complete the mission, ensuring that lieutenants will never give up.

The "fight to build" phase is one of the more academically challenging portions of EBOLC for new lieutenants. During this 4 ½ week phase, lieutenants will learn Horizontal, Vertical, and Bridging operations. These skill sets require special attention to detail as they need to be precise in their planning operations for the building and construction of critical assets. Being the project manager is a meticulous task and requires proficient geospatial and general engineering skills to accomplish the mission.

Starting on week 16 thru the end of week 18 The introduction of the third and final phase of training is conducted. Starting with "think and lead in combinations" and finishing with "sustain the lead". The "think and lead in combinations" phase is where all major engineering

tasks such as combat engineering, geospatial engineering, and general engineering are combined in a manner that showcases the skillsets and proficiencies of the new lieutenants. Lieutenants will need both technical and tactical proficiencies to successfully solve complex problems within a mission and field training environment. This is regarded as the most important phase of EBOLC as it rounds out the engineer officer and allows him/her to use all the skills and knowledge gained in scenarios where you may have planned for one thing but need to use other critical skills from other engineering avenues. Engineer officers initially learn all forms of the engineer tasks within the corps and upon graduation and first duty assignment, they will then be in a more niche job field.

Finally, starting with week 18 through week 20 is the "sustain the lead" phase. During this phase, lieutenants will have shown their attributes and competencies to accurately assign their first duty station and ensure success for their new company and more specifically their platoon. Being the platoon leader comes with many responsibilities and it is crucial that during the last phase of operations at EBOLC new lieutenants are polished and refined, ready to execute, and motivated to lead the next generation of soldiers. This is the closing phase of EBLOC, so admin work will need to be done to ensure that the new lieutenant is ready once graduation is completed and proper UCMJ rules and regulations are met once arriving at their first duty station.

After the completion of all phases of EBOLC training, new lieutenants are advised but not forced to, go to additional follow-on school(s) to take what they've learned and become an elite junior officer. Sapper Leader Course and Ranger School are the two most heavily sought-after schools for junior officers. These schools not only set them apart from their peers, showcasing their elite tactics and abilities as an engineer officer but ensure a mutual and agreed

understanding upon arrival to a first duty station that their leader is more than qualified. Having these schools along with other schools on a lieutenant OML, or resume in civilian terms, will set up the junior commissioned officer as a trustworthy source of knowledge for the lower enlisted to learn from and be led into tactical tasks.

2nd Lieutenant Attributes and Competencies

As a newly commissioned and BLOC completed officer many avenues of approach can be taken to be a successful 2nd lieutenant. As a lieutenant, you're often left to "figure it out" in the everyday aspects of accomplishing your task list but to succeed as a Platoon Leader you need to do three things: be humble, care, and lead with character. While "running fast and shooting straight" are necessary skills for all officers, they are individual tasks. They are not first and foremost what is necessary to "win" as a second lieutenant, especially as a platoon leader (Crimmins, n.d.).

There is an attributes and competencies matrix known as the "Be, Know, Do" matrix, and is viewed as essential for new lieutenants to use. Although this matrix is used for all levels of leadership and is an essential part of practice for junior leaders, it is also an essential part of practice for senior leaders as well. This matrix allows the new lieutenants, and senior leaders alike, to check themselves to ensure fair and honest leadership is taking place if actions occurring are not advantageous to mission success. Within the "Be, Know, Do" matrix there are 6 sub-portions. 3 of the sub-portions are attached to the "attributes" category and 3 of which are attached to the "competencies" category. The "attributes" of the matrix include Character, Presence, and Intellect. In the "competencies" portion of the matrix you have: Leads, Develops, Achieves. This leadership matrix is found all over the Army and is not specific to just the

engineer corps. The importance of these traits is not only directed towards officers but is spread amongst all soldiers within the force enlisted and commissioned.

Attributes

Character

The first attribute that is found in the matrix is “Character”. Character, as depicted in the matrix is the values a leader has internally and externally. Having character within the Army according to the graph is having the army values engrained in your everyday performance, having empathy, embodying the warrior ethos, embodying the service ethos, and maintaining discipline no matter what scenario is present. According to the U.S. Army Combined Arms Center (n.d.), character is operationally defined as dedication and adherence to the Army Ethic, including Army Values, as consistently and faithfully demonstrated in decisions and actions. Additionally, according to the Center for Army Lessons Learned NO. 18-24 (2018), A Soldier’s first impression of a leader has a lasting impact throughout his time as a leader. This is especially true at the platoon level. Whether there is an effective relief-in-place process or none, Soldiers remember if a leader takes charge and is organized. When assuming a platoon, leaders need to take charge; assess their manning, equipment, and training status; determine expectations of themselves; learn the strengths and weaknesses of subordinates; and communicate their expectations for their unit.

Presence

The next attribute along the matrix is “Presence”. Presence is defined as having military bearing, professional bearing, fitness, confidence, and resilience. Presence on and off the clock is essential for mission success as it instills a consistent effort to be the best you can be no matter if someone is watching or not. The presence a newly commissioned officer has over his or her new

platoon highly affects the command and culture/environment of the platoon. Being fair and willing to go as far or farther than your lower enlisted soldiers not only shows them that you're willing to do what they are doing and then some, but it also shows them that no matter what they can always trust that their lieutenant has their best interest in heart. If the lieutenant is willing to do the same thing as his subordinates it creates a climate presence that is highly respected. Soldiers are more likely to follow a new lieutenant who is willing to do the dirty work just as they are rather than a new lieutenant who always wants to take the easy route and have their junior soldiers do the work.

Intellect

Lastly, "Intellect" is defined in the matrix as having mental agility, sound judgment, innovation, interpersonal tact, and expertise. Intellect with new officers is essential for many reasons but most importantly for sharing the wealth of knowledge learned over the course of their training with the junior soldiers. With a strong willingness to learn and grow in intellectual studies on specific job tasks and regulations, new lieutenants are at a major advantage in strengthening the weaknesses in their platoons and making all soldiers around them smarter and more capable at completing tasks. There's an old saying that goes "You're only as strong as your weakest link", and this is inherently true with military intellect in officers. Yes, intellect within an officer is held to a higher standard than junior leaders as it is necessary to be a subject matter expert for the safety and effectiveness of operations. However, the intellect gained from an officer can only do so much if the officer doesn't choose to share the wealth of knowledge he or she has learned. The intellectually gifted officers use what has been taught to them and use their skills to benefit the weaknesses of others, hence creating a stronger force.

Competencies

Leads

The first attribute of the competencies portion of the matrix is “Leads”. “Leads” are categorized as leading others, building trust, extending influence, leading by example, and communicating. Leading soldiers is the first step for new officers as they will be assigned to a platoon at their first unit/duty station. All of the descriptors involved with leading soldiers are used hand in hand with the other and can be used simultaneously to achieve goals. These descriptors are dependent upon the others for all missions to work successfully. According to the Center for Army Lessons Learned NO. 18-24 (2018), A functional platoon requires a cohesive team. Exercising mission command and empowering junior leaders requires teams that are built through mutual trust. Platoon-level leaders gain this mutual trust by building a team based on shared experiences, enforcing standards, creating a platoon identity, building trust in training environments, and having a welcome program. A platoon where leaders do not share hardships may not function as well.

Develops

The next attribute of the competencies is “Develops”. “Develops” is most quoted as preparing oneself, creating a positive environment, developing others, and being a steward of the profession. Developing new ideas and concepts within a new platoon is cohesively done by proper leadership, or the ability to lead, and sometimes in an unconventional manner that doesn’t require much influence. In recent years the less aggressive approach has been implemented to not have a negative influence on the soldier targeted and for the soldier to not repeat the same style towards others in the future. This is stemmed from the changing of society within the United States as a whole and around the world.

In most styles of leadership within the United States Army through its long but relatively short span, there is a rough and up-in-your-personal-space style of leadership. However, in recent years this has all changed. From the lowest level up to the highest level of the Army, the development of new soldiers has changed dramatically in just a decade. The loud and brutal drill sergeant were seen as a way to toughen up fresh recruits and prepare them for the harsh realities of war, from the jungles of Vietnam to the post-9/11 battlefields in Afghanistan and Iraq. But that thinking is changing, and many in the service believe a less harsh approach may be more effective with recruits (Beynon, 2022).

The reasons behind being less personal and brutal when it comes to leadership are for several reasons. Most of this stems from the nation's recruiting being so low within the Army and the times in which society is a part of now are rapidly changing. 30, 20, and even 10 years ago the United States Army had a much different approach when it came to recruitment and retention of new soldiers. Within the last three decades, the United States has been a part of several global wars overseas and has had to ramp up its combat forces with boots on the ground. Nowadays in society and global conflict around the world, young men and women do not cling to the idea of being a soldier. The all-volunteer military has reached crisis levels of low recruitment, while at the same time, the American public's perception of the Armed Forces is increasingly divided. A recent Gallup poll found confidence in the U.S. military is at its lowest level in over two decades, only 60 percent of people told Gallup they had confidence in the U.S. military (Rogin, 2023).

Some may ask, how does a fresh Army officer approach a first duty assignment? Especially with the ever-changing perception and approach of the Armed Forces, more specifically the Army, there is a major disconnect now of civilians wanting to enlist. Becoming a

soldier and wanting to stay in the comfort of your own home has shifted the approach to more of a farmer's approach. There is an old saying that says if you plant a seed and let it do its natural course, good things will come. All this to be said is that finding the right way to develop soldiers and leaders takes time. With the rapid change in today's society from day-to-day functions, it does not pay off with long-term goals and investments to be rushing things to change and get better. The biggest thing the Army is pushing for overall is for the nation to be safe. Yet the Army also wants good quality leaders and soldiers most of all. Developing new leaders in new ways to fit the societal norms of today's world is now viewed as an approach worth taking to be able to connect with soldiers and achieve mission success on and off the battlefield. Only time will tell how this style of leadership will pay off since it is such a new concept to the United States Armed Forces.

Achieves

Last yet certainly not least in the competencies portion of the matrix is "Achieves". Achieves is defined, by the matrix, as: gets results, anticipates, integrates tasks, roles, resources, and priorities; improves performance; gives feedback, executes; adapts. While this may seem like a complicated list of words it is a cycle in which you can repeat these quoted descriptors of "achieves" to achieve what has been asked of you. Yes, you can read these and go down the line and then repeat the cycle, but if you were to jump around with the term descriptors it can still match the same result and achieve mission success. Achieving mission success is not a cookie-cutter method and it comes with many different avenues of approach to pull some things off versus other things. Some leaders have had one way to achieve success and others have had multiple. However, when it comes to future leaders in the United States Army, and fresh

lieutenants at their first duty station, it is increasingly advantageous for these new officers to be able to culminate all of these factors and be able to apply them to different facets of work.

Platoon Leader Roles

Platoon leaders, 2nd lieutenants, LTs, PLs, and "butter bars" are all the same, and when it comes to the connotation of becoming a freshly commissioned officer 2nd lieutenants are known for not knowing anything and always getting other soldiers lost. A new 2nd lieutenant is notorious for trying to make his/her mark on the way to better leadership and command as he/she moves through the ranks. This comes with many failed and unsuccessful attempts to make their mark, but all of this is a learning experience. According to the Center for Army Lessons Learned NO. 18-24 (2018), As a PL, your expectations come from both your company and battalion commanders. They may come in the form of formal counseling or informal direction. You receive guidance from higher leaders and translate this guidance to your platoon. Spend the time on clarifying expectations, providing back briefs, and understanding how your platoon fits into the company and battalion's bigger picture as you assume command of your platoon.

This learning experience would be nothing without the help of someone who is more "seasoned" when it comes to being a soldier and understanding the ins and outs of things. This person is the Platoon Sergeant, more formally known as the most senior non-commissioned officer within the platoon and a subject matter expert in their respective field. On the battlefield, platoon leaders and sergeants build their platoons, empower squad leaders, integrate outside elements, and use troop-leading procedures to plan and lead. Off the battlefield, platoon leaders and sergeants prepare their platoon for combat through tough training. The platoon leader and platoon sergeant's ability to coach, teach, and mentor their Soldiers leads directly to the readiness of our formations (Col. Pappal, 2018).

Roles and Responsibilities at First Unit

With so many things going on around a brand-new 2nd lieutenant it becomes increasingly difficult to manage tasks and drills. It is wise of a new lieutenant to take control of his/her surroundings but also delegate tasks to key leaders within the platoon outside of the platoon sergeant. Within the platoon, there are also other leaders such as squad leaders who take care of roughly 8-10 soldiers and team leaders who take care of half of the squad. The chain system is used throughout the Army and is increasingly important to give everyone a slice of the pie to feel like what they are doing is contributing and ownership of tasks is established. This is apparent with the lieutenant's use of his/her squad leaders to delegate tasks to get things off of their plate but also to allow the NCO (Non-Commissioned Officer) to be a leader and grow his/her soldiers alike. According to the Center for Army Lessons Learned NO. 18-24 (2018), Squad leaders are critical during planning. Oftentimes, PLs plan in a vacuum and bring in their NCOs either too late in the process or not at all. This type of planning overlooks the collective years of experience that NCOs have. Planning should be a team effort where squad leaders provide input to the PL based on their experience. After being given a task and purpose, having squad leaders back brief their aspect of the operation or actions on the objective can allow valuable bottom-up refinement during planning. While PLs and PSGs hold and supervise rehearsals for actions on the objective and other key parts of an operation, squad leaders should also be given time to rehearse. Special teams, actions on contact for the lead squad, or even radio procedures are important for squad leaders to review with their squad before a platoon-level rehearsal.

To go along with trusting the other leaders around you a new lieutenant may find themselves needing to go back and having proof of events that occurred, good or bad. The method for record-keeping across the platoon is known as counseling and is a vital part of soldier

growth and record-keeping as it acts as a tracker and allows for the junior soldier to sign and acknowledge the changes that will be made or have been made. According to the Center for Army Lessons Learned NO. 18-24 (2018), Counseling is the tool used by PLs and PSGs to coach and mentor their subordinates. Formal and informal counseling is important, but documentation of sessions is key to maintaining a common operational picture. Successful platoon counseling programs track performance over time, are timely, leverage both PLs and PSGs and are documented. Counseling is a tool that allows leaders to track a subordinate's growth and performance over time. Regular counseling allows leaders to track positive and negative performance, building an evaluation over the year.

1st Lieutenant Tasks

As an Army officer's career advances from 2nd lieutenant to 1st lieutenant there are some additional responsibilities and implied tasks that must be accomplished. As a junior officer, the foundation has already been laid and most of the small kinks of learning yourself as a leader have been worked out during your first 18 months as a 2nd lieutenant. This is not to say that all of your trials and tribulations along the way have been solved, but at least there is something to stand on as you progress and assume greater responsibility. The 1st lieutenant is a "senior" junior officer who is assumed to be ready to take on the role of the company XO or the company executive officer. However, a 1st lieutenant may not assume the role of a company XO and rather they may become a part of staff at the next level up which is battalion staff.

Company XO Role

The company XO or the company executive officer is the managerial officer in charge who does the operations behind the scenes that ensure that the commander's intent is met. In layman's terms, this means that the XO carries out operating functions at the company level, is

the second in command if something were to happen to the commander (captain), and is in charge of briefing and dissemination of information. During a lieutenant's time at company XO, one can most likely expect to be attached to the commander for most of the briefings he/she was to be a part of to accurately create plans for the rest of the company. The company XO most similarly acts as a Vice President to the President. The responsibilities for operations being carried out are on both 2nd and 1st lieutenants, ensuring that the company and the soldiers within the company can meet the commander's intent. But the planning process will predominately come from the 1st lieutenant (company XO).

Battalion Staff

Time spent as a battalion staff officer tends to go a bit differently than it does being a company XO. The biggest difference between the two roles is the influence of which the officer is in charge. At the company XO level of leadership, the lieutenant deals with fewer individuals but is in more of a personal relationship with the individuals and can form relations with soldiers and see the lower enlisted more often. During the time spent at battalion staff for a lieutenant, however, it is less of an interaction with the lower enlisted and more focused on the big picture planning of operations. While both sides of the assignments serve their purpose, and neither is more important nor more stressful than the other, planning is more heavily focused in a battalion staff position. There are different components of battalion staff to which a lieutenant can be assigned to. Lieutenants will similarly be a vice president to the president to a captain in some staff positions. According to the United States Institute of Peace (n.d.), Every unit of battalion size or larger has four or more specialized staff sections, each of which is identified by an alphanumeric designation. Section 1 (S1) handles personnel administration; Section 2 (S2) handles the processing of intelligence and tactical information for the commander; Section 3 (S3)

handles plans, operations, and training; Section 4 (S4) handles all aspects of logistics—transportation, supply, ammunition, rations, and so forth.

Military and Civilian Cohesion

Moving further into a young lieutenant and officer's career within the Corps of Engineers, it is apparent that all things that happen cannot be simply designed or created by one person. It requires a team to plan and strategically create operations to ensure that the soldiers beneath them are up to speed on their soldier tasks and drills. Oftentimes the Army, more specifically the Army Corps of Engineers, will work alongside civilians within the Corps of Engineers and will aid and assist in domestic problems and projects to mix up the training and gain benefits not only on a military installation but for the nation as a whole. This process of working with civilians is similar to the original functions of the Corps of Engineers as they were the primary subject matter experts on figuring out, fixing, and solving the issues and plans set out by government and state officials.

Some organizations do more than just infrastructure and repair and remodel to the nation on a human level. These organizations work hand in hand with the Corps of Engineers to ensure that all forms of life are safely and most efficiently taken care of for the benefit of everyone and everything involved. Moreover, the wildlife agencies and organizations that partner up with the Corps of Engineers have remained close to the Corps and continue to be a vital piece for civilian and military cohesion. These wildlife organizations are but not limited to the National Audubon Society, National Wildlife Federation, Ducks Unlimited, and The Nature Conservancy.

National Audubon Society

According to the National Audubon Society (n.d.), The National Audubon Society protects birds and the places they need, today and tomorrow, throughout the

Americas using science, advocacy, education, and on-the-ground conservation. As far as the works in which the National Audubon Society and the Corps of Engineers work cohesively there are certain things to denote. Most significantly, the National Audubon Society and the Corps of Engineers work together to restore habitats for waterfowl and aim to conserve and preserve wetlands, water flows, and critical ecosystems for all avian species. Additionally, the National Audubon Society and the Corps of Engineers work together to monitor and research avian activity as well as mitigation strategies to keep infrastructure and wildlife in a healthy balance and promote growth for both. The concept in which both can benefit seems a bit of a tall tale but is very apparent in the United States.

A relatable comparison between the two sides benefiting from one another can come from the installation of man-made dams. Dams are built primarily by the Corps of Engineers and indirectly and directly used by organizations such as the Audubon Society to promote the consistent growth of avian populations. Dams allow for water to be used as a resource of energy and transportation on a human level. Dams also allow for water to be stopped up instead of running freely to promote flooding and promote the control of certain areas to grow and expand for further wildlife balance. According to Energy5 Your Way (n.d.), dams and reservoirs create new habitats for species, providing them with secure environments to thrive and reproduce. These structures can restore damaged ecosystems, reestablishing natural water cycles and supporting vital habitats. Dams and reservoirs also act as a protective measure against climate change, mitigating flooding and providing reliable water supplies during droughts.

National Wildlife Federation

The National Wildlife Federation is another organization that structures its work similarly to the Audubon Society. According to the National Wildlife Federation (n.d.), their mission is to Protect, Restore, and Connect Wildlife Habitat: Active restoration and reconnection of fragmented and degraded habitat across protected lands, working lands, waterways, coasts, and communities. One of the several ways the National Wildlife Federation works with the Corps of Engineers is water resource development. According to the U.S. Army Corps of Engineers (2023), the missions and authorities of the Corps of Engineers (Corps); involve a proposed or existing Corps' water resources projects or efforts whose primary purpose is flooding and storm damage reduction, commercial navigation, or aquatic ecosystem restoration, municipal or agricultural water supply reformation. Proposals for recreation or hydropower are eligible for inclusion if undertaken in conjunction with a flood or coastal storm damage reduction, commercial navigation, aquatic ecosystem restoration, or municipal or agricultural water supply project or effort. What the Corps of Engineers does directly affects the benefits that organizations such as the National Wildlife Federation strive to achieve. This makes it increasingly important for the Corps of Engineers to consider all factors and be able to adapt to the ecosystems and wildlife around them during operations. According to the Corps of Engineers Headquarters Website (2022), As technologies are evolving, our steadfast principle of ensuring we are at the forefront of science and engineering has never been more important than it is today.

Ducks Unlimited

In all good things, certain strides sometimes must be made to enhance relations between two things even if conflict is involved. This is apparent with Ducks Unlimited,

an avian conservation group, and the Corps of Engineers. Although the two organizations now have a healthy relationship and work together to promote conservation and preservation, it wasn't necessarily the case everywhere. Sometimes considerations cannot be met and or are neglected and it's the unfortunate piece of cohesion. For all good things to occur sometimes bad things also need to occur for a balance of presence.

In the case of SWANCC vs. the United States Army Corps of Engineers, it was originally a non-favoring scenario between the two organizations. Neglect for wildlife was apparent in decision-making on the United States Corps of Engineers part and government officials. Moving forward after all was said and finalized the two organizations SWANCC and USACE restored their relations. Similar smaller organizations supporting the backing and help of Ducks Unlimited have seen significant progress in avian conservation and preservation. The work Ducks Unlimited put into conserving wildlife not only benefited the wildlife itself but also the natural balance of man and animal. Ducks Unlimited has continued to be a face of progress for conservation and preservation in today's society. There haven't been any major conflicts with the two organizations since this conflict back in 2001 and both Ducks Unlimited and the Corps of Engineers continue to keep healthy relations.

SWANCC vs. United States Army Corps of Engineers

According to Ducks Unlimited (n.d.), In 2001 the U.S. Supreme Court issued a decision, Solid Waste Agency of Northern Cook County (SWANCC) v. United States Army Corps of Engineers. The decision reduces the protection of isolated wetlands under Section 404 of the Clean Water Act (CWA), which assigns the U.S. Army Corps of Engineers (Corps) authority to issue permits for the discharge of dredged or fill material

into "waters of the United States." Before the SWANCC decision, the Corps had adopted a regulatory definition of "waters of the U.S." that afforded federal protection for almost all of the nation's wetlands. Therefore, a narrow and literal reading of the SWANCC decision meant that "isolated, non-navigable, intrastate waters," would no longer be afforded CWA protection if use by migratory birds was the sole basis for asserting federal jurisdiction. All this to say that the neglect of natural habitats would take place since the considerations of these habitats legally did not have to be met.

Ducks Unlimited responded by using its team of scientists to evaluate the potential impacts of the Court's decision in light of other federal regulations, state-based protections, geographic distribution, and other factors. They found that the SWANCC decision could have significant consequences for wetland conservation in the U.S., particularly in areas important for breeding and migratory waterfowl (n.d.). According to Ducks Unlimited (n.d.), in 2003, thousands of Ducks Unlimited members and supporters took action by writing more than 20,000 letters to Washington, D.C. decision-makers in support of protecting isolated wetlands in the United States. Ducks Unlimited President, John Tomke met with President Bush and other wildlife conservation leaders at the White House in December 2003. During the meeting, President Tomke mentioned the thousands of letters that have been sent in support of wetlands protection and how important the issue is to sportsmen, women, and all outdoor enthusiasts.

Shortly after the meeting between Ducks Unlimited's President and the President of the United States, the Bush Administration announced that no new rule or development would be implemented. While this did last for a few years and significantly took a hit in some aspects of conservation, the United States was concerned and worried

about larger conflicts overseas and overlooked the issues within the homeland. Fighting for national security was the main focus of the United States. However, a few years after one of the largest terrorist attacks the world has seen, the United States began to get back on track and start considering more things within the homeland. According to Ducks Unlimited (n.d.), on Earth Day in 2004, the President of the United States announced a new wetlands initiative, shifting from a policy of "no net loss" to a policy of "overall increase" in wetland acreage each year. To achieve this goal, the President pledged to restore and protect 3 million acres of wetlands over the next five years by committing more federal funding to key conservation programs including the Wetlands Reserve Program and the North American Wetlands Conservation Program.

It may seem as though the Corps of Engineers did not value the importance of issues with wildlife conservation for a short stent but that wasn't necessarily the case. With so many things happening globally during this era of society, it was easy to put some problems on the back burner and worry about larger issues at hand. Civilian lives are the most important when it comes to the United States defense, however, without the wildlife within the nation, and the ecosystems supporting the wildlife society would not be thriving in as many major categories as it does within the United States. Ranging from food in terms of plants and animals, to freshwater, and natural resources, the United States is an all-encompassing nation that has so many things to support. Yet without the support towards wildlife, the Corps of Engineers and the nation as a whole would struggle in more ways indirectly than directly.

Army Officer to Wildlife Conservationist

The transition from one profession to another or the cohesion of two professions is usually a strenuous and sometimes painful process for the individual involved. Being as though the jobs can be different and the work may not coincide with the other, individuals may find that they struggle with the balance of work and or transition of work. However, when it comes to the Corps of Engineers and the cohesive relationship with wildlife organizations, the transition between wildlife conservation and preservation is a seamless and parallel relationship allowing for easy use of knowledge in fields of work that may seem drastically different. Building a dam or clearing a channel for a river is completely different work than creating an ecosystem for the restoration of wildlife and more specifically avian wildlife. However, the two work together, and the two benefit from one another both directly and indirectly.

As an officer within the Army Corps of Engineers retires it can be tricky to figure out the right approach or the most applicable approach with the skillset they possess and require. Though the work in which they planned and created was within the confinements of both military and civilian consideration, it can still be easily and seamlessly correlated between the two. According to the Corps of Engineers Headquarters Website (2022), our workforce is highly technical and skilled, comprised of more than 37,000 civilians forming a world-class workforce. Engineers, scientists, technicians, and researchers, work with innovative, advanced technologies in research locations across the United States and around the world.

Conclusion

Engineers were used before the first days of the United States and remain vital to the nation's health and success. Becoming a nation and continuing to be successful worldwide to this day wouldn't be possible without a proper foundation and building and expanding knowledge of the Corps of Engineers. Dating back to the first war as a nation during the American Revolution,

the Corps of Engineers played a pivotal role in securing the nation's freedom and maintaining its freedom for centuries to follow. In the 18th century, the Corps of Engineers was not fully endowed just yet with their potential. However, by the turn of the 18th century into the 19th century the Corps of Engineers were in full demand. The Corps of Engineers' first major tasks were work of a civic nature. The civic tasks ranged from topographical mapping of coastlines, building and fortifying coastal lines and buildings/structures along coastal lines, mapping underwater channels, constructing railway systems for both eastern and western expansion, and the introduction of improved roads. By the end of the first chapter of the Corps of Engineers, engineers were viewed as the main priority within the nation. The United States government made the Corps of Engineers one of the most essential branches of service. With the largest population of soldiers per branch, it is clear to see just how rapidly the importance the Corps of Engineers has within the nation in a relatively short amount of time. The United States intentionally decreased the number of soldiers in various branches such as artillery and infantry to meet the demand of just what all the engineers could do to improve the nation as a whole both foreign and domestic.

In modern times there are many specific and broad avenues a soldier can approach when becoming a part of the Corps of Engineers. There are also equally as many ways to lead soldiers as an officer within the Army Corps of Engineers. All of which can be tailored to the preference of the officer. Engineers can range from being the brain and the brawn of operations and ultimately can put their talents and good qualities into what is the best fit for them. Achieving the specific job field as a leader does come with sacrifice. Often it takes one or two additional assignments to achieve the one specific field the officer is looking for. However, there is still

value in learning all of the avenues of the Corps of Engineers as they all can be used cohesively between one another.

The journey for an Army engineer officer is not a short, nor an easy road to success. This path comes with many trials and tribulations along the way. Becoming an engineering officer requires the soldier to be increasingly adaptable and ready to sacrifice time to perform at the highest level possible. With every rank change as an officer, there is always a school and or an additional form of teaching that requires the officer to push through adversity and be able to stay on top of what is happening around them. Officers are a continuous growth and expansion of knowledge that require sacrifices to maintain the safety of other soldiers above and below the given rank appointed to them.

Within the first term of a soldier being an engineer officer, there are so many things to learn and to accomplish and it oftentimes will feel as though there is a firehose of information being thrown at you. And while this is stressful for the average soldier, it takes the adaptability of an engineer to succeed and overcome the adversity. There are many different things that engineer officers must be proficient at and it is important to be able to be a wealth of knowledge over different aspects of the Corps of Engineers. While it is not required to learn about other forms of engineering, it is strongly suggested that engineers maintain a high level of readiness in multiple forms of engineering so that when problems arise, solutions can be made.

The avenues of approach that an Army officer can take within the U.S. Army Corps of Engineers can range and vary in many different ways. Whether the officer wants to make a 20 to 30-year career in the service or learn some leadership skills and get out after the first or second term, there are so many different ways to approach the U.S. Army Corps of Engineers and all it has to offer. No matter what someone chooses to do with his or her career, they will forever

maintain and practice the same attributes and competencies, skills and techniques, and leadership qualities in some form of their life for the rest of their life.

When soldiers within the Corps of Engineers decide to “hang it up” for the last time as a service member, sometimes they never truly “hang it up” even if they aren’t within the ranks of the armed forces. Despite the technical disconnect to the Corps of Engineers, someone can force upon themselves, there are many different ways to stay a part of the Corps of Engineers without having to wear a military uniform. Wildlife conservation is one of the many ways in which an individual can remain a part of the Corps of Engineers even after their time in service is completed. The individual approach to how someone may approach working alongside wildlife conservation, and the Corps of Engineers in general whether it be civil or environmental, can happen well before the soldier’s career is over.

One of the biggest ways a soldier and an officer within the Army Corps of Engineers can set themselves up to maintain a relationship within the Corps of Engineers for a lifetime is by starting earlier than their military release date. Forming positive relations with civilians in the Corps of Engineers who work alongside soldiers can help build and grow the nation both domestic and foreign. While in the service, Army officers can plan alongside civilians within the Corps of Engineers to better assist in training the soldiers underneath. Likewise, civilians working on projects and jobs within the homeland of the United States are sometimes able to use the Army’s training to benefit them simultaneously in certain regards. These projects can range from mapping and graphing land and waterways, improving road conditions in tough areas of approach, all the way to restoring and building structures. Army engineers are always in need of training and maintaining a high level of proficiency for their tasks and drills, likewise, problems domestically can always be fixed no matter how big or small. The two aspects use one another

and balance between goals to better assist one another. The Corps of Engineers, both military and civilian, show a level of trust with one another and the understanding that no matter what, improving the way of life around for yourself and for others is essential for mission success in all aspects of life.

An engineer is not defined to which "box" it is designated, rather an engineer manages to create new avenues of approach and does not let the title of specifics limit them to utilizing other forms of engineering. Being an engineer in the army doesn't limit someone to exclusively being an engineer in their profession within the armed service. Whether that be wildlife conservation or using military knowledge outside the service to accomplish tasks and jobs similar to within the service, being an engineer is easily cohesive to many different kinds of careers and jobs. Throughout all of the information gathered, researched, and compiled it is clear to see just how much of an influence engineers have and more specifically the Corps of Engineers have in so many facets of life. From the creation of the United States to the modern era, the Corps of Engineers paved the way in many different avenues of society and life as a whole.

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