

May 16, 2014

INSSC This Week



U.S. Army Medical Soldier Systems Center Public Affairs Office



Also inside:

2013 Department of Defense Thomas Jefferson &
U.S. Army MG Keith L. Ware Award-winning Digital Publication



Publisher's Note

John Harlow
USAG-Natick and NSSC Chief of Public Affairs



Brick by Brick

I want to take a moment and share a personal story today.

My hometown of Tyrone, Pa., has a small park across from our American Legion called Soldiers Park. There is a statue of a doughboy, and every Memorial Day, crosses are put into the ground to honor those from Tyrone who were lost in service to the nation.

Cody Eckles of Troop 300 decided for his Eagle Scout project to re-do the look of Soldiers Park.

Flags for all services fly over Soldiers Park and bricks are in place to honor those from Tyrone who served in our Armed Forces.

My brick went in yesterday. It may not seem like much, but I thought it was pretty cool to have a spot in my hometown where I am among the many who served.

To the many here at the Natick Soldier Systems Center who have worn the uniform of our Armed Forces, thanks for your service.



Tuesday is the biggest night of the year at the Natick Soldier Systems Center. Softball opens at the Ninodome. The opening game is USARIEM vs. Sybarites and the second game is a rematch of last year's finals between Combat Feeding and Madness.

It is a great place to gather, have a couple beverages and enjoy each other's company.

Have a great weekend and thanks for taking the time to read *NSSC This Week*.

John Harlow
USAG-Natick and NSSC Chief of Public Affairs

NSSC This Week

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About this newsletter

NSSC This Week is a biweekly newsletter covering NSSC news within the Army and commercial media.

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On the Web: www.army.mil/natick

Cover photo: Staff Sgt. Jacob M. Bailey

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Upcoming Events

NSSC SHARP Training

"Sex Signals" will be presented June 2 and June 3 at 9 a.m., 12:30 p.m. and 2:30 p.m. at Hunter Auditorium.

Sex Signals has become one of the most popular programs on sexual assault awareness among college and military audiences, personnel and educators.

For more information, please contact your training coordinator or SHARP personnel Laura Capehart-Hall at ext. 6922 or Julie Lindahl at ext. 6925.

Flag Transfer

Command Sgt. Maj. Robert Beausoleil of U.S. Army Garrison Natick will be the featured speaker at the 90th annual "Transfer of Flags" ceremony May 21 at 7 p.m. at Kennedy Middle School in Natick.

As part of the town's Memorial Day observances, the Natick Public Schools have formally transferred responsibility for raising the American flags at each of the schools from one set of students to those assigned for the following year.

Within the Gates

Blood Pressure Screening

The Natick Soldier Systems Center's Occupational Health Clinic, Bldg. 30, is offering a free blood pressure screening on Thursday, May 22, from 9 to 11 a.m. for Natick civilians and military personnel. No appointment is necessary.

If you have any questions, please call Mary Freyermuth at ext. 5415.

Summer Safety Day

U.S. Army Garrison Natick will hold its annual Summer Safety Day May 30. For more information, call LaVern Olmstead at ext. 4552.



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ARRIES :

Natick Takes Protective Eyewear into the Future

When it comes to the very best in vision protection for the warfighter, researchers at the Natick Soldier Research, Development and Engineering Center make sure the eyes have it.

When it comes to the very best in vision protection for the warfighter, researchers at the Natick Soldier Research, Development and Engineering Center make sure the eyes have it.

“Eyesight is fundamental to a Soldier’s job, making vision protection of critical importance,” NSRDEC researcher Brian Kimball said.

A warfighter’s vision can be impacted by dust, sand, fog, and changes in lighting. There are also outright threats from ballistic fragmentation and lasers.

NSRDEC researchers are continuously working to find better ways to prevent sight impairment and eye injury, now and in the future, and are also working on cutting-edge technologies for vision enhancement and shared vision applications.

“At NSRDEC, our mission is the Soldier. We are honored and humbled by their service, bravery and dedication, which challenge us to

pursue science and

technology solutions that will enhance their safety, comfort, and effectiveness,” Kimball said.

“The number of injuries has come down with the use of protective eyewear. Although you can’t prevent all injuries, the majority can be avoided, or reduced in severity, by wearing the proper protection,” said Michelle Markey, who is involved with science and technology research at NSRDEC, as well as end-item technical support for both the Army and Marines.

“Improvements are always ongoing,” Kimball said.

Advances are made possible by the spirit of collaboration.

NSRDEC attributes the success of ongoing vision protection technologies to the collaborative nature of the DOD vision-protection community, which has a long history of working together and sharing resources, capabilities and technology.

“This community consists of scientists, engineers, medical professionals, and dedicated

program and project managers,” said Kimball. These

combined resources “provide capabilities that could not be realized otherwise.”

Ballistic fragmentation protection is a top priority.

“Ballistic fragmentation protection is always the primary consideration,” Kimball said.

Soldiers face a variety of ballistic fragmentation threats, including debris from explosions and weapons firing. They also face increased

threats from improvised explosive devices.

Polycarbonate, known for its durability and manufacturability, has long been the Army’s staple material for impact-resistant eyewear.

Now, however, NSRDEC is taking ballistic fragmentation eye protection into the future. NSRDEC is now working to incorporate new, lightweight, transparent nylon materials into protective goggles and spectacles.

“The material is a significant improvement,” Markey said. “We are looking at a 15 to 20 percent improvement in impact resistance.”

“And it is lighter weight,” Kimball added.

This new material, the result of research conducted by Dr. John Song, a materials research engineer at NSRDEC, is approaching the manufacturing stage of product development.

Laser danger

Lasers are an increasing threat to Soldiers. The word laser is actually an acronym for Light Amplification by the Simulated Emission of Radiation. Lasers can cause flash blindness, corneal hemorrhaging, retinal lesions and burns, and possibly permanent blindness.

“Laser light is coherent, collimated and of a single wavelength, so that your eye focuses it to a very fine spot. In this way laser light is more intense than regular white light,” Kimball said.

Handheld versions of lasers are readily available to anyone, anywhere. Military system-based lasers are also becoming more prevalent in theater operations. Laser hazards can come from systems such as target designators and laser-range finders.

Current laser protective lens technologies use dyes and/or optical films to absorb or reject laser energy. Natick researchers are aiming to increase the survivability and mobility of warfighters in situations where lasers pose a threat and/or hazard. They are working to provide protection in low-light conditions, especially protection that will work better at night. Their goal is to make laser protection part of a single, multifunctional lens system.

Sand, fog and scratches pose ongoing challenges.

Researchers continuously face the difficult challenge of developing scratch- and fog-resistant coatings that do not interfere with ballistic fragmentation or laser protection. Solving this problem is an important priority, because Soldiers tend to take off their eyewear if it is scratched or remove their eyewear when it fogs—thus, sacrificing protection altogether.

“The most common complaints they have in the field are scratching and fogging,” Markey said. “We are always looking into new technologies.”

Researchers also discovered during desert conflicts that improved scratch resistance coatings are needed to protect lenses against blowing sand abrasion, such as that from sandstorms.

NSRDEC, with support from PM-Product Manager Soldier, devised new methods of evaluating abrasion and fog resistance. “We are perfecting and finalizing these new methods of testing and will be investigating new coatings,” said Kimball.

A prescription for success

Many Soldiers wear prescription eyeglasses. Currently, vision is corrected by installing a prescription lens carrier with corrective lenses behind the Soldier’s protective eyewear. Technologies currently being investigated by NSRDEC also have application to prescription lenses, and will help make vision correction part of the single-lens system envisioned for the future. NSRDEC foresees this as a joint venture with the [U.S. Army Public Health Command](#) and program offices.

The importance of testing

One of the most important contributors to successful advancements in eyewear protection is early and frequent testing of new materials and coatings to make sure an advance in one area isn’t detrimental to another area. Sometimes, new coatings that may protect against scratching or other problems lessen impact protection and have to be abandoned.

“If we have a new capability, one of the first things I do is shoot it (with a ballistic fragment impact simulator),” Markey said.

“The key is to test it as early as you can,” Kimball said.

Looking into the future

Hindsight may be 20/20, but future sight will be even better.

The key to future systems, according to Kimball, is to “do it all in a single-lens format.”

NSRDEC researchers are developing an active eyewear system that will protect the user from ballistic fragmentation and lasers, as well as provide vision enhancement in a single lens. The lens will be able to quickly adjust from very clear all the way down to a true sunglass state, allowing the Soldier to more readily adjust to rapidly changing lighting conditions. The system will protect against dangerous forms of light, including lasers.

In addition to providing protection against numerous threats and adapting to different types of light, the single-lens system would also include vision enhancement.

“The system will have tremendous potential to give the warfighter the edge over opponents and to ultimately lighten their load by providing information and functionality that will one day replace complex, stand-alone systems,” Kimball said.

Soldiers will benefit from features such as zoom magnification, variable polarization, multispectral enhancement, and selective light-filtering capabilities. The technology will allow for increased situational awareness and enhanced target recognition. The single-lens system will also feature improved impact protection and hearing protection/augmentation. Energy-harvesting technologies are also being investigated to make the system self-powering.

NSRDEC researchers are working to ensure that these new developments will be environmentally robust and low in bulk and weight. Nanotechnology will allow for the creation of new materials.

Protective eyewear is crucial to preventing permanent or temporary injuries to the eye in conflicts, past and present. Eyewear protection has proven to be extremely important in recent conflicts in Iraq and Afghanistan, where warfighters face ongoing threats from improvised explosive devices. Protective eyewear has saved the eyesight of countless Soldiers exposed to shrapnel and flying debris common with the use of these devices.

Fortunately for the warfighter, “Warfighter Vision System research is a challenging area that has attracted some of the brightest minds in the country,” Kimball concluded.



“Eyesight is fundamental to a Soldier’s job, making vision protection of critical importance.”

NSRDEC researcher Brian Kimball

Historical Perspective – Eye protection has come a long way.

Eye protection for the warfighter was first developed in the 1940s and included goggles that protected from the sun, wind and dust. From the 1980s until the beginning of the new millennium, new advances in impact protection and laser protection became available. Since then, coatings, materials and capabilities have been improved continuously to ensure the warfighter has the very best technology can offer.

Natick's 'HEaDS UP' Leads Way

By T'Jae Gibson, ARL Public Affairs / April 24, 2014

The [U.S. Army Research Laboratory's](#) prototype exoskeleton, the Vertical Load Offset System or VLOS, could one day lead to new helmet technology that displaces the static load of the helmet onto the shoulders and enables the Soldier to tolerate much higher levels of protection and device capability.

It's being considered as a candidate technology for the [U.S. Special Operations Command's](#) ambitious "TALOS" demonstration program, which seeks superior protection of "first in" forces involved in highly dangerous and unpredictable scenarios, said Dr. Shawn Walsh, the principal investigator for the VLOS concept development.

The Natick Soldier Research, Development and Engineering Center's "HEaDS UP" Program provided both the context and impetus to aggressively explore new approaches of integrated head protection, as well as the operational needs and environments that made VLOS a practical alternative for improved head protection, he said.

Results from recent tests of Soldiers wearing this head system prove promising in moving head protection system technology forward in ways that could allow more equipment like night vision goggles, batteries, radios, etc. to be mounted on helmets of future Soldiers without adding weight on their heads and necks.

Postulating the future technology needs of America's fighting forces is "the quintessential role of ARL," said Dr. Jeffrey Zabinski, chief of ARL's Materials and Manufacturing Division of the Weapons and Materials Research Directorate at Aberdeen Proving Ground, Md. It is through this "informed imaginings" that ARL can leverage basic scientific research to conceptualize, discover, innovate and eventually transition scientific breakthroughs to military systems for Soldiers who need them most.

Such was the case with upgrades for ground vehicles, combat helmets and ammunition, for example.

The MRAP, one of the most iconic weapon systems deployed during America's last major conflict, changed the course of war, thanks to research in material and detonation science that traces back almost 200 years to the Army Research Laboratory's legacy in Watertown, Mass.

The Watertown Arsenal was established in the early 1800s for the receipt, storage and issuance of ordinance. The arsenal remained active until the Defense Secretary's Commission on Base Realignment and Closure identified the Army Material Technology Laboratory at Watertown for closure in December 1988.

The MRAP's V-shaped undercarriage helped deflect the impact of blasts from improvised explosive devices, a ferocious enemy weapon in Iraq.

In 2008, ARL researchers started looking at a material and manufacturing process that hadn't changed since the early 1970s, and by 2010, had created a new manufacturing capability using a little-known lightweight material – an ultra-high molecular weight polyethylene, a type of thermoplastic – that revolutionized ballistic helmets. The ECH is expected to be fielded by Army and Marine combat forces in 2014.

Also in 2010, ARL's technical expertise in ballistics and lethality research led to the fielding of the M855A1 Enhanced Performance Round. The new, better performing small caliber munition was the result of collaboration among ARL, PEO Ammunition, Project Manager for Maneuver Ammunition Systems at Picatinny Arsenal, the Research Development and Engineering Command and defense contractor Alliant Techsystems. It marked the first time since the 1980s the

U.S. Army fielded a new ball cartridge for its 5.56 mm small-caliber weapon system.

"Investigations of tough challenges ARL started 10 to 20 years ago are now maturing and poised to help future warriors face combat uncertainty with innovative technological solutions. That's the strength of Army basic research and the essence of our work at the Lab," said Dr. Patrick J. Baker, director of the laboratory's Weapons and Materials Research Directorate. "We're taking multidisciplinary approaches to push the frontiers of fundamental science and technology that result in transformational capabilities.

"We've teamed with academia and industry, and other government partners to invest in science and engineering as well as manufacturing expertise needed to drive innovation, and mature and demonstrate technological capabilities with our partners to provide future warriors with what they need to maintain a decisive technological edge," he said.

This is paramount to the future warrior, who, unlike those who fought conflict during the past 12 years, is expected to face down more technically capable enemies in more complex, more contested environments like urban territories in more advanced societies. To confront those challenges, ARL is on the brink of transitioning prototype technologies to military users who need them most.

"A great thing about working in the Army lab is that we have a lot of smart people with open minds working in different areas. If you discover or invent something revolutionary that may be big payoff, it won't be tossed aside just because it is different than how the Army fights today. For a scientist who wants to have an impact, that keeps you pretty excited," said Baker.

ARL's vertical load offset system is a prototype exoskeletal device designed to displace the static load of the helmet onto the shoulders, proven in recent studies to reduce apparent strain overall on a Soldier's head and neck.

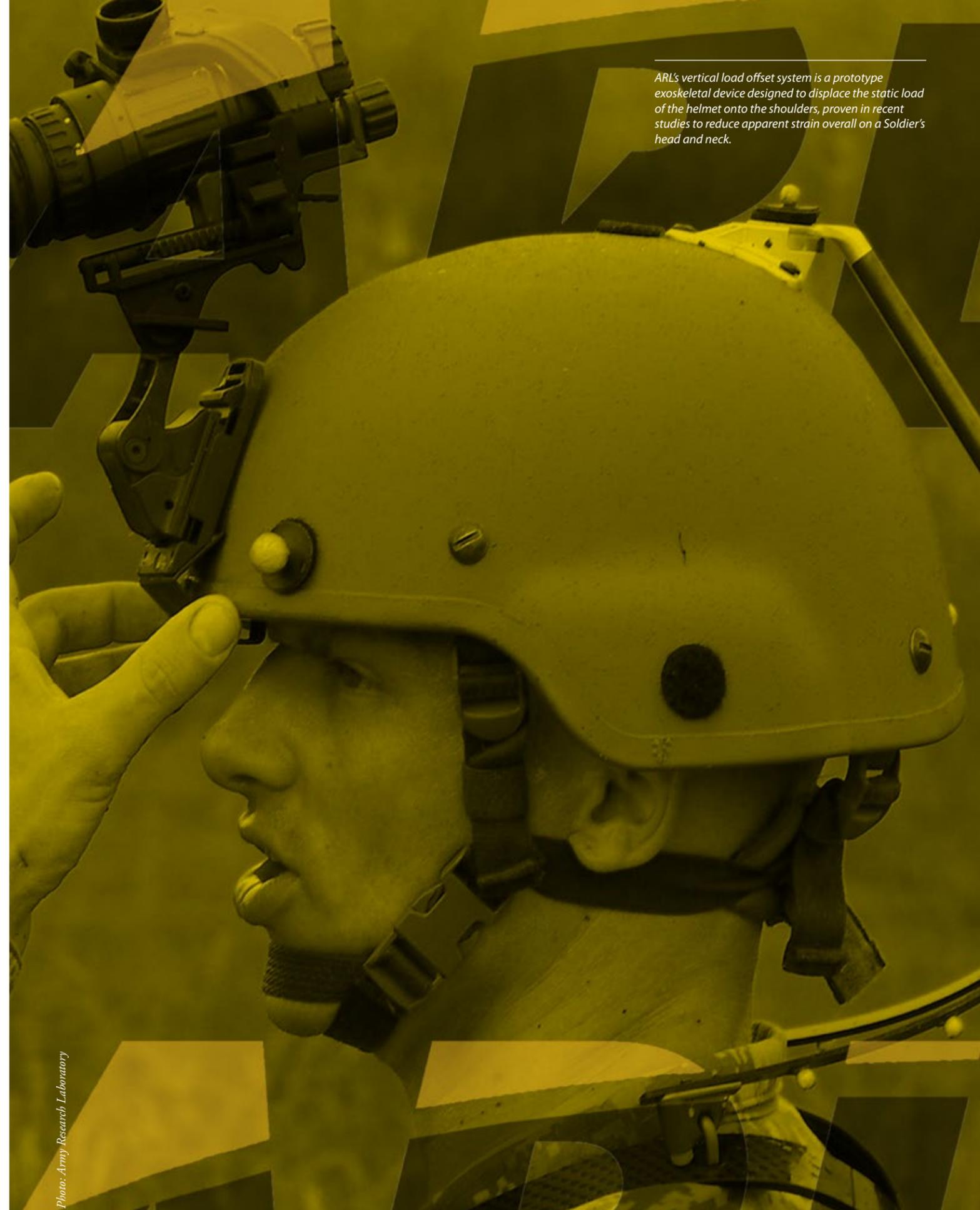


Photo: Army Research Laboratory



Photo illustration: Philip Fujitawa

During combat missions, water bottles can become dangerous projectiles in explosions.

Water Hazard

Natick researchers develop insulated containers

By Alexandra Foran, NSRDEC Public Affairs / NATICK, Mass. (April 30, 2014)

Armey researchers answered the call for insulated bottled water containers for Soldiers in the field. The result may be a life-saving product to protect Soldiers in vehicles during combat missions when water bottles could become dangerous projectiles during explosions.

Researchers from the U.S. Army Natick Soldier Research, Development and Engineering Center responded to the [Joint Program Office for Mine-Resistant, Ambush-Protected Vehicles](#) with a container to not only insulate and protect the water bottle, but also make bottled water easy to reach and cool enough for Soldiers to want to consume it.

The prototype is known as the Insulated Containers for Bottled Water, or ICB. The NSRDEC [Aerial Delivery Directorate](#) and the [Combat Feeding Directorate](#) worked together on the project.

“We came up with initial prototypes that were large, medium and individual with minimal funding using the project manager’s concept and Combat Feeding’s concept, so we just fabricated it,” said Laura Winters, team leader for the Aerial Delivery Design and Fabrication Team, Aerial Delivery Directorate.

Through their work on systems that have to survive intense airdrops, Winters’ team has developed the skills and equipment necessary to handle creating a prototype with blast survivability for water bottles and rations, which will most often be [Meals, Ready-to-Eat](#), or MREs.

Initial concepts for the system included a zipper that went around the storage bag. Unfortunately, zippers tend to fail, and if the zipper breaks, the bag will no longer keep water cool and protected.

“You need some level of redundancy with this system because if one fails, then the system is no good,” Winters said.

The final prototypes utilize webbing wrapped around the bag to encase the material instead of relying on a zipper, or seams, to hold the bag together. The webbing has a minimum breaking strength of 6,000 pounds, which provides the necessary strength to the overall system to successfully retain all contents.

“Your weakest link is going to be your closure and your seam, so by reinforcing it with the webbing, you are improving the strength and the performance of it,” Winters said. “We also put in hook and loop, too, just so that there is some level of redundancy if the closure system fails.”

The large system holds 36 water bottles, or 28 MREs. The medium bag holds 15 water bottles, or six MREs, and the small individual bag holds five water bottles. NSRDEC is working with the [Tank Automotive Research, Development and Engineering Center’s](#) Occupant Centric Protection, or OCP, on integrating the ICBs into the next generation of vehicles. User evaluation testing and blast testing should occur this year.

“We’ve done drop testing, vibration testing, flammability testing, performance testing at the [Doriot Climatic Chambers](#), and abrasion testing,” said Ben Williams, ICB project officer on the CFD Systems Equipment and Engineering team.

“We also linked up with Johns Hopkins University’s Applied Physics Lab to conduct in-vehicle blast testing, because our customer’s number one requirement was that these bags needed to be blast-proof in an [improvised explosive device] scenario.”

Containing the bottles within the bag ensures that they do not become projectiles that could harm Soldiers. Keeping water palatable is the other concern.

“The temperature of the water is a big factor when keeping the Soldiers hydrated,” Williams said. “We’ve done lots of studies on what water temperatures are most palatable for Soldiers. Soldiers drink more water when it’s cold and remain hydrated for longer periods of time because they are consuming more water. This improves Soldier endurance. We consider it a force multiplier.”

Temperatures in areas of operation can reach 95 to 120 degrees Fahrenheit on average in the summer months, creating an even greater demand for cool water as Soldiers exert themselves every day.

Drinking water, safely contained and cool, is often taken for granted by many in the U.S. For Soldiers serving abroad, however, it is an extremely valuable commodity.



Photo: Art Illmann, MetroWest Daily News

Natick Holds Active Shooter Exercise

By Bob Reinert, USAG-Natick Public Affairs / NATICK, Mass. (May 12, 2014)

On the morning of May 7, gunshots rang out near Building 19 on [Natick Soldier Systems Center](#).

Within minutes, first responders from U.S. Army Garrison Natick Police, the [Natick Police Department](#) and other law enforcement agencies arrived on the scene, and the installation went into lockdown.

An hour later, there were 13 killed – including the two shooters – and five wounded. Fortunately, this was NSSC’s annual antiterrorism/emergency management exercise and not a real active shooter incident. The two-day event was designed to test NSSC’s ability to respond while partnering with local and state agencies.

“This is an annual requirement, to conduct an emergency management exercise,” said [Lt. Col. Brian Greata](#), USAG-Natick commander. “Here at Natick, we’ve got really strong working relationships with all of our local partners.

“Really, it’s a mutual benefit by doing these exercises this way. They get the benefit of hav-

ing a somewhat realistic scenario, and we get the benefit of working through our processes, understanding how we work with external partners to effectively deal with the situation, deal with the consequences.”

Areas of focus this year included fatality management, media management and family assistance.

We kind of encompassed those into this exercise program, using the active shooter as a trigger,” said Scott Whitney, the exercise director. “And this definitely helped us understand where our shortcomings are and what our successes were for this exercise.”

The [Office of the Chief Medical Examiner](#) of the Commonwealth of Massachusetts sent its personnel and a mobile mortuary to handle the simulated fatalities.

“We have the ability today to just test out some new equipment that we’ve been able to acquire for setting up temporary morgue operations at a location outside of the main office,” said Dr. Henry Niels, the state’s chief medical examiner. “A lot of this is just about

Personnel from the Commonwealth of Massachusetts Office of the Chief Medical Examiner retrieve a simulated casualty in front of Building 19 at Natick Soldier Systems Center during an antiterrorism/emergency management exercise May 8.

practicing, getting used to small glitches that might turn up. That gives us a chance to find out what those are and remedy those before a real mass-fatality situation presents itself.

“In addition, it helps us to interact with different jurisdictions and different agencies.”

USAG-Natick also stood up an Emergency Family Assistance Center to help those affected by the incident.

“We’ve never stood up an EFAC before here,” said Julie Lindahl of [Army Community Service](#). “The purpose of the EFAC today was really just to provide psycho-social services – so mental-health counseling and crisis counseling, those type of things.”

In a mock news conference at the end of the exercise’s second day, Greata took questions from students of the Connecticut School of Broadcasting.

“Ultimately, all of us come out of it more prepared,” said Greata, “in the unfortunate case that something like this would happen.”

Sgt. Seth Bullock and his mother, Carla Bullock, used their faith to get them through Seth’s deployment to Iraq.

Carla Bullock has always had a unique bond with her youngest son, Sgt. Seth Bullock.

“All my children are special,” said Carla, “but that’s my baby boy.”

So when Seth deployed with the [1st Squadron, 89th Cavalry Regiment, 2nd Brigade Combat Team, 10th Mountain Division](#) from Fort Drum, N.Y., to Iraq in August 2006 for 15 months, Carla leaned heavily on her Southern Baptist faith.

“Because I did not know whether he would come home or not,” she explained. “There were nights I worried. If it was not for my faith, I don’t think I could have done it.”

As Mother’s Day 2014 approached, Carla and Seth recently took time out to look back on that time of uncertainty in their lives and how they got through it. Seth’s career path actually began during his boyhood in Bainbridge, Ga.

“My father had served and he retired from the military,” said Carla of Seth’s grandfather. “And it was just something that Seth always talked about. He always talked about the Army, and we always encouraged him and told him it was an honor to serve his country. That’s what he wanted, so that’s what he did.”

Seth, the youngest of a blended family of seven children, was born 10 minutes later than his twin sister, Erin. When Seth decided to enlist in 2005, he had his mother’s full support.

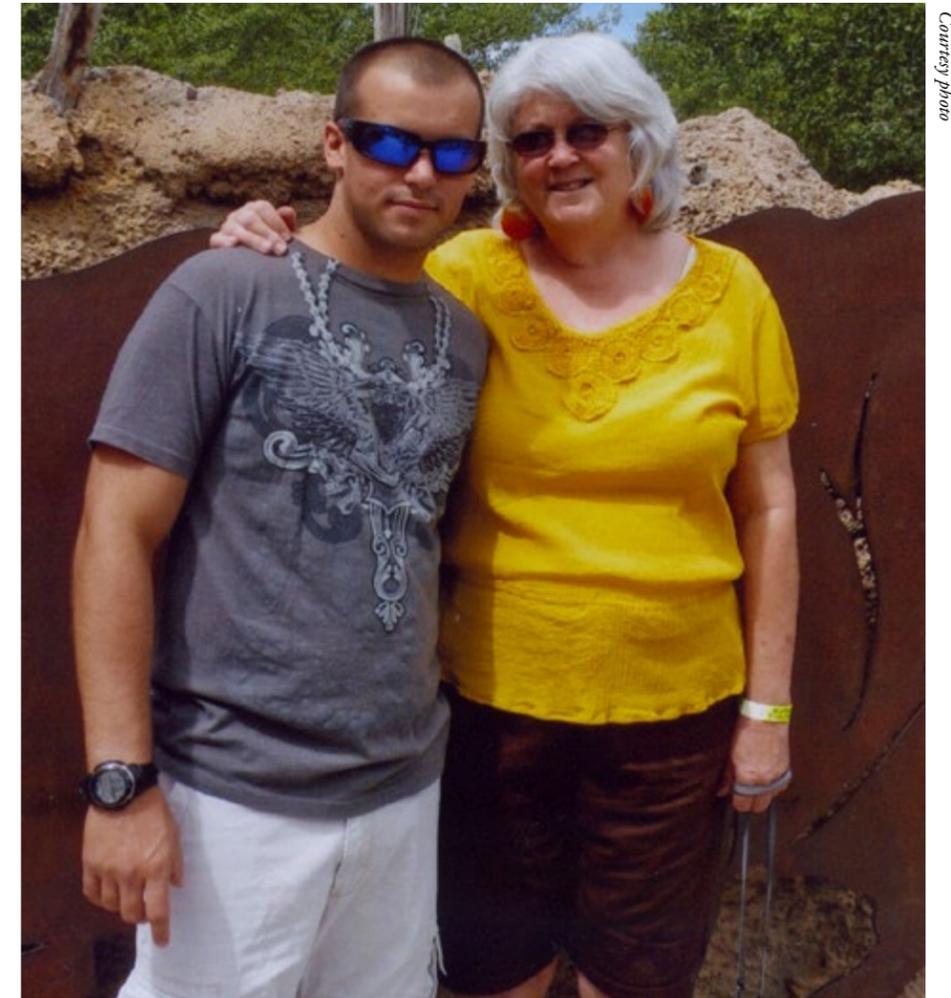
“One of the hardest things I’ve done, but one of the proudest things I’ve done,” Carla said. “When one of your children knowingly puts himself in harm’s way, that’s hard.”

Carla said that it was also difficult for Erin.

“It was hard on everybody, but it was the hardest on Erin,” Carla said. “It was hard on both of them being separated. It just tore her up. They are still, to this day, extremely close.”

When he deployed to Iraq, Seth did his best to keep bad news from his mother when they connected through email, phone calls or letters.

“I’d keep what was going on in Iraq ... I’d keep that to myself,” Seth recalled. “We didn’t want to, I guess, upset each other. We’d stay focused on the mission, and she’d stay focused on the things going on back home.”



Courtesy photo

A Little Faith

By Bob Reinert, USAG-Natick Public Affairs / NATICK, Mass. (May 16, 2014)

It was only recently that Carla learned that Seth had survived an IED attack on his convoy on July 1, 2007 – the day he was promoted to specialist.

“He wanted to protect me,” she said. “I would have rather known.”

Seth said that he thinks she found out last summer, when he discovered that he would need surgery to repair fractures at the top of his spine, which may or may not have resulted from the explosion.

While Seth was deployed, Carla looked in on his wife, Jayme, and their children.

“They serve, too. They’ve sacrificed an awful lot,” Carla said. “I think the one thing that I learned was to let him depend on his wife, more so than me.”

Seth, who is now assigned to the [Operational Forces Interface Group](#) at the Natick Soldier Research, Development and Engineering Center, said that, like his mom, his faith helped him through his deployment.

“I grew up in the church,” said Seth, adding that it “helps you get through things.”

And then there was Seth’s mother and their close connection.

“She was always there for me,” Seth said. “She always sent me care packages and stuff like that.”

Carla had worried that when her son came home from war, he would be a changed man. Was he?

“A little bit, but not much,” she said. “He seems to value things a little bit more.”



Balad to Boston

USARIEM Soldier makes a marathon journey

By Kelly Field, USARIEM Public Affairs / NATICK, Mass. (April 25, 2014)

As he crossed the finish line of this year's [Boston Marathon](#) race, Capt. Craig Thompson took a moment to look around at the thousands of spectators cheering him on and enjoy the moment.

He had accomplished something that six years ago when he was stationed in Balad, Iraq, he would have never thought possible. At that moment, he thought, it was all worth it.

In 2008, then 1st. Lt. Thompson was deployed to Iraq as a platoon leader in the [591st Medical Logistics Company](#). One day a friend encouraged him to run the Boston Marathon Forward, a shadow race of the Boston Marathon that would be run at Camp Taji that April.

Thompson, who had never run a marathon before, thought this would be a great opportunity to stay motivated while deployed, as well as provide an opportunity to check something

off of his bucket list, running a marathon.

"This was something I planned on doing once and then sitting back and being proud of it for the rest of my life," said Thompson, now a medical logistics officer for the [U. S. Army Research Institute of Environmental Medicine](#). "I trained for two months and just remember the day of the race there was nothing to look at but dirt and sand and having to run over and over the same patches of land, as space on the post was limited."

After finishing the race in a time he now considers slow for himself, he felt a determination to do it again and do it faster. "This really kick-started what I am doing now and sparked my passion for running these races," Thompson said.

From then until Marathon Monday 2014, Thompson has gone on to complete eight marathons, two 50-mile ultra-marathons and

Capt. Craig Thompson, a medical logistics officer for the U. S. Army Research Institute of Environmental Medicine, poses with medals he earned for finishing two Boston Marathons. The first was in Iraq in 2008; the second was in Boston in 2014.

an Ironman Triathlon. He said, however, from the beginning the ultimate goal for him was to qualify for and run in the Boston Marathon.

"It's been a goal of mine since the beginning," Thompson said. "Only the most elite runners qualify for the race, so to run in the actual Boston Marathon, to me, it's a big deal."

This goal became even more important after he witnessed the events of 2013's marathon bombing at the finish line. Thompson, who had regularly followed the marathon, remembers watching in horror as the day's events unfolded from [Fort Detrick](#), Md., where he was stationed at the time. His resolve to qualify for the 2014 Boston Marathon became so much stronger.

"I knew I would be in Boston this year and was planning on running it anyway, but suddenly it became so much more special," Thompson said. "I wanted to be a part of the atmosphere this year that told the terrorists, you did not stop Boston. You made us stronger."

Thompson said he could feel that strength and energy from the thousands of racers and spectators who participated in the marathon this year. He said it gave him the boost he needed to finish the race with a qualifying time to run again next year "without a second to spare" at 3 hours, 14 minutes, 59 seconds.

"The atmosphere was amazing, nothing like the sand and dirt in Iraq," Thompson said. "Those last several miles starting at Heartbreak Hill take every ounce of strength you have. Even though I was so tired, the support I got from all the people cheering me on kept me going strong. That is a moment I will never forget."

As Thompson completed his ninth marathon, he said he felt very accomplished. He had achieved something that six years ago, he didn't consider possible. For now, Thompson said he will keep on running. He has his sights set on another Ironman competition in September.

"All of this is about facing challenges," Thompson said. "Being able to accomplish things that I once considered impossible is a tremendous feeling. I feel that if I am determined and work hard enough, I can accomplish anything."



Igniting a Passion for Science

By Kelly Field, USARIEM Public Affairs / NATICK, Mass. (April 25, 2014)

During the April school vacation week, Massachusetts teachers were treated to a preview of the [Gains in the Education of Mathematics and Science](#), or GEMS, program at [Natick Soldier Systems Center](#).

Teachers from a variety of school districts throughout MetroWest in grades six through nine participated in this program, which was created as a collaborative effort between the [U.S. Army Research Institute of Environmental Medicine](#) and the Natick Soldier Research, Development and Engineering Center.

"As Lab Champion of the GEMS program, I was approached with the idea of offering GEMS to teachers so that they can have a better handle on what the students are experiencing through the summer program," said Army Capt. Carrie Quinn, a research physiologist at USARIEM, who also serves as the GEMS program director and co-creator of the GEMS for Teachers program. "So it was a natural fit for me to lead the GEMS for Teachers program."

GEMS for Teachers was created at NSSC and is the first program of its kind aimed at giving middle-school teachers the hands-on op-

portunity to engage in real-world science and to take those experiences back to their own classrooms. At the end of this unique week, the teachers received a Science, Technology, Engineering and Mathematics Kit that had starter pieces for a variety of the experiments they conducted throughout the week, so that they could then implement those experiments in their classrooms.

Quinn also asked the resource teacher and Near Peer Mentors who run the summer program to be a part of this session. In using this format, the teachers could get a real feel for the summer GEMS program for middle-school students, and the mentors gained invaluable lessons in leadership.

"The Near Peer Mentors are in charge of the curriculum and instruction for the summer GEMS program, so it was important that the teachers receive their instruction from the Mentors that are vital to our summer program," Quinn said.

"This way, the teachers could offer tips and guidance to the Mentors, and the Mentors could provide vital insight on what works and what doesn't for each of the lab ex-

periments and what excites the students and encourages the most 'ah-ha' moments relative to other experiments," she added.

Joanna Graham, the STEM outreach coordinator for NSRDEC who co-created the GEMS for Teachers program with Quinn, agreed that the value of this program is in the reciprocity of learning.

"The model set up through the summer program, by design, has middle-school students instructed by high school students," Graham said. "This allows for the middle-school students to learn from Near Peer Mentors close in age to engage the students in the process. This also gives the Near Peer Mentors critical leadership and life skills equally as important as the technical STEM-related skills."

According to Graham, NSRDEC supports the GEMS summer program through tours of the testing facilities on post. Their goal for this session was to equip teachers with the same interactive STEM-related activities that the summer students receive so they can incorporate the experiments into their annual curriculum.

"This week was about offering the highly successful GEMS summer program to middle-school educators of the Commonwealth," Graham said. "There has been so much positive feedback from the middle-school students over the summer that we wanted to take that valuable information and turn it into a teacher training."

Teachers who attended this program said that it was not only entertaining, but it gave them ideas and tools to bring back to their classrooms.

"I really like what you are doing here," said Jackie O'Brien, a sixth-grade teacher at the Up Academy Leonard, a tuition-free Lawrence public middle-school with students in grades six through eight. "My goal as a teacher is to get kids interested in learning and create a passion for lifelong learning. I definitely want to try so many of the activities I learned here."

With all the excitement generated from this GEMS for Teachers session, Quinn is eager to capitalize on the program's popularity and begin the summer session of GEMS.

"Ideally, the GEMS for Teachers program will help us promote the GEMS summer program and expand our enrollment to areas outside of Natick," Quinn said. "This will diversify the student base that we are able to expose to the amazing science we engage in at NSSC."



Soldiers for a Day

By John Harlow, USAG-Natick Public Affairs / NEEDHAM, Mass. (May 5, 2014)

Seventh-grade students at [Monsignor James J. Haddad Middle School](#) started their Civil War studies with Recruitment Day on May 2, when Soldiers from the [Natick Soldier Systems Center](#) participated in the recruitment process by teaching basic drill and ceremony.

The Soldiers, led by Natick's senior enlisted leader, [Command Sgt. Maj. Robert Beausoleil](#), had a great time working with the students.

"I had the pleasure in conducting some community outreach with one of our local middle schools, to teach 67 seventh-graders the basic drill movements in order for them to conduct a re-enactment of Pickett's Charge as part of their educational enhancement of history and military tradition," Beausoleil said. "It has become an annual tradition of the NSSC Soldiers visiting Monsignor Haddad for Recruitment Day.

"It is an awe-inspiring feeling when you can directly impact a child's life through the knowledge of where drill and ceremony originated from and how it was used to infuse discipline within the Armed Forces. To see their smiles and watch them execute basic marching and drill movements was inspirational."

The students responded well to the Soldiers' instructions, and that was the purpose of having them participate in Recruitment Day.

"Today, the average person in Massachusetts has little opportunity to interact with the men and women who serve our country," said Jared Belliveau, a seventh-grade teacher at Monsignor Haddad. "First and foremost, we wanted our students to have an opportunity to meet and interact with our nation's service members. We also wanted them to

become familiar with the basics of close-order drill in preparation for a re-enactment of [Pickett's Charge](#) later this month."

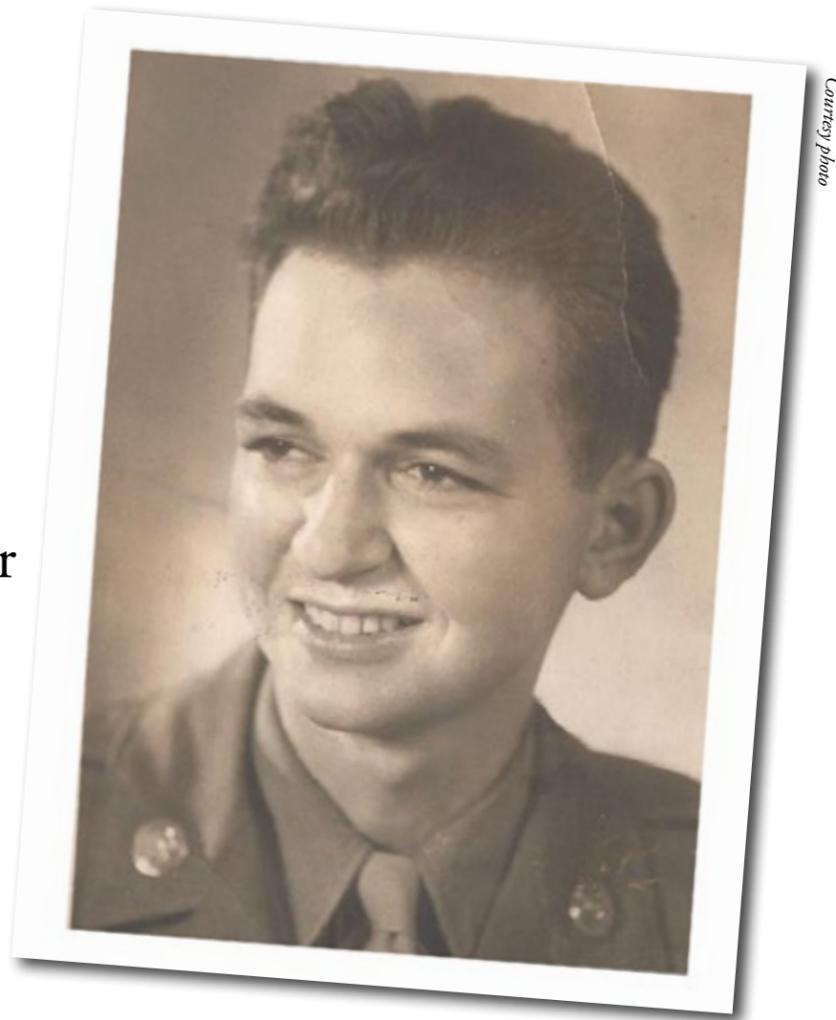
The students learned basic drill and ceremony, and by the end of the morning, they were able to perform right-face, left-face, they marched in formation and carried their weapons (broomsticks) at port arms.

"I learned about some of the personal experiences of people who serve our country, said seventh-grader Daniel Habermas of Needham. "They also shared with us some of the things they are taught during their own training."

The students will conclude their studies of the Civil War with a re-enactment of Pickett's Charge on May 22.

Photos: John Harlow, USAG-Natick Public Affairs

In April 1945, Ellsworth “Al” Rosen and other Soldiers with the U.S. Army’s 36th Infantry Division came across a train that included a number of boxcars. They were unprepared for what they found inside.



Remembering the Holocaust

By Bob Reinert, USAG-Natick Public Affairs / NATICK, Mass. (April 30, 2014)

“The people, they were lying on the floor of the boxcar ... maybe a hundred to a boxcar,” Rosen recalled. “A third of them were already dead. They hadn’t had anything to eat or drink for six days. They were locked in that boxcar.”

Rosen related this and other still-vivid memories during an April 28 Holocaust Remembrance Day Observance at [Natick Soldier Systems Center](#)’s Hunter Auditorium. He told how he and fellow Soldiers helped to liberate one of the 123 sub-camps of the infamous [Dachau](#) on that very day 69 years ago.

“They would take prisoners from Dachau and move them to these sub-camps to work

in various factories,” said Rosen of the Nazis. “And the average life in those sub-camps was four months.

“They worked them to death. They starved them to death.”

What he experienced there made Rosen, who is Jewish, abandon his original goal of making lots of money when he returned home. Instead, he spent his life working for philanthropic organizations. Ten years ago, he co-produced a 20-minute video on the Holocaust.

“Because the memory of the Holocaust was something that I never forgot,” he said.

Rosen showed the video, “Bearing Witness, American Soldiers and the Holocaust,” to the Natick audience. He explained how he had to raise \$100,000 for the production.

“And I must tell you, raising \$100,000 was tougher than combat,” Rosen said. “It was very difficult, but we did it.”

It was a worthwhile endeavor. According to Rosen, the video is still shown in schools across the U.S.

Asked how experiencing the Holocaust aftermath had affected his life, Rosen responded without hesitation.

“It definitely changed my life,” Rosen said. “It changed it dramatically.”

Barbara Joy Hansen, a sexual abuse survivor, spoke April 24 at Natick Soldier Systems Center.

Every 2 minutes a child is molested and every 5 minutes a woman is forcibly raped.

One in every three girls and one in five boys have been violated by some form of sexual abuse.

[Barbara Joy Hansen](#) of Milford hopes those statistics make a mark on soldiers and employees at Natick Soldier Systems Center, whom she spoke to Wednesday.

“Sexual assault is criminal,” she told people gathered in an auditorium at the U.S. Army base. “Please, please tell until you’re believed. Speak out.”

Hansen, a survivor of sexual abuse by a family member and also while attending a church camp, shared her story in a program that coincides with Sexual Assault Awareness Month and Child Abuse Prevention Month.

[Lt. Col. Brian Greata](#), the base’s garrison commander, said he hopes having someone who has personally experienced sexual abuse speak made an impact on those who attended one of the two presentations Hansen made Wednesday.

“It’s no secret the Army has been focused on sexual abuse,” Greata said. “We’re very committed to eliminating sexual abuse of any kind.”

Greata said he hopes Hansen’s presentation encourages people to report any instances of abuse.

Julie Lindahl, the installation’s sexual assault response coordinator, said the program is one of many ways staff reach out to soldiers and civilians. They operate a 24/7 hotline, conduct annual training and run other education programs, among other efforts, she said.

Hansen talked about how her grandfather and a pastor at a church camp abused her and shared stories of other people she has met.

“My friends and I didn’t talk about it until we were adults and so we couldn’t heal,” Hansen said of the abuse at camp.

She talked about post-traumatic stress and panic attacks victims often face.

“You feel abandoned and rejected. ... You feel alone and abandoned,” she said.



Photo: Art Iltis, MetroWest Daily News

Shedding Light on Abuse

Local author addresses Natick audience

By Brian Benson, MetroWest Daily News / Natick, Mass. (April 24, 2014)

In the military, she said, 47 percent of men and 44 percent of women have contemplated suicide for one reason or another.

Hansen, who wrote the book “Listen to the Cry of the Child: The Deafening Silence of Sexual Abuse” about her experiences, gives presentations on her story and speaks to drug addicts.

“My journey is from redemption to purpose, out of darkness into light,” she said.

Hansen recommended victims go to support groups, whose members “help us understand

because we’re all in the same place.”

Hansen said a key to her being able to share her story was learning to forgive, including forgiving the pastor from the camp. She remains married to her husband of almost 49 years despite his past infidelity, she said.

“To forgive is to set a prisoner free and realize the prisoner is you,” she said.

For more information about Hansen and her book, visit [www.listentothecry.org](#).



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