

**MAINEiacs Deploy to Israel CIVIL SUPPORT TEAM** TRAINS WITH AVIATORS

25 YEARS LATER: OPERATION DESERT STORM

COACH OF THE YEAR

MAINE GUARD SOLDIER RECOGNIZED FOR OUTSTANDING PERFORMANCE

**FUEL SWITCHING 101** 

YOUROPINION: SHOULD WOMEN REGISTER FOR THE DRAFT?





## Intro

The Maine National Guard office of Public Affairs is pleased to present the March 2016 edition of the Bayonet Magazine.

The Bayonet is the official magazine of the Maine National Guard and is made possible by Soldier and Airmen provided content and feedback.

This edition highlights some of the incredible accomplishments made by our service members, including a look back at Maine's service during Operation Desert Storm, The Civil Support Team's situational training exercise, the Civil Engineering Squadron's mission in Israel, and much, much more.

If you enjoy the content that is provided in the Bayonet and would like to see more of it, please consider "liking" the Maine National Guard on Facebook (URL is provided next to Facebook logo on this page) where weekly updates and news are shared with the public.

Thank you for your continued interest and unwaivering support to your National Guard. Always Ready! Always There!

-Public Affairs Officer

Maj. Norman Stickney



## the **BAYONET**

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**Front Cover:** The 11th Civil Support Team (WMD) conducted an exercise at Great Pond Outdoor Adventure Center, Great Pond Maine on Tuesday, January 20. The scenario called for the Maine National Guard Unit to send a strike team via UH-60 Blackhawk to a suspicious cabin in a remote location to test for hazardous and potentially fatal biological or chemical weapons. The strike team makes a quick entry followed by the rest of the team for analysis and decontamination. (National Guard photo by Sqt. 1st Class Peter D. Morrison / Released)

**Back Cover:** Spc. Dan Sweetser, 1035th Engineer Detachment Survey & Design Team, is evaluating a casualty by checking for injuries and wounds during cold weather training at the Brunswick Readiness Center. The cold weather, casualty evacuation training is designed to improve combat readiness in all conditions. Casualty evacuation training prepares Soldiers to quickly react and provide aid to a casualty. (UPAR photo by Spc. Sarah Chapman)



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Contents of this publication are not necessarily the official views of the U.S. government, the Department of Defense, National Guard Bureau, nor the Maine National Guard.

All pictures are Maine National Guard photos unless otherwise identified.



Spc. Benjamin Crocker teaches a group of Soldiers from the 251st Engineer Company (SAPPER) combatives skills at the Norway Armory.

Crocker demonstrates the collar choke on Spc. Michael Bleier, a technique taught in the Army Combatives Level one class. The SAPPERs must maintain a high state of combat readiness.

Teaching hand-to-hand combat skills instills confidence in soldiers, while also providing them with techniques that can be used to protect themselves.

(UPAR Submission by Pvt. 1st Class Joseph Smith, 251st Engineer Company (SAPPER))

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## A MESSAGE FROM

## THE ADJUTANT GENERAL

## BRIG. GEN. DOUGLAS A. FARNHAM

"Great people, great mission and we get to do all of this while living in the great state of Maine. Uncertainty and challenges? Absolutely. But I wouldn't trade places with anyone."

am grateful and honored to serve as the 40th Adjutant General for the state of Maine. The honor is representing you, the Airmen and Soldiers of the Maine National Guard. Your hard work and dedication is the foundation for any success we will have in the future.

It is a privilege to lead such an incredible group of Airmen and Soldiers. You are good at what you do, you should be proud. MAINEiacs of the Air National Guard, you already know how I feel-vou rock! But as I've listened to briefings from the Army leadership and heard glowing praise from other Adjutants General, I know the Maine Army Guard has a tremendous reputation as well.

We are good because we have great people who get up in the morning and want to do the right thing. We have no choice, since excellence is our legacy and heritage that has been passed on to us. You are good at what you do, be proud.

Over the last several weeks, I have had time to reflect as I took my last flight in the KC-135 and stood on stage

handing over command of the 101st Air Refueling Wing. It becomes very clear that despite the distractions, the uncertainty and challenges that we face, we are doing something very cool right now.

You need to enjoy and appreciate the moment. Nearly half of our Soldiers have deployed to Iraq or Afghanistan. We continue to deploy Airmen to multiple theaters while remaining operationally engaged every day at home. We are winning environmental awards and establishing "best practices" during inspections.

We have had visits from the most senior leaders in our professions, including: General Frank Grass, Director of the National Guard Bureau, General Mark Welsh III, Chief of Staff for the U.S. Air Force, General Darren McDew, commander for US Transportation Command, Lieutenant General Timothy Kadavy, Director of the Army National Guard, Chief Mas-

ter Sergeant Mitchell Brush, Senior Enlisted Advisor to the Chief of NGB, and many others.

Recently, the 101st Air Refueling Wing's KC-135s flew 20 sorties supporting the 286th Combat Sustainment Support Battalion's training in Vermont – our own Maine Guard Burlington Airlift.

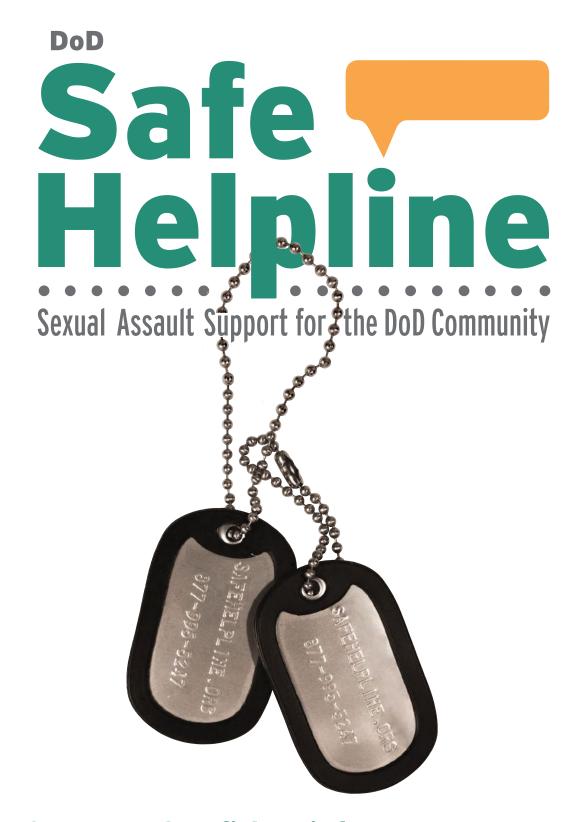
The Future is bright, Maine National Guard. The Total Force is the future. And the Guardboth Air and Army-- is the best value for America with our dual capability supporting both the Governor and President. Great people, great mission and we get to do all of this while living in the great state of Maine. Uncertainty and challenges? Absolutely. But I wouldn't trade places with anyone.

Finally, I will always thank you for choosing to serve.



It is never easy to make the choice as we have been a nation at war for nearly 15 years. It isn't easy on you, your families, employers, or co-workers, but you still choose to serve. Never forget the importance of what you do and the value of your service.

Brig. Gen. Doug Farnham Adjutant General Maine National Guard



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t has been twenty-five years since the "Thunder Run" of American armored units plowed through Saddam Hussein's army, retaking Kuwait, and crushing the Iraqi armed forces in under 100 hours. For the first time since the Korean War, thousands of National Guard Soldiers were called up to take part in the operation. This highlighted the importance of the National Guard as part of the Army's "Total Force" policy, and demonstrated that the Army required this force to undertake a mission of this size.

Headquarters and Headquarters Company, 286th Supply and Service Battalion (Gardiner) and the 3620th Transportation Detachment (Augusta) were mobilized for Southwest Asia. These units deployed to Saudi Arabia where they coordinated the logistical aspects of the invasion. The U.S. military deployed 500,000 combat troops to Saudi Arabia in record time, a logistical feat that demonstrates the need for well-trained Guard units.

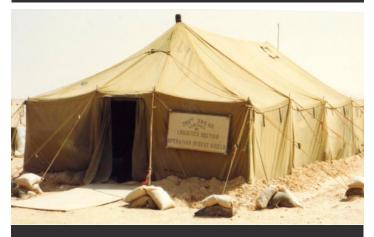
The 286th Supply and Service Battalion, under the command of Lieut. Col. Daniel Haley, received alert of its mobilization on November 11th, 1990 and was ordered to Active service on November 17th. The very next day the unit moved to Fort Devens for mobilization training.

This training lasted a mere six days. The company departed for Saudi Arabia on December 4th, arriving on the 6th. The company's first location was at Dammam (King Abdhul Aziz Seaport) where they were packed in amongst the logjam of equipment, armaments, and personnel arriving for the invasion. Their first mission was to serve as a brigade-echelon support group to move 122 units from the seaport to their tactical assembly areas (TAA). They took control of the 504th Maintenance Company (Active), 1174th Transportation Company (TNARNG), 1158th Transportation Company (WIARNG), and the 1052d Transportation Company (SCARNG).

The 286th moved to its next position of TAA Roosevelt in the rear of the 1st Infantry Division on Christmas morning, 1990. From here they provided transportation and supply support to the 1st Infantry Division, as well as maintaining their own security for their TAA. The air war began on January 17th, 1991. Personnel from the 286th could see the attack formations of Allied aircraft pass over their position on the way to strike targets within Iraq. The 286th took part in the 1st Infantry Division's rehearsals for the actual ground invasion, which was to be preceded by an 87,000 round artillery bombardment.



Soldiers from the 286th Supply and Service Battalion stand next to a Maine flag during Operation Desert Storm, 1991. (Photo courtesy COL Donald agace)



The headquarters tent for the 286th Supply and Service Battalion in Saudi Arabia, 1991. (Photo courtesy COL Donald Lagace)



Soldiers of the 286th Supply and Service Battalion and their subordinate units stand at parade rest during a ceremony with the 159th Corps Support Group, 1991. (Photo courtesy COL Donald Lagace)

n February 14th, the 286th moved forward to its final assembly area at a forward area of the 1st Infantry Division, known as Junction City. There they supported the advancing combat units with their maintenance and transportation needs.

On February 22nd, one of the 5-ton tractor trailers hauling 180 rounds of 155mm high explosive artillery rounds caught on fire when the vehicle's brakes locked up and overheated. The resulting explosion threw thousands of pieces of shrapnel into the air, one of which struck Staff Sgt. Robert Collin of the 286th. The shrapnel was about a foot long and had penetrated his right arm, severing an artery. The quick action of the battalion's acting adjutant, Staff Sgt. Carolyn Robinson, probably saved his life as she applied bandages and pressure to his wound. Medics soon came to the scene and Collins was evacuated to safety, the only casualty sustained by the 286th in Desert Storm

On February 24th, the artillery bombardment began and obliterated all available targets after half an hour. The 1st Infantry Division rumbled forward through sixteen assault lanes with elements of the 286th's attached units following along to provide fuel and maintenance support. The ground war was over in about 100 hours.

During Desert Shield/Storm, the 286th and its subordinate companies hauled 8,305,000 gallons of diesel, 1337,000 gallons of jet fuel, 140,000 gallons of gas, 195,000 gallons of water, 8,614 tons of dry cargo, fifteen M1A1 tanks, fulfilled 3,000 work orders, and logged 918,067 driving miles. The battalion left Junction City on March 23rd, 1991 and left the theater of operations on May 9th. The unit was released from Active service on June 4th, 1991.

The 3620th (thirteen personnel) was ordered into Federal service on August 26th, 1990. It also served in the forward area of operations and received the Meritorious Unit Commendation for its service in coordinating the massive movements of trucks and equipment from the seaport in Saudi Arabia to the forward area of operations.

The 112th Medical Company (Air Ambulance) was mobilized and deployed to Frankfurt, Germany to backfill Active units on service in the Gulf. Headquarters and Headquarters Company, 213th Medical Brigade (HSLD) was mobilized for service in the continental United States.



Sgt. 1st Class Carolyn Robinson receives the Bronze Star Medal for her exemplary service during Operation Desert Storm, 1991. (Photo courtesy COL Donald Lagace)

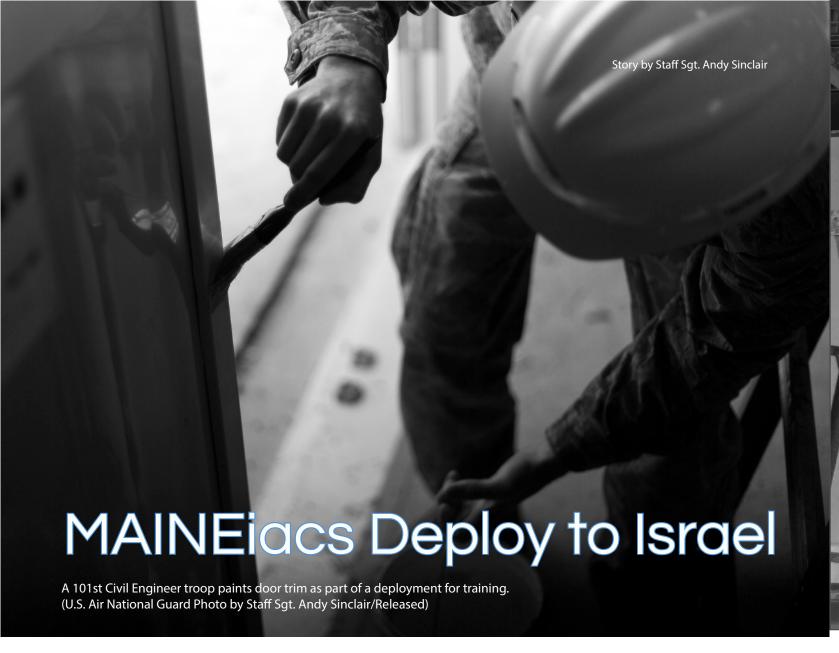
he 286th Supply and Service Battalion and the 3620th Transportation Detachment were both discontinued as units in the mid-1990s. Their lineage was carried on by Battery A, 1-152nd Field Artillery, which is now held by the 185th Engineer Support Company.

Operation Desert Storm demonstrated that the Active Army needed the Army National Guard for large-scale missions. Consequently, mobilizations of Guard units rose following Desert Storm. From 1993-1999, Maine National Guard units would see rotations in Bosnia, Panama, Guatemala, and Kuwait. When the Global War on Terror began in 2001, the Maine Army National Guard stood prepared to provide the Army with trained and ready units.

1st. Lt. Jonathan Bratten is a contributing editor of the Bayonet and serves as the Maine National Guard Historian.

He is always looking for photos, documents, and stories from past and current deployments.

Contact him at: jonathan.d.bratten.mil@mail.mil



he 101st Air Refueling Wing has been all over the world, building a reputation known by all and raising the bar for today's military.

Its Civil Engineering Squadron recently deployed to Israel where the utilization of experienced airmen was implemented to not only exceed mission requirements, but to give airmen a chance to acquire new skill sets.

The Prime Base Engineer Emergency Force (BEEF) MAIN-Eiacs had prepared months before their deployment for training, ensuring they could meet their deployed tasks head on and leave behind finished products that epitomizes the MAINEiac legacy.

Projects included heating ventilation and air conditioning, concrete pouring and maintaining, electrical wiring and

configuration, roofing, metal work, painting, and more.

While project completion paralleled with mission accomplishment, the MAINEiacs prioritized tasks that catered to training the Air Force's most powerful asset; its airmen.

Senior Airmen Dan Day is a structural apprentice with 101st, a job that requires constant learning to strengthen his craft. Day learns a lot from his supervisor by attentively listening and applying the skills he's learned to build a better Air Force.

"It's a great feeling having someone with that much experience right there working with you and teaching you everything he knows so when he leaves you can fill his shoes" Day said.



The vast amount of knowledge the civil engineering squadron bestows to its airmen is not only a critical component for the prime beef MAINEiacs, but to help form today's airmen into tomorrow's leaders. Today's Air Force exceeds the standards as one of the most elite fighting forces in the world, but it isn't until it's airmen are placed in extreme conditions throughout the globe when their training is truly tested.

The 101st civil engineering squadron outperformed expectations, leaving Israel with finished products stamped with the MAINEiac legacy of excellence, and bringing home knowledgeable airmen that will continue to learn from their supervisors so they can meet future challenges with confidence, expertise, and commitment to the mission.





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## THE CHAPLAIN'S WORD

Author Gore Vidal once stated that "half of the American people have never read a newspaper; and half never voted for president... one hopes it is the same half."

At last, we see the beginning of the end; the caucuses and primaries have begun! At last we will no longer hear about what this or that poll said; and have to endure the padded predictions of the pundits. All we have to do is endure the next 9 months of endless adds and then, on November 1st, it will be over, the new president will have been elected and we can relax. Until November 2nd, when they all start running for 2020.

It seems, sometimes, that the continuous election cycle is only there to numb us. The messages get simpler and simpler until a point where they have little real meaning. By the time we go to vote, it feels more like a mindless, robotic task, largely because we just want it to be over – though it never really is.

Love can be like that too. Whether it's love of our families, fiancés, friends, or even of God, we can tend to get into a rut and just go through the motions. The "sameness" of every day can make us

forget the passions that we once cherished. We take each other, we take our God for granted and loose the love that we are playing out.

As Soldiers and Airmen and our families, we tend to be the answer to Mr. Vidal's quote above. We tend to pay attention to policies, their implementation, and the second and third order effects, that others might miss.

Our "attention to detail" and our sense of duty attract us to read the newspapers, to analyze the careers of the candidates, to make an informed, rather than a bored decision. It is our love of our country that often drives this; it is our passion for freedom that maintains this.

Why not in other parts of our lives?

Reading a newspaper, watching the news, reading blogs, analyzing actions all take one thing – intentionality. We have to choose these behaviors, they do not often come naturally. We need to do the same thing with the ones we love. Plan time together; know what the ones you love like to do and do it with them, tell them that you love them, participate in each other's lives.

And oh, by the way, if you have a faith, renew it; let God know you love Him too. Be the half that reads the newspapers and votes – not only in the elections, but in all aspects of life.

"Half of the American people have never read a newspaper; and half never voted for president... one hopes it is the same half."

-- Gore Vidal, Author

Chaplain (Col.) Andrew Gibson Senior Army Chaplain Maine Army National Guard



It was the largest mobilization of the National Guard since the Korean War 40 years prior, and the first large-scale combat mobilization for the reserve component since the Vietnam War. This month the National Guard reflects on the more than 75,000 Guard members who were mobilized or deployed in support of Operation Desert Storm, which began 25 years ago.

Offensive air operations involving the National Guard began Jan. 16, 1991, when pilots from the New York and South Carolina Air Guard took part in the first waves of the conflict, which resulted from the August 1990 invasion of Kuwait by the Iraqi army. By late February, more than 62,000 Army Guard Soldiers from 398 units had mobilized with more than half of them serving in the Persian Gulf.

Guard units also took part in the ground offensive that ended Feb. 28, but helped with the task afterwards of securing and cleaning up Kuwait, which had been devastated by months of Iraqi occupation and the Allied air and ground offensives. Both Army and Air Guard units began returning home in April and by the end of September 1991, only a handful of Guard units remained overseas. The impact of its role, however, would have lasting effects for the National Guard.

### AIR GUARD IN SUPPORTING ROLES

Desert Storm was the first time in Air National Guard history where most who mobilized or deployed were from non-combat and nonflying units – units like medical squadrons, security forces and firefighters, said David P. Anderson, director and chief historian with the Air National Guard History Office.

"Some went overseas and some stayed home to back fill, or they went to Europe to back fill active duty units that were leaning forward," Anderson said, adding the Air Guard mainly provided airlift, air refueling and special operations capabilities during the conflict. "We also had two fighter squadrons and a reconnaissance squadron that went over," he said.

In total, Anderson noted, 12,404 Guard Airmen entered federal service during Operations Desert Shield and Desert Storm. Of that number, 5,240 deployed to Southwest Asia while another 6,264 served in the continental U.S. The remaining 900 were assigned to Europe and other overseas locations, he added.

"Initially, Air Guard volunteers had concentrated on airlifting as well as flying air refueling, reconnaissance, tactical airlift, and special operations missions," Anderson said. "The early surge of volunteers helped the Air Force meet its operational commitments while the President built political support for his Persian Gulf policies."

Regardless of their mission, Air Guard units went out the door trained and ready to go,

thanks in large part to the Total Force concept, said Anderson.

"Desert Storm not only validated the Air National Guard's relevance as a member of the total force, it validated this entire Total Force policy where the training and the equipment of all the organizations was supposed to be on par. Desert Storm was the first time we demonstrated the Air Force's ability to send all three components into combat," he said.

Air Guard members also served in support roles outside of the Persian Gulf to meet the needs of the Air Force, who had pulled personnel from Europe to serve in the Gulf.

Several Air Guard members deployed as individuals and not as units, which is an interesting element of Desert Storm, according to Anderson.

"We always expected to go as a unit," he said, "but we were sending individuals or a group of individuals, plus the equipment, to meet whatever requirements were asked for."

Many of those individuals volunteered as well, said Anderson.

"Volunteerism, or the 'silent call-up,' allows for the flexibility to fill the short-term needs wherever they are needed," he said, noting it is a common practice even today. "It gave a lot of flexibility to not only the warfight, but also the individual."



Looking back, Anderson credits much of how the Air Guard operates today with the Total Force policy and volunteerism that began in the early '70s.

"I think the active duty Air Force and the Guard have always had a really good relationship," he said. "When we arrived for Desert Storm, they saw that we were showing up and ready to go," he said. "We went over there, we integrated with the active duty forces and operated without any hiccups."

Anderson credits the tremendous performance of the Air Guard then with how much the component is relied upon today.

"As a result, you're now seeing more and more Guard units being deployed and tasked to do these real-world operations."

### THE ARMY GUARD CONTRIBUTED

After the Iraqi invasion of Kuwait, the Army made clear its plans to incorporate the Army Guard, which stood ready, into the warfight.

"The word went out and states immediately put people on orders because they knew something was coming," said Army Lt. Col. Jeff Larrabee, the chief of historical services at the National Guard Bureau. "We were just in the process of getting ready, not knowing what was happening, but that there was probably going to be a need for the forces."

Larrabee said much like the Air Guard, the Army Guard provided some combat arms units, but primarily provided combat support units.

"Army Guard units deployed included two

field artillery brigades, engineers, hospitals – a lot of logistics types – military police and some transportation units," Larrabee said. "They were all heavily engaged and integrated into the regular forces, whether they were supporting U.S. or allied divisions."

What was needed, according to Larrabee, was artillery.

"The Army did have a need for corps artillery, non-divisional, heavy, eight-inch stuff, which the Army Guard had a lot of," he said. "We also had a Multiple-Launch Rocket System battalion in the Guard – there were only three in the Army at the time – and all of those participated in Desert Storm."

Like the Air Guard, the Army Guard changed too. That change began in August 1990 when the Iraqi army invaded Kuwait and the U.S. began the buildup to Desert Storm.

"I think the biggest thing – you probably won't see this written down anywhere – is that it changed the training dynamic because it was happening at the end of the fiscal year and the end of the annual training period. Some units were actually at annual training at the time and suddenly it injected a higher level of seriousness," he said.

"It was huge for the Guard as a whole," Larrabee added. "As part of the Army and as part of the Air Force, it validated the Total Force concept."

Desert Storm not only validated the Guard and the total-force concept, it changed the perception of the Army Guard.

"The fact that we were mobilized in large numbers and performed effectively as part of the Army helped to change the perception of the Guard from the Vietnam era," Larrabee said.

The American public was also seen as the driving force behind much of that perception change, he continued.

"There were very public ceremonies and sendoffs ... and a huge public awareness of the supposed threat that the Iraqi army posed. Everyone was keenly aware of what we thought we were up against, but the fact that we mobilized so many Guard members from across the country characterized the difference between the Gulf War and Vietnam."

It also led to more consistent use of the Army Guard, which led to higher readiness and a better posture when 9/11 occurred and beyond, Larrabee said.

"Desert Storm changed the Army's thinking and focus on how they were going to use the Guard and Reserve in the future. It changed the training dynamic in the '90s and how we thought about unit prioritization. There was more empowerment of the Guard as a whole."

Looking back, Larrabee observed, the National Guard finds itself repeating history.

"The timing is right to remember Desert Storm," he said, "because as the U.S. military is downsizing again, we're facing a lot of the same questions, like 'how do we get the best defense for the U.S.?'That was the big question in the 1990s. The Guard's performance during Desert Storm ensured that the Guard was going to be part of the answer."

Members of the 101st Air Refueling Wing stand in formation during an assumption of command ceremony for U.S. Air Force
Col. Adam Jenkins as he takes command of the wing during a ceremony held at the 101st Air Refueling Wing, Bangor Maine, Feb 6, 2016.

During the ceremony, the unit flag is handed off symbolically indicating to all, his authority as the commanding officer.

(U.S. Air National Guard Photo by Master Sgt. Jon Duplain/Released)











Gov. Paul R. LePage administers the oath of office to Brig. Gen. Douglas A. Farnham as Maine's 40th Adjutant General and Commissioner of the Department of Defense, Veterans and Emergency Management at the capitol building on January 20, 2016.

Farnham recently served as the 101st Air Refueling Wing commander and has 31 years of service to our Nation.

Farnham replaces Brig. Gen. Gerard F. Bolduc, who served as acting Adjutant General since March 2015.

(US Army National Guard Photo by Sgt. 1st Class Peter D. Morrison / Released)





ccessing a remote cabin in the woods of Maine after a suspected terrorist, domestic or otherwise, has been hiding out there could pose a dangerous situation for local law enforcement. That's where the 11th Civil Support Team (WMD) comes in.

The 11th CST conducted an exercise at Great Pond Outdoor Adventure Center, Great Pond Maine on Tuesday, January 20.

The mission of Civil Support Teams is to support local and state authorities at domestic WMD/NBC incident sites by identifying agents and substances, assessing threats, advising on response measures, and assisting with requests for additional military support.

This scenario called for the Maine National Guard Unit to send a quick reaction team called a strike team via UH-60 Blackhawk to a suspicious cabin in a remote location to test for hazardous and potentially fatal biological or chemical weapons.

"We provide peace of mind for the people of Maine. We are a quick strike first responder, within 90 minutes the 11th CST can be out the door and anywhere in the state in just a few hours," said 1st Sgt. Matthew Aseplund, noncommissioned officer in charge of the CST.

Fighting the bitter cold on Great Pond, Aseplund said it was important for them to be able to train in all conditions, "If we can do it in tough conditions like this we can do it in any condition, whether it's 75 degrees and sunny or 15 degrees with 30 miles per hour winds in a remote location.

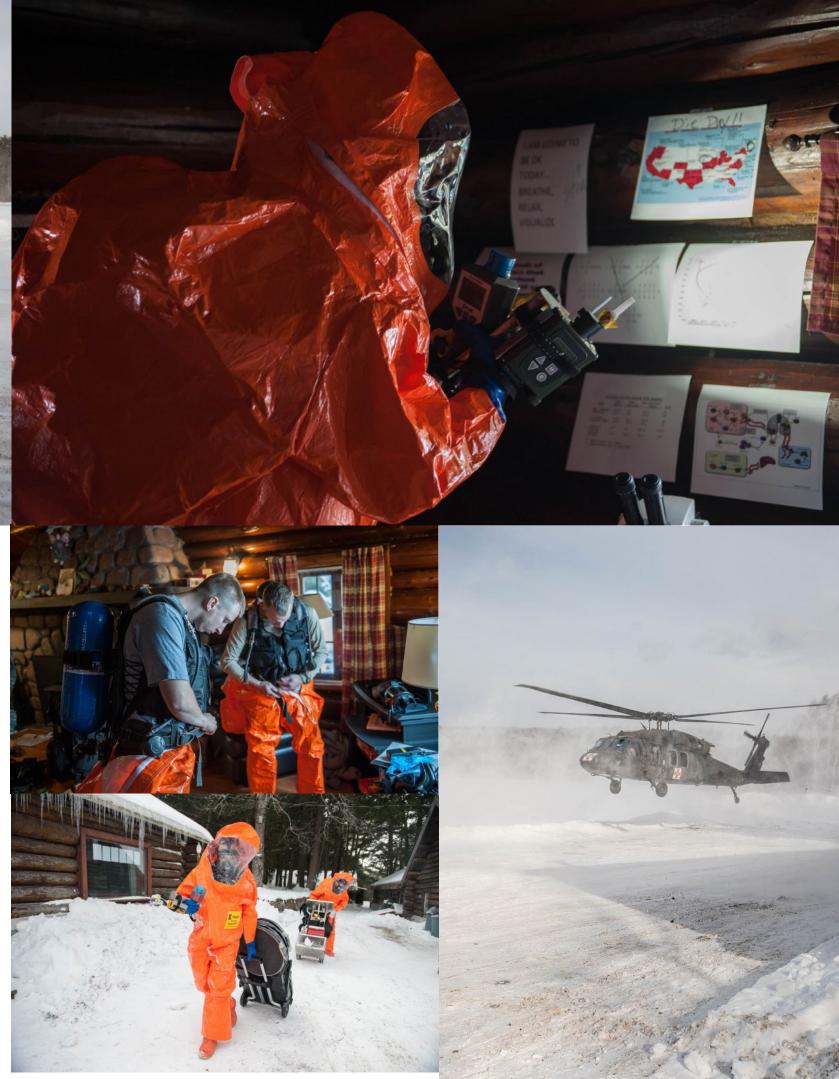
Maine Army National Guard Aviation worked with the CST to insert the team on the edge of the frozen pond. The strike team prepared and made a quick entry to assess the initial hazard. They were followed by the rest of the team who convoyed from Waterville for follow on support including analysis and decontamination.

The 11th CST consists of National Guard Soldiers and Airmen, who work on a full-time duty status. The unit consists of six sections: command, operations, administration/logistics, medical/analytical, communications, and survey. The team is required to maintain a level of readiness that will allow for a rapid response within established timelines.

**Above:** Members of the 11th Civil Support Team unload equipment from a UH-60 Blackhawk helicopter during a winter training exercise. The exercise enabled the team to practice aerial insertion of their quick reaction team in severe conditions.

**Opposite Page:** Members of the 11th Civil Support Team don their protective suits and move out to their objective in frigid conditions.

A UH-60 Blackhawk helicopter conducts a landing on the shore of Great Pond.



## FUEL SWITCHING 101

By AJ Ballard, Certified Energy Manager

f your existing heating system is over 15 years or older then you should consider replacing the system because you will most likely save between 15 to 40% or more in energy use! The Maine Army National Guard saved over 30% in energy use by switching fuels and replacing the boiler in a 20,000 square foot band building in Bangor, Maine in November 2014.



In the summer of 2014, an energy audit was conducted for the band building and the following building elements were looked at:

- Building envelope, which includes the windows, doors, siding and roofing.
- Insulation values for the foundation, walls and attic/roof areas.
- Heating Ventilation and Air Conditioning systems such as boiler, furnace, distribution (ducts or piping) and the fuel type which was fuel oil.

The results of the energy audit showed that the "oil fired" boiler was over 20 years old, oversized and inefficient. The distribution systems, which included baseboard radiators and forced hot air duct work was in good shape and the building envelope was in excellent condition.

In the early 2000's the Band Building had an insulation system installed over the brick exterior that consisted of four inches of foam insulation (approximately R-24) that was covered with a plaster type finish. This system is commonly known as "EIFS" – Exterior Insulated Finish System. Many facilities in the Maine Army National Guard inventory have this type of energy efficient system installed.

Once it was determined that the boiler was oversized and approaching the end of its useful life, the decision to replace it was made. Heat loss calculations for the building were completed and showed that a new boiler for the building could be reduced in size by 40% to 50% due to the EFIS that was installed in the early 2000's. It was determined that in-house HVAC personnel would install the boilers and we would "fuel switch" from fuel oil to natural gas.

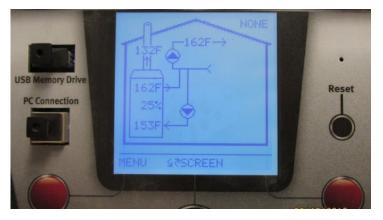


Old fuel oil boiler that burned 11 gallons per hour.



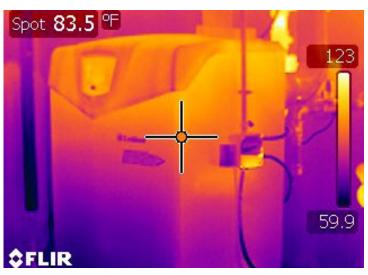
New high efficient gas boilers that burn between 1.5 to 3 gallons of fuel oil equivalent an hour each.

The screen below is from the new high efficient gas boilers. As you can see on a February day the boilers are only firing at 25% (about 1 gallon per hour of fuel oil equivalent each) of their capacity and supplying hot water



at 162 F to the building radiators.

The infrared picture below shows the efficiency of the new boilers with



minimal heat loss through the boiler jacket.

The new boiler went on line in November 2014. This team effort was led by Eric Dumont and Richard Webber, DFE's boiler and HVAC technicians along with other DFE personnel (Go Army DFE!). This effort resulted in approximately 30% in energy savings and 50% in energy cost savings. In order to compare fuel oil to natural gas to determine the savings, you must first convert both fuels into British thermal units (Btu). Once they are in the same units it is easy to compare and for the Band Building the MEARNG saved 30% in fuel use, just under 400,000,000 Btu for the FY15 heating season.

The energy savings were 30% and the energy "cost" savings was over \$15,000 or 50% for the FY 2015 heating season as indicated in the table below:

"Fuel Switching" Savings				
FY14 Fuel oil cost	\$30,619			
FY15 Natural gas cost	<u>\$15,283</u>			
Savings	\$15,336	50%		

Convert Fuel Oil and Natural Gas to MMBtu for Savings Comparision					
	Units	Quantity	Btu per unit	Btu	
FY14 Fuel Oil - gallons	gallons	9,713	136,800	1,328,738,400	
FY15 Natural gas - therms	therms	9,310	100,000	931,000,000	
Savings				397,738,400	30%

As you can see by evaluating a facility in a methodical manner you can make decisions regarding heating equipment that results in significant savings. The cost to install the boiler was approximately \$65,000 and this resulted in just over a four year pay back for equipment that has a 15-20 year lifer cycle. Most importantly, if the boiler had failed in the middle of the winter then the typical approach would be to replace it "in-kind", which would be a unit similar in size. Of course the unit would be more efficient, but it would still be over sized and would likely "short cycle" on and off because it is oversized, which results in a shorter life cycle.

This approach can be applied to your home heating system as well. The table below compares the heating cost of various heating options for a typical 10-15 year or older 2,500 square foot home in Maine. Fuel oil and propane each have two line items for cost comparison, the first is the current cost per gallon and the second is the reality long term estimated cost.

Comparision of Heating Fuels for a Typical 2,500 SF Maine Home						
	Fuel use for Avg home per year (enter Btu from below)	Fuel unit	Avg cost per fuel unit	Avg yearly home heating cost		
2,500 sf home	100,000,000					
Fuel Oil	877	gals	\$1.45	\$1,272		
Fuel Oil (long term)	877	gals	\$3.00	\$2,632		
Kerosene	891	gals	\$3.50	\$3,119		
Electricity	30,851	kWh	\$0.15	\$4,628		
LPG	1,326	gals	\$1.80	\$2,386		
LPG (long term)	1,326	gals	\$3.50	\$4,639		
Natural Gas	1,176	Therms	\$1.30	\$1,529		
Wood Pellets	7.4	Tons	\$225.00	\$1,654		
Seasoned Cord Wood	6.5	Cords	\$250.00	\$1,623		
Coal	5.0	Tons	\$330.00	\$1,650		
Average home use between 25,000 - 40,000 Btu per square foot a heating season						
1000 sf home x 40,000 Btu/sf = 40,000,000 Btu year						
1500 sf home x 40,000 Btu/sf = 60,000,000 Btu year						
2000 sf home x 40,000 Btu/sf = 80,000,000 Btu year						
2500 sf home x 40,000 Btu/sf = 100,000,000 Btu year						
3000 sf home x 40,000 Btu/sf = 120,000,000 Btu year						

The table below shows the typical efficiencies for a heating system that is 10 years or older.

Efficiency Of Heating Unit					
	Input (gross) Heating Value		Standard Efficieny of the Burner	Output (Net) Heating Value	
Fuel Oil #2	139,000	Btu/gal	82.0%	113,980	Btu/gal
Kerosene	132,000	Btu/gal	85.0%	112,200	Btu/gal
Electricity	3,412	Btu/kWh	95.0%	3,241	Btu/kWh
LPG	92,000	Btu/gal	82.0%	75,440	Btu/gal
Natural Gas	100,000	Btu/Therm	85.0%	85,000	Btu/1000 CF
Wood Pellets	17,000,000	Btu/ton	80.0%	13,600,000	Btu/ton
Seasoned Cord Wood	22,000,000	Btu/cord	70.0%	15,400,000	Btu/cord
Coal	25,000,000	Btu/ton	80.0%	20,000,000	Btu/ton

**Download the workbook** to check your own numbers by visiting: http://www.me.ngb.army.mil/resources/docs/fuel-switching-calcs.xls

A.J. Ballard is a Certified Energy Manager and is a contributing editor of the Bayonet. He serves as the Maine Army National Guard Energy Manager within the Directorate of Facilities Engineering.



Maine Army National Guard Soldier led Skowhegan High School Wrestling team to Class A Championship, the first North (East) school to win the title since 1989.

Sgt 1st Class Tenney Noyes, operations noncommissioned officer, 136 Engineer Company (Vertical) was awarded the Kennebec Valley Athletic Conference Coach of the Year at the championships held at Cony High School.

Noyes is a homegrown Skowhegan wrestler, competing with Skowhegan high school until his graduation in 2000 heading to college and deciding to join the Maine Army National Guard. While he would humbly call himself a good wrestler, his true skills have been found in coaching others.

"I would help out with the middle school program, I was a junior in high school and I would go down and help out with practices," said Noyes.

During college he stayed with the sport and officiated matches and did some coaching at Skowhegan until 2006 when he became the head coach.

Col. Hamilton Richards, and the coach of Mount View high school, a past recipient of the Coach of the Year Award is impressed with the way Noyes has fit into the role and developed a first-class program. "They have gotten Skowhegan to the forefront, the past few years

they have been developing a team, filling the weight classes, giving them different wrestling opportunities. They have really improved the program," said Richards.

"It's not like they just got lucky and had a phenomenal bunch of kids, they have been grooming these kids, working hard to fill the program and the kids who have talent they are making sure they are getting exposure to other quality wrestlers. This is a concerted effort."

Noyes is quick to point out that it's a team effort, and that they are a close knit group. "It's a family environment in wrestling, it's a real tight knot group it's a real bond that you grow, it's similar to the bond you grow on deployment. When you're getting the crap beat out of you day in and day out you get to know who is going to be there right next to you."

Much like senior leaders in the military need to connect with junior Soldiers, he and his other coaches look to their leadership skills to develop athletes.

"You need to have those good leadership skills to be able to coach of 20 to 25 teenage boys, you have to know your audience and how to cater to each one in order to get the best out of them," said Noyes.

"You have to know the person just like you have to know the Soldier. Everyone has different motivation, you have to know how to draw off that and pull the right strings in order to get their best.



That wrestling family seems to stretch far in the Maine National Guard, Command Sgt. Major for the 52nd Troop Command John Martin, has been a coach at Cony High School and officiates high school wrestling matches and wrestled for Dirigo high school in Dixfield. He speaks highly about Noyes both professionally and as a coach.

"It's kind of a chicken and the egg situation here, which comes first? He started out as a young man athletic and mentally tough, but I am sure that lessons learned through his professional education has given him the tools he needs to take to the coaching room as well as the lessons he has learned on the wrestling matt as tools to use with young Soldiers," said Martin.

"He is a tactical coach. He is very good at organizing his team and putting them in the best situation to have success. Some of that probably comes from his experience in the military," said Martin.

Noyes hopes he is leaving a positive mark with his athletes and they learn not just wrestling skills but life lessons.

"It's not just about winning, you hope to see improvement every day, someone who keeps coming back and working harder and stronger especially after a loss. I hope we are teaching them that hard work is needed in every aspect of your life. We stress the importance of hard work will get you to where you need to go in life, whether that be in college, job, relations or with a parent, everything."

Right now it seems Noyes, the coaching staff and the Skowhegan wrestlers' hard work has paid off and they have a little something to be proud of.

"It's nice to be recognized for hard work, it's very humbling, and for the athletes to be able to say they were the first team in history to win a championship for Skowhegan is pretty awesome," said Noyes.

#### **Image Legend**

**Left:** Sgt. 1st Class Tenny Noyes (background) provides encouragement to his wrestler after scoring points for a take down. Noyes, an Army National Guard NCO has been involved with coaching for over 10 years.

**Right:** Noyes congratulates a member of his wrestling team after a match during the state championship tournament. Noyes lead his team to their first state title since 1989 and was named "coach of the year".

Noyes poses with his family at the conclusion of the tournament.

## RECRUIT SUSTAINMENT PROGRAM SOLDIER OF THE QUARTER





What are your goals?

Steadily take on more responsibility, challenge myself and becoming a better leader.

#### What are your future plans?

Attend Universal Technical Institute (UTi) in Norwood, Massachusetts to study automotive and diesel technology.

#### Why did you join the Maine Army National Guard?

I always considered the military, but never explored opportunities until a recruiter approached me in my high school and discussed how you could serve on a part time basis. The idea appealed to me because I had personal goals that I could achieve and still serve.

## What advice do you have for someone getting ready to go to Basic Training?

Everything done at Basic Training has a reason and a purpose, even if at the time it doesn't appear obvious. Remember that and you will succeed.

#### Did you know:

Private 1st Class Fraser graduated his military training as the Distinguished Honor Graduate. An honor reserved for the top graduate of each class based on leadership, academics and physical fitness.

Name: Connor Fraser

Rank: Private First Class, E-3

Military Occupational Skill: 15G, Air Craft

Structural Repair

**Unit:** 224th Aviation Company, Bangor, ME

**Basic Training Location:** Fort Jackson, SC

Advanced Individual Training: Fort Eustis, VA

Hometown: Searsport, ME

**High School:** Searsport Hich School, Class of 2015

**Hobbies and Interests:** Hunting and Fishing

## **HOW WILL YOU USE YOUR MOMENTS?**

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# YOUR OPINION FEEDBACK FROM THE FIELD

## SHOULD WOMEN BE REQUIRED TO REGISTER FOR THE DRAFT?

THE BAYONET TOOK TO THE STREETS TO ASK A FEW SERVICE MEMBERS WHAT THEY THOUGHT OF WOMEN BEING REQUIRED TO REGISTER FOR SELECTIVE SERVICE NOW THAT THE DEFENSE SECRETARY HAS DIRECTED COMPLETE GENDER INTEGRATION IN ALL BRANCHES OF SERVICE AND ALL UNITS.







think it is important for young Americans to enroll as a reminder that they are citizens in this great country. If it ever came to where they were needed and were called to serve, I believe they would feel the same sense of pride when wearing the uniform and their service to their country.

think they should. I don't know much about the political implications of changing the selective service requirements, but it could give people a better understanding of what the military does and a sense of structure.

veryone should have to sign up, but people who are eligible does not necessarily mean that they are fit for duty. What makes our military great is that we are an all-volunteer service that is built of professionals who want to serve and strive to be the best at what they do.

