

March 2016

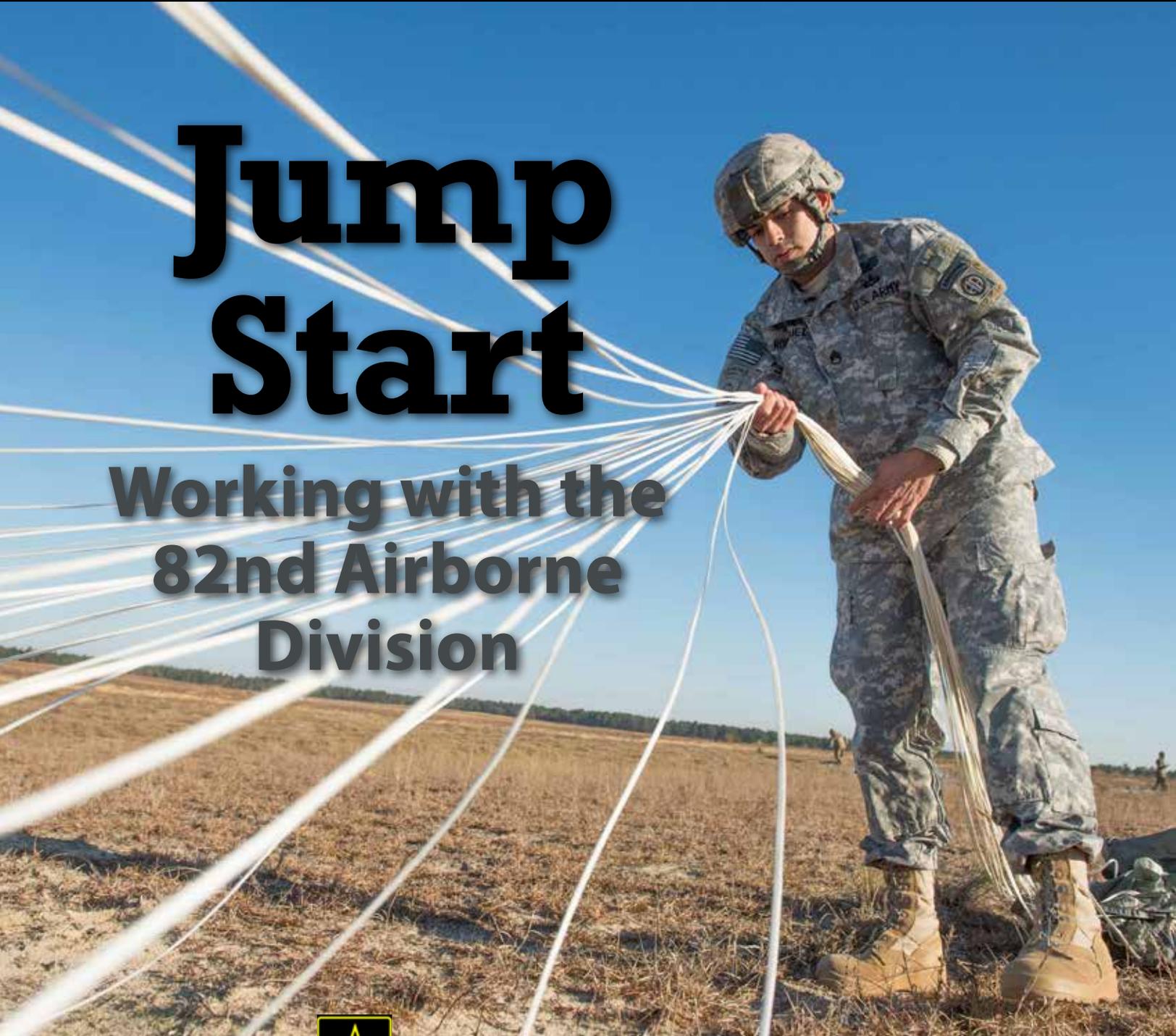
# NSSC This Month



U.S. Army Garrison Natick Public Affairs Office

# Jump Start

Working with the  
82nd Airborne  
Division



2013 and 2015 U.S. Army Maj. Gen. Keith L. Ware  
Awards - First Place, Digital Publication



# Commander's Corner

Lt. Col. Ryan Raymond  
USAG Natick Garrison Commander



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## Time Is Precious



March has come and gone in a flash ... I can't believe the year is one quarter over already. There is a lot going on within our great team right now, and it seems that time is our most precious resource.

In that light, I'd like to thank each of you who took the time to join us for our Women's History Month observance; special thanks to USARIEM for hosting and leading the combined effort to plan and execute a truly great event. April is a busy month, as we celebrate military children and focus our attention on the prevention of sexual assault and child abuse; I look forward to your support of these events.

This issue of NSSC This Month features some very interesting articles that highlight Natick's contributions to the Army today and into the future. I am particularly proud of the installation's achievements in energy conservation, as our savings are truly attributed to efficiencies and not reduced workload.

What we do here is important at the highest levels of our Army. If you haven't yet read the March 21 issue of [DefenseNews](#), you should. An article covering the [Army's "Big 8" initiatives](#) provides a list that closely mirrors the projects that our teams are working.

Please join me in hoping that winter is truly behind us. As the weather warms and the days lengthen, please be safe; take care of yourselves and one another. The Army depends on you, and I am thankful for all you do for our current and future Soldiers!

Lt. Col. Ryan Raymond  
USAG Natick Garrison Commander

## NSSC This Month

**NSSC**  
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[Brig. Gen. Thomas H. Todd III](#)

*Garrison Commander*  
[Lt. Col. Ryan Raymond](#)

*Command Sergeant Major*  
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[Bob Reinert](#)

**About this newsletter**  
NSSC *This Month* is a monthly newsletter covering NSSC news within the Army and commercial media.

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To subscribe to *NSSC This Month*, please contact Bob Reinert at [robert.j.reinert.civ@mail.mil](mailto:robert.j.reinert.civ@mail.mil).

On the Web: [www.army.mil/natick](http://www.army.mil/natick)

Cover photo: Sgt. Alex Manne, 982nd Combat Camera



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# NSSC News Briefs ...

## GEMS Summer Program

USARIEM and NSRDEC will be sponsoring the GEMS program once again this summer at Natick Soldier Systems Center.

The one-week paid extracurricular science education program enables students to experience science in a real laboratory setting. Participants will conduct interesting biology and chemistry experiments, receive interactive lectures on engineering, mathematics and new technology, and tour NSSC facilities to learn about exciting, ongoing research efforts.

GEMS I: Session 1, July 5-8; Session 2, July 11-14  
GEMS II: Session 1, July 18-21; Session 2, July 25-28  
GEMS III: Session 1, Aug. 1-4; Session 2, Aug. 8-11

If you have a student who qualifies and is interested in participating, please email [usarmy.natick.medcom-usariem.mbx.usariem-gems@mail.mil](mailto:usarmy.natick.medcom-usariem.mbx.usariem-gems@mail.mil) for more information.

## DFAC nutrition study

The U.S. Army Research Institute of Environmental Medicine is looking for volunteers to take part in a two-month study assessing dietary intake of meals eaten at the Natick DFAC. Active-duty military and Army civilians are eligible. For more information, call (508) 233-5648 or send an email to [adrienne.m.hatch.civ@mail.mil](mailto:adrienne.m.hatch.civ@mail.mil).

## AER annual campaign

The [Army Emergency Relief](#) Annual Fundraising Campaign continues until May 15. Over the past 74 years, AER has provided \$1.7 billion in needed financial assistance to Soldiers and their families. Unfortunately, in the past two years, the number of Soldiers donating to AER has fallen by 40 percent. Please consider supporting NSSC's campaign.

## Lunch and Learn

In honor of the Month of the Military Child, financial experts from [Hanscom Federal Credit Union](#) will offer "Raising Money Smart Kids," a financial resiliency workshop, from noon to 1 p.m. April 6 at the Lord Community Center. They will discuss the three principles of wise money management, being a financial role model, and valuable resources for parents. Light refreshments will be provided. Registration is required at [www.hfcu.org/nal](http://www.hfcu.org/nal).



Photo: Tazanyia Mowen, USAG Natick Public Affairs

The ACS Financial Readiness Program held its first Financial Resiliency Expo on Feb. 24 at the Lord Community Center. It was open to all Natick Soldiers, civilians, retirees and their family members.

## Mobile library

The next visit of the [Natick Mobile Library](#) will be 11:30 a.m.-1:30 p.m. April 6 in Parking Lot B. There is a selection of popular fiction, selected non-fiction, DVDs and audio books. Library personnel will do their best to fulfill special requests, such as a particular title, author, subject area or genre type.

## Military family life

There is a Military Family Life Consultant assigned to the [Town of Wellesley](#) until the end of April who is available to NSSC active-duty Soldiers and their families. The MFLC program provides confidential, short-term counseling on or off the installation at no charge. Contact ACS for more information, or call the MFLC directly at (781) 206-6304.

## Excess office furniture

Excess office furniture and/or equipment is being left in hallways. This creates a potential safety/fire hazard and also lacks adequate controls for safeguarding government property. To schedule a turn-in appointment, go to <https://natiportal/LRC/warehouse/TI/default.aspx>. For more information, call John Ervin at ext. 6479 or Scott Dow at 6955.



# Saving Energy

## Natick tops in IMCOM over last 12 years

By USAG Natick Public Affairs / NATICK, Mass. (March 24, 2016)

**U**S. Army Garrison Natick has reduced its energy consumption more dramatically in the last dozen years than any other installation in the Army.

Over that 12-year period, Natick cut its energy usage by a staggering 43.16 percent. Compared with the baseline year of 2003, Natick is unmatched.

"Given the fact that we've got the (Doriot Climatic Chambers) and some pretty high-consumption facilities here, that's pretty amazing," said [Lt. Col. Ryan Raymond](#), USAG Natick garrison commander. "And that's even though we live in a high-cost-of-living area, where energy doesn't come cheap and we're not yet able to provide our own energy."

Raymond noted that Natick ranked No. 5 worldwide in 2014-15 among the 78 Army posts in the [Installation Management Command](#), or IMCOM. Last year Natick experienced a 10.65-percent reduction.

Savings have been achieved through an \$8 million Energy Savings Performance Contract between USAG Natick and [Pepco Energy Services](#). The contract, which will run 25 years, includes lighting upgrades, new windows and building envelope improvements, water conservation, energy management control system upgrade, and HVAC upgrades. The project began with a preliminary assessment in June 2012 and included a comprehensive energy audit.

Improvements made to 33 buildings on the Natick installation will result in annual savings of \$540,000. They include \$4 million in new windows and another \$1.2 million in lighting projects.

Natick's upgrades should also have a significant, positive impact on the environment by reducing emissions.



Photo: David Kamm, NSRDEC Strategic Communications

The sun shines off of new windows installed at Natick Soldier Systems Center. The project helped Natick reduce energy consumption.

"Ninety-five percent of the lighting has now been changed out to high efficiency," said Russ Stokes, Natick's Public Works director. "Another major factor in reducing our consumption was mothballing our old oil-fired boiler plant."

Personnel on the installation have aided the effort in small ways, such as turning out the lights and shutting off their computers before going home at night.

"They have played a role," Stokes said. "It's the right thing to do, so people should do it."

Stokes pointed out that tenant organizations have helped in the effort. For example, savings in the ESPC could not finance all window replacement, so the Natick Soldier Research, Development and Engineering Center funded the remaining windows on the three largest buildings.

The next step will be a focus on energy security and independence. A cogeneration system may be installed in the future, providing cooling and heating while sending electricity to a microgrid.

## By the numbers

**1** Natick's rank in Army energy savings since 2003

**5** Current standing among 78 IMCOM posts

**540** Annual savings in thousands produced by energy contract



# Remembering the Trailblazers

## Natick observes Women's History Month

By Mallory Roussel, USARIEM Public Affairs / NATICK, Mass. (March 18, 2016)

The [Natick Soldier Systems Center](#) celebrated Women's History Month at a ceremony held March 16 in Hunter Auditorium.

The celebration was hosted by [Col. Thomas G. Eccles III](#), the commander of the [U.S. Army Research Institute of Environmental Medicine](#), and the Federal Women's Program Committee.

The theme for this year's national observance is "Working to Form a More Perfect Union: Honoring Women in Public Service and Government." The theme honors the trailblazing women who have shaped America's history and future through their public service and government leadership.

[Lt. Col. Charlette Woodard](#), the [Fort Devens](#) (Massachusetts) garrison commander, served as guest speaker for the event.

"From the early years, women have stepped forward to serve alongside men for the cause of freedom," Woodard said. "Women were certainly ready to meet the needs of our nation. However, the opportunities to do so were not as prominent as they are today.

"Women continue to break barriers. Remember this statement: Women were fully integrated into all of the combat branches of the Army. Later this year, the Army, along with other services, will open 35 Military Occupation Specialties jobs to women that were previously excluded from service. This is an epic shift and one that the Army has taken a deliberate approach



Photo: Mallory Roussel, USARIEM Public Affairs

in managing, thanks to the great work of the physical demands study, spearheaded by USARIEM."

Christine Tinsley, a 30-year U.S. Coast Guard veteran and a master of fine arts candidate at the Tufts University School of Fine Arts, also said a few words about her display, "[SisterVet](#)," which was held in the Carney Hall lobby. The SisterVet media and storytelling project honors women veterans and their stories of service.

"It is important for us [veterans], as women, to share our stories because, when most people hear the word 'veteran,' they don't think about the women in this room," Tinsley said. "They don't think about me. I am hoping, through SisterVet, that by getting women veterans to share their stories with me, I can change that."

The daily honor of lowering the flag in Natick became even more memorable March 16 with an all-female flag detail commemorating Natick's observance of

Women's History Month. According to Sgt. Sherrie Jansky, the non-commissioned officer-in-charge of the all-female flag detail, this tradition has continued in Natick for the past few years.

"The importance of the all-women flag honors, to me, is that it signifies the leaps and bounds the women have made throughout the military," Jansky said. "By participating in this honor, I feel that we pay respect to the women who have broken down the barriers in the past and also encourage women to continue to break down barriers in the future, so that women may continue to serve our country without limitations due to gender."

"We must carry on the work of the women who come before us and assure our daughters have no limits to their dreams and no obstacles to their achievements as they continue to serve as the strength of the Army and the strength of our nation," Woodard said.



Background photo: U.S. National Archives

Nurses take a break at a field hospital in France during World War II.

# Jump Start

## Working with the 82nd Airborne Division

By Jane Benson, NSRDEC Public Affairs/ NATICK, Mass. (March 24, 2016)

**When working to enhance and better understand Soldier performance, sometimes the best approach is to jump right in.**

[Natick Soldier Research, Development and Engineering Center](#) scientists and engineers are working closely with the [82nd Airborne Division](#) to garner new insights into the cognitive, physical and emotional performance of Soldiers. The hands-on approach, which takes place in the environment where the Soldiers live and work, gives researchers insights not possible from working in the lab alone.

NSRDEC's work with the 82nd is part of a larger, all-encompassing science and technology effort called the S&T Project Integration Pilot, which is part of the Soldier and Squad Performance Optimization, or S2PO, initiative.

By becoming immersed in the Soldier's living and working environment, NSRDEC will be better able to develop more appropriate tools, techniques, products and technologies for the nation's warfighters, on and off the battlefield.

"We are studying cognitive, physical and social sciences," said Rick Haddad, NSRDEC's S2PO Program Integration lead. "It's in line with the Army's human dimension strategy."

NSRDEC's work is focusing on cognitive science, biomechanics, load carriage, nutrition, Soldier-borne sensors, and squad resupply efforts – to name just a few areas.

"The laboratory work is, of course, important," said Haddad. "But this enables the scientists to actually see the Soldier perform the task collectively

and individually. So they can understand the task better. If you read about doctrinal tasks, you don't get to see all the things that happen in between those tasks. The communication, the cohesiveness of a squad, and how collectively a squad will overcome a challenge. Those things can only be observed when Soldiers are in their organic environment."

Haddad has worked with Lt. Col. Phillip Kiniery of the 82nd Airborne, Battalion Commander, 2nd Battalion, 504th Parachute Infantry Regiment, [1st Brigade Combat Team](#), to build the bridge between the 82nd and Natick. Kiniery, his staff and company commanders, provided NSRDEC with a unique white paper that detailed the battalion's cognitive and physical challenges.

"This partnership is all about the paratrooper and readiness. NSRDEC's feedback to our leaders gains efficiency in training and closes the cognitive experience gap in junior paratroopers," said Kiniery. "We are truly building adaptive and agile paratroopers that can leverage the full capacity of their cognitive capability to match the physical ability, optimizing their overall performance as an individual and collective team."

"By encouraging a dialogue between active-duty Soldiers and Army scientists, Lt. Col. Kiniery has given Soldiers the opportunity to guide our work from the ground up," said Dr. Caroline Davis, a member of NSRDEC's [Cognitive Science Team](#).

Continued pg. 10

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Lt. Col. Phillip Kiniery  
2nd Bn., 504th PIR



Photo: Brian Gemmill, NSRDEC

**Jump Start, continued**

“Collaborations like these allow the Soldiers to see NSRDEC scientists who care about them and who are willing to integrate into their world and their culture,” said Dr. John Ramsay, an NSRDEC research biomechanics engineer. “We ask them their thoughts, provide quick answers, and then return to NSRDEC with Soldier-driven research problems. This is where we truly can make a difference. Rather than using Soldiers to answer research questions that we think are important, collaborations like this allow us to ask and answer questions that are actually important to the warfighter, originating from their mouths directly.”

“Our current pilot efforts with the 2-504 82nd Airborne are creating an environment of two-way interchange between NSRDEC and [FORSCOM](#) to the benefit of our scientists, engineers and Soldiers alike,” said Dr. Joseph Moran, a member of NSRDEC’s Cognitive Science Team. “NSRDEC scientists gain the incomparable experience of observing Soldiers in the field while gaining invaluable first-hand feedback about the impact of our work, whereas Soldiers get to hear directly about how to optimize their performance through design, engineering and science.”

“This is an invaluable opportunity to recruit much-needed participants for our laboratory and field studies at Natick, as well as solidifying a relationship that will allow us to take our science to the next level by

*Above, Dr. Joe Moran, far right, a cognitive scientist with NSRDEC, accompanies members of the 82nd Airborne Division on a night jump. Opposite: Soldiers from the 82nd watch a demonstration of a pocket-size UAV at Natick.*

testing whether our findings hold in the high-stress training operations being conducted at Fort Bragg,” said Davis.

“Both material and nonmaterial solutions will come out of this with the intent of reducing the cognitive and physical burden of the Soldier,” said Haddad.

“The scientists get a true understanding of what the Soldiers are living,” said Mary Giacalone, an NSRDEC program analyst. “The intent is that these technologies will solve a real problem.”

“I think this mutual investment will allow Soldiers to know that someone out there cares about them and is trying to solve their problems,” said Haddad. “They have the opportunity to help develop it, improve it, and understand its origin. They are being treated as the professionals that they are.”

In addition to working with the 82nd, NSRDEC is working to partner with other units directly, as well.

“Informal discussions and face-to-face interactions are where the game-changing ideas will come from,” said Davis.



Photo: David Kamm, NSRDEC Strategic Communications



# Avatars for Everyone

Photo illustration: Mallory Roussel, USARIEM Public Affairs

## USARIEM making 3-D Soldier models

By Kelly Field, USARIEM Public Affairs / NATICK, Mass. (March 7, 2016)

Since 2010 researchers at the [U.S. Army Research Institute of Environmental Medicine](#) have taken on the mission to develop a computer program to create the full-body, complete-anatomy avatar of individual warfighters. Their goal is to create a 3-D full-anatomy avatar for any Soldier regardless of gender, shape or size.

Dr. Gary Zientara, a mathematical modeler, and Dr. Reed Hoyt, chief of the Biophysics and Biomedical Modeling division at USARIEM, designed this project to morph human internal anatomy to fit into a 3-D body scan of Soldiers. When Zientara and Hoyt looked at the range of research and activities occurring at [Natick Soldier Systems Center](#), it was apparent to them that avatars could make an impact on the design of military gear, protective equipment and vehicles, and other applications across military medicine.

“This strategy has the possibility to create a large library of avatars, indeed, an online avatar ‘Army’ available for research use, and, as importantly, can provide individualized avatars representing uniquely specialized members of special units,” Zientara said. “Creating avatar models with this software enables individualized physiological modeling where an individual Soldier’s avatar can be clothed and moved through different postures and positions in order to be able to test angles of vulnerability and eventually even exercise and test physiological responses in any climatic environment.”

In 2015 as part of their first-generation avatar effort, Zientara and Hoyt formed a partnership with [Natick Soldier Research, Development and Engineering Center](#)’s Anthropometry Team, which provided 500 3-D body scans to USARIEM researchers. Currently, 250 male avatars have been successfully created as a means of testing, demonstrating and constantly improving the USARIEM computer program.

According to Zientara, the one key initial ingredient in the creation of the USARIEM avatars is the 3-D body surface scanning technology provided by NSRDEC. This technology can acquire a representation of the Soldier’s external surface.

“Human-like computer graphics figures shown in Hollywood movies or in online games are hollow, lacking internal anatomy,” Zientara

said. “These movie or game avatars do not differ much from the body scan input used in our computation of full-anatomy avatars. Hollywood graphics figures or gaming avatars are simplified, compared to the full-anatomy USARIEM avatars, and are usually decorated to model superficial physical characteristics and clothing textiles. The simplicity of the Hollywood representation makes those cartoon avatars much easier to animate than the USARIEM avatars.”

Dr. Zientara explained that the software USARIEM uses analyzes the structure of the Soldier’s 3-D body scan to identify external appendages, surface anatomical landmarks, and a simple skeleton that

the computer uses to understand body positioning. The software can then bend and size the standard anatomy figure into the posture representing the Soldier’s body scan, and finally expand or contract individual body components to best fit the Soldier’s scan.

“We consider our avatar products as ‘first generation’ due to the approximations made, but highly useful, nonetheless,” said Zientara. “The project takes advantage of computer technology now available on off-the-shelf, moderately priced commercial workstations. A great feature is that the computation is a black-box operation, that is, it does not require any expert input. Easy

scanning and easy computing make our avatars a widely deployable tool for the Army.”

This technology could lessen the costs of physical testing and reduce the man-hours of the subject devoted to actual testing. Since simulation and testing software can be operated as desired, new applications can be tried, high-risk simulations can be easily and safely performed, and results can be compiled from as many avatars as one has available.

“These future applications, coupling avatars with other technologies, present the most sophisticated case of simulation tools to the 21st century Army,” Zientara said. “Advanced training tools developed from this technology and coupled with USARIEM avatars can significantly increase Soldiers’ knowledge and experience, concretely benefiting effectiveness, efficiency and safety.”

**“Advanced training tools developed from this technology and coupled with USARIEM avatars can significantly increase Soldiers’ knowledge and experience, concretely benefiting effectiveness, efficiency and safety.”**

**Dr. Gary Zientara, USARIEM**

# Gut Check

## USARIEM tries to keep Soldiers healthy

By Mallory Roussel, USARIEM Public Affairs / NATICK, Mass. (March 23, 2016)

The [U.S. Army Research Institute of Environmental Medicine's Military Nutrition Division](#) is studying ways to improve gut health and prevent gastrointestinal illness among Soldiers operating in austere environments.

While the Army has spent decades making field rations nutritious and safe, researchers are only beginning to understand how food interacts with bacteria normally found in the human gut. Better understanding of this interaction could lead to better rations, healthy Soldiers, and improved performance on the battlefield.

As part of its study, USARIEM researchers have recruited volunteers in the Natick, Massachusetts, area who are willing to eat nothing but [Meals, Ready to Eat](#) for 21 days. To help Soldiers customize their menus during the course of the study, USARIEM's team developed an MRE cookbook with more than 20 recipes.

The importance of gut health, which contributes to general health and disease and is influenced by interactions between our diets and bacteria living in the human gastrointestinal tract, has been known for centuries. As Greek physician [Hippocrates](#) said more than 2,000 years ago, "All disease begins in the gut." However, new technology and research findings are fueling the military's current exploration of nutrition and gut health.

Research has shown poor gut health may compromise operational readiness. Gastrointestinal distress frequently causes lost duty time and reduces job performance during deployment. It

may also be linked with sub-clinical inflammation during military training.

"What emerging science suggests is that the bacteria living in our gut can have a large impact on physical, mental and general health, not only in our warfighters but in everyone," Dr. J. Phillip Karl of USARIEM said. "A recent explosion in technology now allows us to study the trillions of bacteria living in our gut in ways we never have been able to before. We think we can leverage those bacteria to have a favorable effect on warfighters out in the field and in garrison."

**"What we know now that we didn't understand fully decades ago is the bacteria living in our gut can have a large impact on physical, mental and general health, not only in our warfighters but in people in general."**

Dr. J. Phillip Karl of USARIEM

Karl, a nutrition scientist and the study's principal investigator, said improving gut health could help optimize military health and performance.

"A common problem some of our warfighters face when they travel overseas to regions where sanitation is not as high quality as it is in the U.S. is they are susceptible to pathogens that can cause diarrheal illnesses, such as Travelers' Diarrhea," Karl said.

Karl added, however, that creating an environment that allows healthy gut bacteria to flourish helps those bacteria "out-compete" bacteria that can cause gastrointestinal distress.

According to Karl, gut bacteria basically eat what we eat. So, researchers are observing how they respond when study volunteers transition to a MRE-only diet.

"The bacteria in our guts can digest the foods we cannot," Karl said. "The byproducts of that digestion are often beneficial for health. They improve the integrity of our intestinal wall, which helps prevent unwanted compounds from getting into the bloodstream. They also create an environment in the gut that's conducive to the growth of healthy bacteria."

Volunteers began enrolling in June 2015, and Karl said 60 people will complete the study. Half of the current volunteers have committed to consuming only MREs for 21 days, while the other half provide a comparison by sticking to their normal diet. Both groups visit [Natick Soldier Systems Center](#) three times weekly to meet with study staff.

"We meet with volunteers multiple times throughout the study to collect fecal, blood and urine samples," Karl said. "We use these samples to assess if the MRE is impacting bacteria and whether that interaction influences health."

"What we're trying to do with all of our research is improve what we provide to the people who serve and protect our country. Everything USARIEM does is aimed toward benefiting our warfighters. That requires people donating their time, but it is one way to help contribute to our nation's warfighters."

*Researchers from USARIEM are finding ways to leverage gut bacteria, right, in warfighters to help prevent gastrointestinal illnesses during deployment and training.*

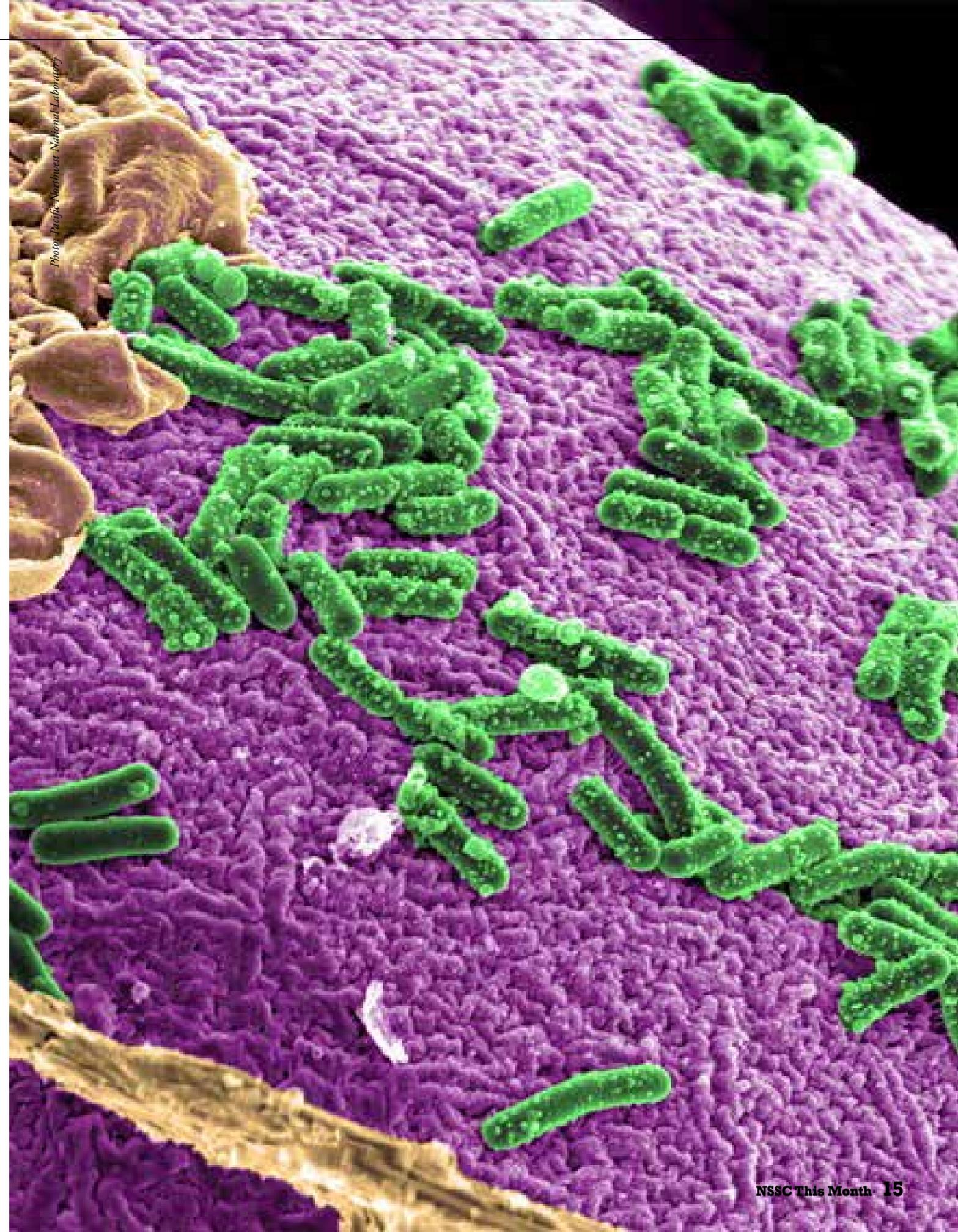


Photo: Pacific Northwest National Laboratory

# Fort Devens' 'MacGyver'

## Dowse right on target at Range Control

By Bob Reinert, USAG Natick Public Affairs / NATICK, Mass. (March 10, 2016)

Like the title character from the old television series "MacGyver," it seems that Jim Dowse of Fort Devens Range Control can fix just about anything.

Officially, Dowse is a system target equipment worker. As he pointed out, however, the guy with the tools always gets asked to look at other stuff. That's him.

"Everybody's good at something," Dowse said. "I'm good at fixing broken stuff. My whole life, I've taken stuff apart. It drove my parents nuts. I can't leave anything alone. That's just the way I am."

"I've 'MacGyvered' a lot of different things. You patch things together, and you use gum and duct tape, but it works. I don't throw anything away."

Step into his work space, and you're as likely to find radios and public address system components as targetry. But as a gun enthusiast and former Soldier, Dowse is all about making sure that the service members and law enforcement officers who shoot at Fort Devens get the best training experience possible.

"My job is to keep everything at a hundred percent, or as close to a hundred percent as I can," Dowse said. "I'm very service-oriented. If the customer's happy, the customer's coming back."

"If everything's running fine, what could be better? How could we make it better? There's always something."

In the five-plus years he's been at Fort Devens, Dowse has seen the ranges go from pneumatic to digital systems that feature integrated targets and automated control and recording. Those ranges now feature a variety of 3-D, realistic, stationary, moving, and thermal targets. (To watch a video of a thermal target Dowse built, click [here](#).)

Range Control Officer Keith Jackson estimates that from \$750,000 to \$1 million has been spent upgrading the targetry on [South Post](#).

"We've really switched technologies over the years," Jackson said. "Ranges are awesome, but if you don't have a targetry system on there that's really conducive to the training, you don't have a range, in theory."

And if you don't have someone like Dowse to maintain the targetry systems, well, you don't have ranges, either.

"I've only got one Jim," Jackson said. "A lot of installations have got six or seven Jims."

He may be alone, but Dowse, who has an industrial design background, brings a unique skill set to the job. As with the curtain in the "Wizard of Oz," few Soldiers who shoot at Fort Devens know what goes on behind that sand berm.

"I think it's taken for granted that there's something behind that sand pile that makes the target go up and down, but who knows what it is?" Dowse said. "As finicky as the pneumatic ranges were, I could fix them with a pocket knife. You could really fix them with nothing."

The introduction of networks, fiber optics, computers and modems to ranges has changed all that, Dowse said.

"There's a lot more in the chain that can actually fail," Dowse said. "It all goes back to make it work, get it working."

Dowse will go to any lengths to keep the Fort Devens ranges functioning. In an era of fiscal constraint, that means getting creative. For example, in the winter when the ranges slow down, he will cannibalize failed target lifter motors.

"Out of every two or three, I'll rebuild another good one," Dowse said. "I won't spend money if I don't have to. I can't throw away anything that I can find useful."

"If I can do it with less, I'm going to do it with less, and I refurbish most everything."

According to Dowse, his days are challenging and varied.

"Every day, I come in here thinking my day is planned in a certain direction, and it always takes a right or a left," Dowse said. "And that's fine. To me, that's what I look forward to. I don't want the same old thing every day."

And business is booming for Dowse.

"The best part about my job is, they're shooting at the product that I am hired to fix," Dowse said. "They're shooting bullets at a product that I'm supposed to keep running. It's bound to keep me in business. How can I fail?"



Opposite, Jim Dowse, system target equipment worker at Fort Devens Range Control, points to a variety of targets in his work area. Below, Dowse inspects a pair of targets at Hotel Range on South Post.



Photos: Bob Reinert, USAG Natick Public Affairs

Federal civilian employees and service members must be cautious of election year political activity on social media.

Most federal employees – military and civilian – who have served through at least one election cycle know of the limits on political activity imposed by The Hatch Act and service-specific rules, but the ever-growing popularity of social media has raised many new questions over what political activity is permissible.

The [Hatch Act](#), passed in 1939, restricts the political activity of civilian employees serving in a variety of federally funded programs, but it was amended in 1993 to allow most employees to engage in certain types of political activity while in their personal capacity.

"While The Hatch Act allows most federal employees to participate in some types of political activity, the act prohibits political activity while on duty, while wearing an official uniform or insignia, while using a government vehicle, and in any federal workplace," said Sarah Green, senior ethics attorney, [U.S. Army Space and Missile Defense Command/Army Forces Strategic Command](#). "The ease of accessing one's personal social media and email though have made it much easier for federal employees to unknowingly violate the law."

Political activity in this case is defined as any activity directed at the success or failure of a political party or partisan political group or candidate in a partisan race. Complying with the act is possible if employees remember a few guidelines, Green said.

Receiving political or partisan emails or invitations to fundraisers at work is not inherently a problem if employees keep the guidelines in mind.

"Federal employees may receive a political e-mail at work, and they may forward that email to their personal accounts," Green said. "They may not forward that email to others and definitely not to subordinates. And under no circumstance can a federal employee solicit or receive political contributions at any time, nor invite individuals to political fundraising events."



## Soldiers, civilians reminded about Hatch Act

By Carrie E. David (SMDC/ARSTRAT / REDSTONE ARSENAL, Ala. (Feb. 25, 2016)

Social media with its likes, shares, tweets, profile pictures and posts creates its own minefields.

"Federal employees may not like, friend or follow the social media page of a partisan group or candidate in a partisan race while on duty or in the workplace," Green said. "If a federal employee displays a political party or campaign logo or candidate photograph as his profile picture, then he cannot post, share, like, or tweet anything while on duty or in the workplace even if the item is nonpolitical."

Service members' social media activity is further restricted.

"Service members may express their personal views on public issues or political candidates on social media, much as they

would be permitted to write a letter to the editor," Green said. "If the service member is identified in any way as being active duty, then the entry must clearly and prominently state that the view is not that of the Department of Defense.

"In addition, Soldiers may friend, like or follow the social media page of a political party or partisan candidate, campaign, group or cause," Green said. "They cannot, however, engage in any partisan political activity. They cannot link to, share posts, or encourage others to like or follow said entity."

If federal civilians or Soldiers have further questions, they should contact the SMDC ethics counselors at (256) 955-2181 or (719) 554-2126 or email the U.S. Office of Special Counsel at [hatchact@osc.gov](mailto:hatchact@osc.gov).

## Women to train for infantry, armor Army to use USARIEM's physical performance tests

By Todd Lopez and Gary Sheftick, Army News Service/WASHINGTON (March 11, 2016)

The Army will begin training women for infantry and armor specialties later this year, according to its Gender Integration Implementation Plan released March 10.

The plan will be executed in phases, first bringing female officers into combat arms this summer after they graduate from the [U.S. Military Academy](#), [ROTC](#) or [Officer Candidate School](#).

Enlisted recruits are expected to begin training in infantry and armor military occupational specialties beginning this fall. By the time they graduate Advanced Individual Training and report to their first combat units, female officers will already be there. It's part of the Army's "leader-first" approach to integrate the last 19 military occupational specialties that had been closed to women.

"We're not going to turn our back on 50 percent of the population," said [Acting Secretary of the Army Patrick J. Murphy](#). "We are opening up every occupation to women. I think that's pretty historic."

The Army is currently in the first phase of its integration plan. It has developed gender-neutral standards and is educating the force about its implementation policies.

"An incremental and phased approach by leaders and Soldiers who understand and enforce gender-neutral standards will ensure successful integration of women across the breadth and depth of our formations," said [Chief of Staff of the Army Gen. Mark A. Milley](#).

The Army has also been developing a new Occupational Physical Assessment Test. The OPAT will be administered to recruits beginning no later than June, according to Phase II of the plan.

OPAT includes physical performance tests developed by the [U.S. Army Research Institute of Environmental Medicine](#). These

tests will measure the ability of a recruit or cadet to perform physically demanding MOS tasks.

The new test will include a standing long jump, a dead lift, an interval run and a seated power throw to measure strength needed for tasks such as loading ammunition.

Phase II is the initiation of gender-neutral training. It begins April 1 as the Army starts enlisting women under the Delayed Entry Program for armor and infantry One-Station Unit Training or OSUT.

**"We're not going to turn our back on 50 percent of the population. We are opening up every occupation to women. I think that's pretty historic."**

**Patrick J. Murphy**  
Acting Secretary of the Army

Training won't actually begin for the enlistees until fall and could be delayed for up to a year until they graduate high school.

Phase III involves assigning women to operational units. Again, female officers will be assigned to infantry and armor units first, to prepare the way for enlisted Soldiers to arrive at end of the year.

Phase IV is "Sustain and Optimize." In this phase the Army achieves full operational capability and re-validates MOS screening requirements. Through talent management,

it continues to select the best Soldiers for the right jobs, according to the plan.

Over the last four years, the Army has opened a substantial number of positions to female Soldiers. The Army opened 95,216 positions and nine occupations to women between May 2012 and October 2015, including combat engineer (12B) and artillery MOSs.

The first female cannon crew member, 13B, graduated this month from Advanced Individual Training at [Fort Sill](#), Oklahoma, at the top of her class.

Now under the Army's Gender Integration Implementation Plan, the final 19 MOSs will provide an additional 220,000 job opportunities to female Soldiers, though that number may change based on end strength reductions and ongoing force structure changes.

Following are the 19 MOSs within infantry, armor and Special Forces that will incrementally open to women:

- 11A (Infantry Officer)
- 11B (Infantryman)
- 11C (Indirect Fire Infantryman)
- 11Z (Infantry Senior Sergeant)
- 13F (Fire Support Specialist)
- 19D (Cavalry Scout)
- 19A (Armor, General)
- 19B (Armor)
- 19C (Cavalry)
- 19K (Armor Crewmember)
- 19Z (Armor Senior Sergeant)
- 18A (Special Forces Officer)
- 180A (Special Forces Warrant Officer)
- 18B (Special Forces Weapons Sergeant)
- 18C (Special Forces Engineer Sergeant)
- 18D (Special Forces Medical Sergeant)
- 18E (Special Forces) communications Sergeant)
- 18F (Special Forces Assistant Operations and Intelligence Sergeant)
- 18Z (Special Forces Senior Sergeant)



**MONTH OF THE MILITARY CHILD  
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