



NORTHERN STRIKE 2021

MICHIGAN'S NATIONAL ALL-DOMAIN WARFIGHTING CENTER



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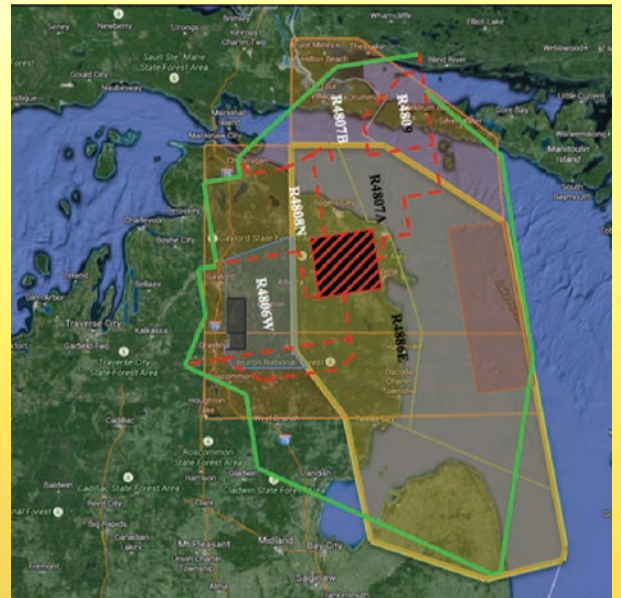
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NORTHERN STRIKE

The Michigan National Guard (MING) began hosting NS in 2012 and it has since grown into a large joint, multi-national exercise program. The exercise provides participating units a chance to conduct robust and relevant scenario-based, full-spectrum readiness training and complete mission essential tasks. Michigan's Northern Strike exercise is an Army and Air National Guard sponsored, Joint National Training Capability (JNTC) accredited exercise providing readiness-building opportunities for all services.

In addition to the military participants, a contingent of attendees are focused on innovation and technological improvements. Members of military research agencies and industry partners plan to address challenges across the spectrum of military operations including artificial intelligence, software and communication improvements, automated equipment, and space operations.

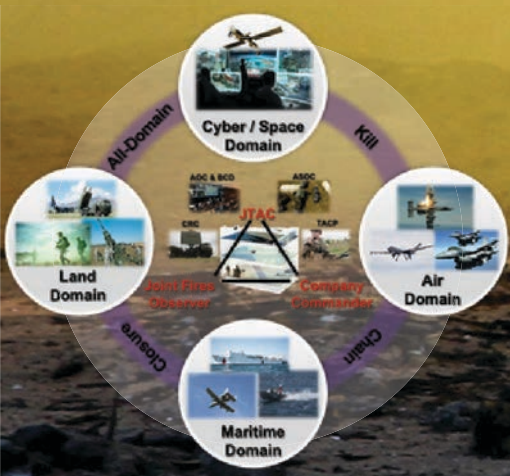
JOINT AREA OF OPERATION



NATIONAL ALL-DOMAIN WARFIGHTING CENTER

The National All-Domain Warfighting Center spans Michigan's Northern Lower Peninsula, encompassing the capabilities of the **Camp Grayling Maneuver Training Center** and the **Alpena Combat Readiness Training Center** and their combined ranges and airspace. This system of training areas is the premier location to replicate the future operating environment, offering integrated training across all domains.

What sets the NADWC apart from all other training venues is the ability to build readiness capacity for all warfighting functions in a contested multi-domain training environment that enables combined joint integration at echelon.



CAMP GRAYLING MANEUVER TRAINING CENTER:

- Division-level Command & Control Capable
- Cyber Capability, connected to Merit Network
- Air to Ground Range
- UAS Training and Ranges
- Simulation Center
- 147,500 Acres, 43 Live Fire Ranges
- State of the Art Urban Training Facility
- Housing for >8,000 Personnel
- Army Airfield
 - 2x 5,000' Runways
 - C130 Capable
- Multi-Spur Rail Head
- Tank Ranges



ALPENA COMBAT READINESS TRAINING CENTER:

- 17,000 Square Miles of Charted Special Use Airspace
- 23 x Special Activity Areas, ranging from 300' AGL to 50K' (includes SR, VR, MOA, RA, ATCAA, AR)
- Air Gunnery Range for training, full-scale and live ordnance
- 1000 Sq Mile Maritime Restricted Area (Lake Huron training range) with large-footprint Ordnance Capability
- 3x Joint Threat Emitters
- Capability for all DOD UAS training
- 9000' & 5000' Runways
- Lodging for >1,000 personnel
- Rogers City Calcite Quarry – Littoral and land-based Full Mission Profile Area (Off-Range, Realistic Military Training (RMT) area provided on private property)



2021 TRAINING AUDIENCE



SUSTAINMENT



36TH SUSTAINMENT
BRIGADE SETS UP
SHOP



ARMY FUTURES
COMMAND VISITS
36TH SUSTAINMENT
BRIGADE



294TH QM LOADS
C-130



RESUSTAINMENT
CAPABILITIES
DEMONSTRATED



127TH MG ENSURES
MISSION READINESS
OF A-10
THUNDERBOLT II
AIRCRAFT



SUSTAINMENT
OPERATIONS B-ROLL



CAMP GRAYLING, Michigan-- Seventy-percent of Earth is covered in it; sixty-percent of the human body is made of it; it is responsible for weather patterns and preserving ecosystems; and, it is a necessity for humans to consume and clean. Yes, it's H2O.

Water purification specialists assigned to the 1034th Composite Supply Company, 185th Combat Sustainment Support Battalion, Iowa Army National Guard, are in place at Base Camp Hawkeye producing and providing this vital resource to all participating units in support of the Northern Strike exercise.

U.S. Army Sgt. Elizabeth Scheer, the water purification non-commissioned officer in charge of the water point located at Howe's Lake, says that the process to begin producing clean water, choosing an appropriate site, is imperative.

"We conduct a water reconnaissance prior to selecting a water purification site," said Scheer. "We test a site for total dissolved solids, turbidity and pH levels to ensure we select a suitable site to purify our water. It's also important to identify a site close to the water where our tactical water purification system (TWPS) can sit. It needs a flat area to operate properly, no more than ten degrees one way or another."

After the source has been selected as an appropriate place to produce water, it's time for the eight water purification specialists at Howe's Lake to get to work. Scheer says that the process can be complicated and lengthy.

"We first emplace the strainer, which receives the water from the source and then feeds into the raw water pump," said Scheer. "From there, the micro-filtration pump takes the water from the micro-filtration system through the reverse-osmosis process, removing all the impurities and gunk from the water. We then add chemicals to the water to include chlorine to kill and remove any bacteria before we send our water out."

Reverse osmosis is a water purification process that uses a partially permeable membrane to separate ions, unwanted molecules and larger particles from drinking water. Although it may seem like the process can be time consuming, Scheer says that once the TWPS is up and running, they can produce incredible amounts of clean, potable water.

"The TWPS can produce up to 15,000 gallons of water from a freshwater source," said Scheer. "We have four load handling water tank racks (HIPPO) that each hold 2,000 gallons that we use to deliver water across the Northern Strike area of operations. We also have three bladders on site that hold 3,000 gallons each that we can service our customers' water buffaloes and other small water requests."

DELIVERING IN THE CLUTCH

1034th CSC Provides Clean Water to Northern Strike

08.08.2021

Sheer added that so far, they estimate that 30,000 gallons have been distributed across Base Camp Hawkeye and other areas throughout the Northern Strike area and could be expected to produce an estimated 100,000 gallons of water by the end of the exercise.

Other than the obvious life-sustaining purposes for clean water such as drinking water and water used for cooking in the field kitchens, one of the largest needs for bulk, clean water comes from the 126th Quartermaster Company, Illinois Army National Guard, also participating in Northern Strike.

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"This laundry system only disposes seven gallons of water per load completed," Sears said. "Not only that, but the remaining water will be recycled throughout the system itself and refill. We can operate ten hours before an hour of maintenance is required on this system."

Sears has been a shower, laundry and clothing repair specialist for his entire eleven year career in the National Guard. He says that although the job can be thankless at times, coming to culminating training events such as Northern Strike makes it all worth it.

"You don't really see the appreciation for our craft until you see the morale of the Soldiers on ground change," said Sears. "After hot days and working hard, it is obvious these Soldiers are very appreciative of the services we provide."

Northern Strike is a joint forces, multi-component, multinational exercise designed to build readiness and enhance interoperability with coalition forces to fight and win, held July 31, 2021 through Aug. 14, 2021.

The exercise provides sustainment brigade and support battalion commanders with a low-cost exercise that stresses staff interaction, planning and decision-making allowing units to practice their core mission of sustainment in a realistic, constructive training environment.



36TH SUSTAINMENT BRIGADE CONDUCTS SUCCESSFUL RE-SUSTAINMENT AIRDROP AT NORTHERN STRIKE

08.12.2021

SELFRIDGE ANBG, Mich.-- This year's Northern Strike exercise featured something not done in years past: Humvees dropping from the sky.

The 36th Sustainment Brigade, Texas Army National Guard, successfully executed a heavy airdrop at the Camp Grayling Joint Maneuver Training Center, in Grayling, Michigan, during Northern Strike 21-2.

The exercise provided the brigade with excellent training opportunities to validate their specialized skills preparing them for their upcoming deployment. For parachute riggers, that meant dropping things like Humvees safely from the sky.

The operation necessitated 2 C-130 Hercules aircraft from the 182nd Air Wing, Illinois Air National Guard, providing simulated intra-theater airlift for Northern Strike. The two cargo aircraft took off from Peoria, Illinois, and landed at Selfridge Air National Guard Base, Michigan.

From there, the 294th Quartermaster Company from the Texas Army National Guard conducted rigging of two M1097 Humvees. The quartermasters also loaded two large pallets per aircraft to be airdropped over Northern Michigan.

"This is what we live for," said U.S. Army Chief Warrant Officer 2 Vic Valdez, the senior airdrop systems technician for the 294th Quartermaster Company. "It's something we don't get to do a lot and to get to do it for this exercise was amazing."

This was the first time the unit has been able to airdrop a Humvee. To determine if the Humvees were still viable after the flight, they had to be driven from the drop zone.

"I've never seen anything like that, and I was really shocked by the entire execution, it was really impressive," said Army Sgt. Fabian Elizondo, a mechanic with the 1836th Transportation Company, based in El Paso, Texas.

Valdez said they have experience rigging drops for Soldiers, food and supplies, but a Humvee drop was a new experience for the Texas Soldiers.

"It's a definite plus in our book," said Valdez. "We've always been able to do it, but finally had the opportunity to execute this operation and everything worked out better than planned."

Having enlisted and served for 15 years as a rigger, Valdez knows exactly what goes into the rigging of a parachute for a Humvee. He said that prior to the air drop, he would quiz his Soldiers to make sure they knew what they were doing and putting their knowledge together to successfully execute the drop.



"I can't think of anything to be prouder of than knowing I was one of those parachute riggers," said Valdez. "I was proud when those parachutes opened, and everything landed safely."

Valdez said the unit will be deploying next year and they are completing many of their pre-deployment qualifications by participating in Northern Strike. The exercise fuses Michigan's unique training facilities and capabilities to maximize unit readiness. The 36th Sustainment Brigade is addressing training now so they are prepared for their deployment.

"Re-sustainment operations such as an airdrop are very important when we have Soldiers in an area that's difficult to reach," said Valdez. "It's important to be able to get supplies to the warfighter on the ground and we need to keep the mission going."

The experience of dropping the diesel-powered four-wheel drive tactical vehicles, which supports combat and combat service support units, left a favorable impression on the training received during Northern Strike.

Elizondo said he didn't know he would be helping out when he was told about the airdrop but was happy to be helping. Although he has been in the unit for the last decade, this is the first time his unit has worked so closely with the 36th Sustainment Brigade.

"Northern Strike has been an amazing experience for all of us," said Elizondo. "Getting to work in a joint operational environment is something that many of us have never done before."

"Getting to go out with all these other people from different parts of Texas and the nation, and coming together to complete the mission was truly exciting," he said.



JOINT FIRES



FIRE SUPPORT SPECIALISTS PROCESS ARTILLERY TARGETS AT NATIONAL ALL-DOMAIN WARFIGHTING CENTER



PALADIN B-ROLL



1-201ST FIELD ARTILLERY REGIMENT OPERATES M109A6 PALADIN HOWITZERS



GRAYLING MATES ATTRACTS WV FIELD ARTILLERY REGIMENT



201ST FIELD ARTILLERY REGIMENT CANNON CREW



STATIC-LINE AIRBORNE OPERATIONS



USMC HARRIER ORDINANCE OFFLOAD



GRAYLING MATES ATTRACTS WEST VIRGINIA FIELD ARTILLERY REGIMENT

08.05.2021



GRAYLING, Mich.--Camp Grayling Joint Maneuver Training Center's 147,500 square foot Maneuver and Training Equipment Site (MATES) is critical for storing and maintaining military equipment housed at the National All-Domain Warfighting Center (NADWC). The storage space, training opportunities, and expertise of the Michigan National Guard's MATES staff offers unique options for units from other states to house their equipment in preparation for training.

Following their participation in Northern Strike (NS) 21-2, the 1st Battalion, 201st Field Artillery Regiment (1-201st FA BN), West Virginia Army National Guard (WVARNG), plans to utilize the MATES and house their 12 M109A6 Paladin Self-Propelled Howitzers.

"We are receiving a majority of the battalion's equipment density, which includes their auxiliary equipment," said Lt. Col. Erick Schramm, Combined Surface Maintenance Office surface maintenance manager. "They will keep some equipment in West Virginia for natural disaster response and a few Paladins so they can train at home station."

According to Schramm, some equipment was hauled via truck while the rest was shipped on a rail line, which runs through Camp Grayling. After completing some joint readiness training at NS 21-2, the 1-201st FA BN will transfer their equipment to the MATES staff.

"We provide them [1-201st FA BN] space to park their Paladins and support vehicles at our facility," said Capt. Peter Leeman, Camp Grayling MATES superintendent. "We will maintain them and do all of the necessary servicing. When they come up to Camp Grayling, they will use their equipment to train and before they leave, turn it back into us. We will perform any maintenance functions needed to make sure equipment is ready to go and mission capable for their next training."

In addition to alleviating the maintenance burden, transferring the equipment will benefit the 1-201st FA BN in numerous ways.

"Down in Virginia, where the Paladins were previously stored at Fort Pickett, they were being stored outside. Being able to put them inside and keep them out of the weather will lower the maintenance cost," said U.S. Army Brig. Gen. Bill Crane, West Virginia National Guard adjutant general. "The range complex Michigan has up here allows our folks to come up and get right into training without having to transport this equipment to the training location."

In the event of a deployment, the 1-201st FA BN would be able to easily ship the equipment from several deep-water ports in Michigan. From there, they can go through the Saint Lawrence Seaway to anywhere in the world.

The 148,000 acres of ground maneuver area already make Camp Grayling a desirable training location, but Leeman believes having the howitzers pooled there will make it even more attractive for units looking for training sites.

"Our mission is to establish a wide array of combat and combat support equipment," said Leeman. "Having out of state units that aren't adjacent to Michigan as customers brings us to a national level."

Leeman added that having Paladins in Michigan allows other units who have the same mission to utilize the equipment as long as they coordinate with the 1-201st FA BN. This saves those units time and money, making a trip to Northern Michigan's NADWC easier and more cost effective than before.

In addition to the large amount of space located at MATES, its 125 cold storage bays, 20 of which are fitted with controlled humidity program systems, was a contributing factor in being selected to house the M109A6s.

"We have the second largest MATES in the country," said Schramm. "It was built when we had multiple Armor battalions in Michigan, so since they've gone away our facility has been underutilized."

While space, range availability, and training opportunities no doubt played a factor, the professionalism of the MATES staff also played a role in the WVARNG moving their equipment there.

"The customer support the team at Camp Grayling offers is outstanding," said Leeman. "Before any of the decisions are made at the senior leader level people meet in person. We were able to show them what Michigan and Camp Grayling are all about and are excited to get to work with them."



AGILE COMBAT EMPLOYMENT



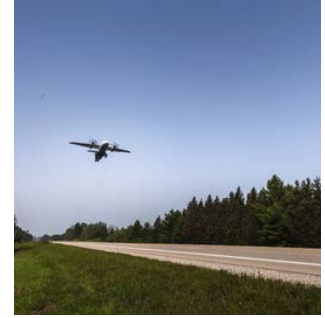
COMBAT SEARCH AND RESCUE TRAINING AT NORTHERN STRIKE



THUNDER LZ EXERCISE MAKES HISTORY



ARIZONA MQ9



C-146A WOLF HOUND FLANDING ALONG HIGHWAY



USMC MAINTENANCE KEEP HARRIERS UP AND RUNNING



C-130H HERCULES DEPLOYS COUNTERMEASURES AGAINST SURFACE-TO-AIR THREAT



AIRCRAFT LANDING ALONG HIGHWAY

"Our adversaries have advanced weapons systems and advanced technology that they can use against us, so we need to be able to operate efficiently in austere situations and gain proficiency in those operations."

LT. COL. BRIAN WYRZYKOWSKI
MISSION COMMANDER FOR THE HIGHWAY LANDING
DUBBED "THUNDER LZ"



ALPENA, Mich.--The Michigan National Guard, in coordination with the Michigan Department of Transportation (MDOT) and local partners, plans to close a portion of Michigan State Highway M-32 for five hours on August 5 to test its ability to land aircraft on roadways designed for cars and trucks.

The Michigan Air National Guard's 127th Wing, Selfridge Air National Guard Base; the Air Force's 355th Wing, Davis-Monthan Air Force Base, Arizona; and, the Air Force Special Operations Command, Duke Field, Florida, landed four A-10 aircraft and two C-146 aircraft on a closed-off portion of the road near the Alpena Combat Readiness Training Center to demonstrate how active duty and reserve-component units can integrate to project combat airpower in austere environments.

HIGHWAY LANDING SHOWCASES AIR FORCE FLEXIBILITY

08.05.2021

American Air Power added a new adjective today. Long known for air superiority and global reach, “agility” has now entered the lexicon.

On a state highway in northern Michigan, six U.S. Air Force aircraft landed and took off from the road, proving the Air Force’s ability to deploy to austere conditions and continue to operate. The mission underscored the flexibility and versatility highlighted in the Air Force’s new Air Power Doctrine, published earlier this year. That the aircraft came from both the active-duty component and the Air National Guard only underscored the Air Force’s ability to assemble the right force to forward project air power anywhere in the world.

At 9:15 a.m. on Thursday, Aug. 5, an A-10 Thunderbolt II aircraft, flown by the 107th Fighter Squadron – pilot call sign “Sherlock” – touched down on M-32, the state highway that runs east-west across the northern tip of Michigan’s Lower Peninsula, not far from the Alpena Combat Readiness Training Center, part of a larger hub of Guard-operated training facilities known as the National All-Domain Warfighting Center. The aircraft is based at Selfridge Air National Guard Base, near Detroit.

The intentional highway landing and takeoff was the first using modern aircraft to take place in the United States.

Next to land was an A-10 from the 354th Fighter Squadron, which is based at Davis-Monthan Air Force Base in Arizona. Next to land was a C-164 Wolfhound, operated by the Air Force Special Operations Command and based in Florida. A second trio, also comprised of two A-10s and a C-164, all from the same units, landed and took off from the same highway later that same morning.

“THIS LANDING SHOWCASES THE VERSATILITY THAT EXISTS IN OUR AIR FORCE TODAY. WHEN OUR NATION CALLS, OUR AIRMEN ARE READY TO MEET THE CHALLENGE. THE AIRMEN WHO WERE A PART OF TODAY’S MISSION CAN AND SHOULD LOOK BACK ON THIS DAY WITH PRIDE AT WHAT THEY ACCOMPLISHED.”

**BRIG. GEN. ROLF MAMMEN
COMMANDING GENERAL, 127TH WING**





Further highlighting the Air Force's capacity to operate in a remote location, the highway was first "secured" by Special Tactics Airmen assigned to the 24th Special Operations Wing. The Special Ops Airmen ensured the suitability of the highway for aircraft operations and then provided air traffic control support for the aircraft involved in the operation. While the Airmen had tactical control of the space during the operation, the landing was closely coordinated with the Michigan Dept. of Transportation, and local power company that temporarily removed several power lines that crossed the highway. Also on hand were local police and fire departments – all of whom have utilized the Alpena CRTC for training in the past.

"Our adversaries have advanced weapons systems and advanced technology that they can use against us, so we need to be able to operate efficiently in austere situations and gain proficiency in those operations," said Lt. Col. Brian Wyrzykowski, the mission commander for the highway landing – dubbed "Thunder LZ" – and a pilot with Michigan's 127th Wing.

The highway landing was part of the Air Force's focus on Agile Combat Employment (ACE), which provides the Air Force the flexibility that would be needed should the nation come into conflict with a near-peer adversary.

"The A-10 allows us to land a lot more places to get fuel, weapons and other armaments so we can operate anywhere, anytime," said Capt. John Renner, one of the 354th FS pilots who piloted an A-10 during the operation. "This will allow us to get away from using built-up bases that our adversaries can target, by moving much more rapidly.

The highway landing took place during Exercise Northern Strike, an annual Michigan National Guard-led exercise which brings together 4,700 military personnel from across the Joint Force and several Allied Nations, operating across the 148,000 acres of maneuver space and more than 17,000 square miles of special use airspace that make up the National All-Domain Warfighter Center and its two primary components, the Alpena CRTC and the Camp Grayling Joint Maneuver Training Center.

The A-10 is primarily an air-to-ground attack aircraft that was specifically designed with austere landing capabilities in mind. In 2016, the 107th FS participated in the first highway landing since the end of the Cold War, at a highway location in Estonia as part of Exercise Saber Strike in Europe. The C-146 is a propeller-driven aircraft, primarily used for the delivery of Special Operations personnel and light cargo.

"Michigan's NADWC is uniquely postured to provide ample training airspace and facilities to accommodate training for the future high-end fight. Michigan is integral to the joint fight and future warfighter. The joint force cannot execute without training as we fight."

**U.S. AIR FORCE BRIG. GEN. BRYAN TEFF
MICHIGAN AIR NATIONAL GUARD
ADJUTANT GENERAL FOR AIR**

TRAINED UP AT NORTHERN STRIKE

08.08.2021

ONTONAGON, Mich.--Imagine being ejected from or crashing an aircraft into a remotely located area with dense forests and challenging terrains. Picture being in a survival situation in this environment and waiting to be rescued.

That exact survival scenario was executed in Michigan's Upper Peninsula (UP) during a Combat Search and Rescue (CSAR) for a Northern Strike (NS) 2021 training mission. NS is the Michigan National Guard's largest and longest training exercise designed to validate readiness of the joint reserve force.

"The fact that we're really far out here, into some pretty remote wilderness, does pose its own challenges," said U.S. Air Force Master Sgt. Robert Rogers, survival, evasion, resistance, and escape specialist with the 122nd Fighter Wing at Fort Wayne, Indiana. "But it also affords us the ability to really increase the realism of the training."

The terrain and thick woodland of the UP presented the military with challenges to help develop the skills needed during actual real world foreign conflicts. The Northern Michigan landscape provided the service members a unique opportunity to test their preparedness, readiness, and resiliency in order to successfully rescue personnel within the remotely located areas.

This joint services training involved an Air Force A-10 Thunderbolt II aircraft, Army medical evacuation flight crews, and a Marine Corps CH-53 Sea Stallion helicopter. Through the integrated training, each branch gained the understanding of how other services approach a CSAR mission.

U.S. Army Staff Sgt. Wyatt Brown, 2-211th Army Aviation Support Facility flight medic, was one of four Army Soldiers from the Iowa National Guard to participate in the exercise. His focus in the scenario was to apply survival skills, such as land navigation and radio communication, but also learn how the Air Force and Marine Corps plan and execute rescue operations.

"It was great training to see the integration between Army Aviation and the Air Force CSAR mission, as well as the full capabilities of the Air Force CSAR mission," said Brown.

Understanding how each branch operates and how all personnel perform in training is vital for readiness and preparedness within the military. These training missions are essential for personnel to hone their skills.

Identifying the strengths and weaknesses of each branch is also a key component of the training. Future exercise scenarios and execution of real world missions are improved by highlighting these proficiencies and deficiencies.

"When you come at it with that approach, you really tend to take away more from the experience," said Rogers. "Because you learn what works for other branches and what doesn't work. And then we're able to put all of that together and each time I feel that we do this we move forward and become better at Combat Search and Rescue."

NS maximizes combat readiness by providing adaptable, cost effective training ranging from individualized tactical skills to near-peer contested threat and combined arms environments focused on Joint and Coalition force integration and domain convergence.



COALITION PARTNERS



LATVIAN SOF, MARINES
RAPPEL TRAINING



BRITISH PARACHUTE
REGIMENT



4 PARA AT CAMP
GRAYLING



LATVIA CHIEF OF DEFENSE
VISITS



LATVIAN AND ALPENA
CRTC FIREFIGHTERS
SIMULATE AIRCRAFT FIRE



LATVIAN JTACS PRACTICE
PROFICIENCIES



LATVIAN SOLDIERS
PARTICIPATING IN
NORTHERN STRIKE



LIBERIA FORCES CONDUCT
TACTICAL TRAINING
DURING NORTHERN STRIKE
21

INTERNATIONAL PARTNERSHIPS FOR GLOBAL READINESS

08.12.2021

ALPENA, Mich.-- Firefighters from the Latvian National Armed Forces and the Estonian Defense Forces traveled to the Alpena Combat Readiness Training Center, Michigan, to participate in Northern Strike 21-2 from Jul. 31 through Aug. 14, 2021. Northern Strike is a training exercise focusing on readiness and interoperability with many different units and multinational partners in realistic multi-domain environments.

The CRTC has areas specifically designed for fire training including a simulated aircraft fire, road vehicle fires, as well as multi-story building fires. The ability to provide continued training in these areas is beneficial to U.S. armed forces as well as international partners, enabling all to work as cohesive units as well as being able to manage these incidents independently.

This multinational training environment allows for units to gain knowledge from one another and improve on skills they would otherwise be unable to rehearse. At the same time, U.S. forces are able to build stronger relationships with international partners and ensure they receive the same high-standard training that U.S. military personnel receive.

Training alongside international partners establishes confidence that U.S. missions abroad are adequately supported by qualified personnel. Having aircraft operating in the vicinities of partner countries, it is critical that qualified personnel are available to support the missions and the aircraft flying these missions.

"It's a lot more cost effective for our coalition partners to be trained up to a level of service than for us to deploy U.S. personnel to support our own aircraft," said Alpena CRTC Fire Chief Jeremy Wohlford. "We're helping them build their capabilities to be able to sustain if something were to happen."

Expanding the capabilities of U.S. forces abroad is important for continued mission success, and strong international partnerships allows the U.S. to heighten the deterrence and support capabilities of our allies.

Over the years, the U.S. has worked with many other countries through the State Partnership Program. Michigan's official partners through the SPP are Latvia and Liberia. Chief Wohlford, working with multiple Air National Guard units throughout the state of Michigan, has helped to build the Latvian National Armed Forces fire fighter program from four firefighters to 34 since 2012.

"I think the program is really important because it's really helped us see the big picture when it comes to the Air Force," said Chief Wohlford. "Over the years, working with our partners has been really rewarding."

MICHIGAN NATIONAL GUARD SOLDIERS STRENGTHENS STATE PARTNERSHIP PROGRAM

07.30.2021

GRAYLING, Mich.--The Michigan National Guard continues to solidify its State Partnership Program (SPP) relationship with the Armed Forces of the Republic of Liberia during Northern Strike 21.

Soldiers from Liberia are at Camp Grayling Joint Maneuver Training Center to participate in Michigan National Guard's Northern Strike 21 Exercise and will make up part of the estimated 5,100 participants from various states and countries. The exercise will be conducted at two locations that make up the National All Domain Warfighting Center (NADWC)—Camp Grayling and the Alpena Combat Readiness Training Center.

"We conducted vehicle rollover and weapons training with the Liberian Army today," said Spc. Noah Schlieff, 125th Infantry Regiment, Michigan Army National Guard. "We taught them the main components of the M4, M16, and M249 Squad Automatic Weapon, and how to fire and engage targets effectively."

"We are going over aspects of loading, unloading, engaging and proper sight picture on the weapons and teaching them how to actively engage and safely operate the weapon system," he added.

The weapons training itself was conducted on the Engagement Skills Trainer (EST), which is an indoor, multi-purpose, small arms training simulator used to simulate weapons training events that lead to live-fire individual and crew weapon qualifications.

For the Liberians, this was their first time handling these types of weapons and they expressed their appreciation for the training.

"This is our first time using the M-4 rifle and the soldiers are very happy about it," said Armed Forces of the Republic of Liberia Maj. Philemon Silikpoh. "We are very thankful for our partners and we are very appreciative for having the opportunity to take part in this training."

"This training will make us all better soldiers," he said.

Through the State Partnership Program, Michigan and Liberia's relationship will strengthen alliances while enhancing mutual benefits of increased readiness.

"It's nice to work with a different country and learning how we do things differently while achieving desired outcomes," said Schlieff. "They are really great soldiers who are determined and capable and it makes me feel good knowing I can rely on them and having them on our side."



INNOVATION AND INDUSTRY



FINDING NEW WAYS
TO BE MOBILE AND
BATTLE READY



NORTHERN STRIKE
FOSTERS INNOVATION
AND READINESS WITH
NEW TECH



MICHIGAN ENABLES
INNOVATION AT
NATIONAL ALL-
DOMAIN WARFIGHTING
CENTER



PARTNERSHIPS WITH INNOVATIVE INDUSTRY INTEGRAL TO SUCCESS OF NORTHERN STRIKE

07.29.2021

LANSING, Mich.— The Michigan National Guard (MING) is inviting industry and research partners to participate in Northern Strike 21 to leverage Department of Defense, industry and academia to improve joint warfighter training capabilities. Collaborative innovation opportunities can assist in that mission.

“Industry partners bring new ideas and solutions for ever-changing challenges and partnering in this way increases our capability to solve real-world problems,” said Army Maj. Gen. Paul Rogers, adjutant general and director of the Michigan Department of Military and Veteran Affairs. “Our goal is to create an everlasting innovation capability for MING, Michigan and the defense industry.”

Northern Strike 21 is scheduled to take place July 31 to August 14, 2021, at northern Michigan’s National All-Domain Warfighting Center (NADWC). The NADWC maximizes combat readiness through the collection of Michigan’s unique environment and premier Air and Army training venues consisting of Camp Grayling Joint Maneuver Training Center and the Alpena Combat Readiness Training Center.

“Michigan’s military training areas provide unique opportunities for defense industry innovators to generate and test ideas that solve mutual complex problems,” said Rogers.

Northern Strike exercise presents an incomparable opportunity for defense industry partners to test emerging technologies. A variety of new capabilities are being tested during the two-week joint forces, multi-national exercise.

One example of the challenges the military faces is medical evacuations in various terrains, including austere locations.

We have several industry partners testing their leading-edge capabilities during Northern Strike, including private industry, Transportation Command and the Air Force Research Lab,” said Army Col. Scott Meyers, commander, Camp Grayling Joint Maneuver Training Center.

“Industry has objectives that are complementary to what the military needs, and through innovative partnerships, we can enhance not only NADWC capabilities but those of the Department of Defense.”

“This is important because contingency operations can result in serious injuries or casualties where evacuations cannot be met exclusively with strategic airlift platforms and Air Force Aeromedical Evacuation equipment,” said Meyers. “Northern Strike has been identified as an opportunity to test a patient movement system in a simulated real-world conflict.”

Another challenge falls in the communications arena. Information and communication resources are critical to ensure effective communication channels are maintained while service members are deployed to areas where this infrastructure might not exist.

“We must improve technology in all environments that affect the transmissions of communications,” said Meyers. “Having real-time satellite imagery, enhanced information technology and field radio communications are vital to our success and we are excited to be the testing ground for integrating several new electronic warfare, artificial intelligence and information gathering capabilities into NS.”

This new technology can improve communications, data, and video transmissions from above the battlefield, providing enhanced real-time situational awareness for warfighters across domains.

“We’re building an innovative capability to solve problems in real-time,” said Air Force Brig. Gen. Bryan Teff, assistant adjutant general for air and commander of the Michigan Air National Guard. “Our aim is to demonstrate this during Northern Strike 21 and again in future iterations of the exercise.”

This year’s Northern Strike exercise will feature participants from all three Army components, Air Force active duty and Guard, as well as both Marine and Navy components. There is also expected to be participation of units from the United Kingdom, Latvia, and Liberia. Planners are anticipating approximately 5,100 participants who will all have the opportunity to utilize the NADWC’s 148,000 acres of maneuver space and more than 17,000 square miles of special use airspace.

BUILDING READINESS



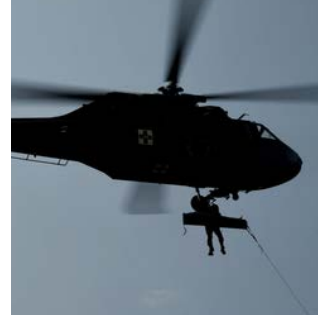
NORTHERN STRIKE
CASEVAC



GRAYLING ARMY AIR FIELD
CONDUCTS A PRE-
ACCIDENT PLANNED
REHEARSAL



36TH SUSTAINMENT
BRIGADE RUNS MEDEVAC
SCENARIO



NATIONAL GUARD RUNS
RESCUE HOIST TRAINING
FOR MARINES, ARMY
RESERVE



BASE CAMP HAWKEYE
COMPLETES MASS
CASUALTY TRAINING



HANDS-ON MEDICAL
TRAINING DURING
NORTHERN STRIKE 21

MICHIGAN NATIONAL GUARD, U.S. NAVY RESERVE CONDUCT JOINT DENTAL CLINIC FOCUSING ON READINESS AND TRAINING

08.16.2021

BATTLE CREEK, Mich.—With the focus on readiness in a joint environment, the 110th Wing hosted a joint dental clinic involving dental teams from the 110th Medical Group and the 4th Dental Battalion, 4th Marine Logistics Group, which is a Navy Reserve unit based in Marietta, GA.

The dental clinic, unofficially named a Dental Rodeo, conducted exams on August 7 at Battle Creek Air National Guard Base during Northern Strike Exercise 21, to help enhance that joint experience in the medical field.

“We’re deploying more often in a joint force and we’re all here to take care of our Soldiers, Airmen, Marines, and Sailors,” said Lt. Cmdr. Joseph Villaluz, general dentist, 4th Dental Battalion.

The event at Battle Creek Air National Guard Base, anticipated to serve more than 200 service members from the National Guard and Navy Reserve, came together as the Michigan National Guard hosts its largest joint fires exercise at the Camp Grayling Joint Maneuver Training Center and the Alpena Combat Readiness Training Center, and when combined, make up the National All Domain Warfighting Center.

“We coordinated with the medical planners with Northern Strike 21 (NS21) and the 4th Dental Battalion came up as part of their Northern Strike Exercise,” said Capt. Tandi Bailey, Medical Administrative Officer, 110th Medical Group, Michigan Air National Guard.

Before venturing to the 110th Wing, the Navy dental team spent time in Camp Grayling to launch a dental clinic for service members participating in NS21.

“During Northern Strike, we established a fixed dental clinic in Camp Grayling,” said Villaluz. “We also packed up our examination gear, mobilized and moved forward to the Alpena Combat Readiness Training Center and did examinations there.”

“We had the advanced party set up that clinic while the main body came to take care of examinations,” he added.

Being mobile and providing readiness services in multiple locations also provided training for dental teams as they teamed up with joint services.

“This allows us to be fluid, mobile, and make those decisions as to what we’re going to do for logistics moving one area to another,” said Villaluz. “We have to work with civilian partners and other services as if we were deployed and work the logistics that entails.”

During the Dental Rodeo, basic dental exams were conducted to ensure service members are current in their medical readiness, and enhancing optimal levels of oral health, which can prevent and minimize the impacts of oral diseases and injuries. Some treatment procedures, such as fillings, were provided free-of-charge at Camp Grayling.

During Northern Strike 21-2, the Navy dentists saw more than 500 patients at the Battle Creek Air National Guard Base, Alpena Combat Readiness Center and Camp Grayling. The estimated value of services provided was \$134,502.

As joint operations evolve between services and different administration forms are used, the lines between components can offer additional challenges.

“Communications are not on the same wavelength, and we don’t use the same systems or paperwork forms,” said Bailey. “But care is care, regardless of the uniform they wear—we can provide great care.”

“This is a great learning opportunity for us to see how documentation is conducted,” she said.

Different computer systems between services offer that challenge as they sometimes are not able to communicate between the Air Force, Army, and Navy, forcing the dental teams to revert to the old way of conducting business.

“We’re using paper forms to accomplish the mission,” said Bailey. “We are able to provide service specific dental forms to our Navy counterparts and vice-versa and integrate this process seamlessly.”

“We get that experience of seeing different workflow, many different ways to approach a situation and being able to come together as a team is great for a learning experience in a joint environment,” she said.

The joint experience and military strategy emphasize that joint forces must be capable of working together in large-scale combat and noncombat operations and forces must be adequately prepared for joint operations.

“It’s awesome to see other teams in action and although our battle rhythm might be different than the Navy’s, it’s been phenomenal to see the Navy team come in, get stuff done—it’s just great to see that and inspires us,” said Bailey. “You feel that pride of taking care of service members and coming together—it is very rewarding.”





NEW HAMPSHIRE NATIONAL GUARD USES DIGITAL COMMUNICATIONS TRAINING DURING NORTHERN STRIKE

08.12.2021

GRAYLING, Mich.—Northern Strike 21-2 offered training in various critical military career fields. One of those, Field Artillery Firefinder Radar Operators, found themselves amongst Camp Grayling Joint Maneuver Training Center's 148,000 acres of training land to hone their skills using highly specialized radar. Having the vital task of detecting enemy fire, the New Hampshire Army National Guard took their mission to heart.

"We trained our Soldiers with collecting and sending target data from the point of origin of enemy artillery down to the fire direction center," said 1st Lt. Garrett Dupre', platoon leader with the 197th Field Artillery Brigade, New Hampshire Army National Guard. "Fire direction center would take our target information and send that to friendly artillery, who could take out the enemy threat."

The coordination involved networking between multiple units in order to respond to enemy fire. Radar operators can receive precision grid coordinates for optimal accuracy from an enemy artillery location, send that information digitally to Fire Control Specialists (FCS) belonging to a field artillery unit through the Advanced Field Artillery Tactical Data System (AFATDS). The FCS would communicate to the field artillery and counter the enemies attempt to attack friendly forces.

"We operate firefinder radars and our purpose is target acquisition for counter-battery fire," said Dupre'. "That means when an enemy artillery fires at us, our radar picks it up through the computer on board, calculates the point of origin where it was fired from, and predicts the intended point of impact."

"We can get down to a 10-digit grid coordinate, find the size of the projectile being fired, and project the type of weapon system that's firing it—a motor, a cannon, or a rocket," he said.

During Northern Strike, National Guard units integrated and enhanced their digital communications with each other in order to have overall successful training. The New Hampshire Guard members worked with Soldiers from the West Virginia Army National Guard, who supported the AFATDS piece.

"We came up here as guests with the 201st Field Artillery Battalion, West Virginia National Guard," said Sgt. 1st Class Andrew Childs, platoon sergeant with the 197th Field Artillery Brigade, New Hampshire National Guard. "They never worked with us before and we learned a lot from each other."

"The Michigan National Guard contacted us to get digital communications running so the radar could talk to the AFATDS - FDC (fire direction center)," he said.

This type of communications technology is beneficial in real-world situations, enhancing communications throughout the unit as information can be sent to multiple users through the Army and other service networks.

"Our systems coordinate fires digitally across the battalion," said Army Capt. Tyler La Vay, battalion field direction officer 1st Battalion, 201st Field Artillery Regiment, West Virginia Army National Guard. "In war, radar operators would see direct or indirect fire and immediately send us a fire mission, giving it to my section who would disseminate it down to the battery that is munitions capable to fire on that target."

Indirect fire can come from lengths from beyond the horizon and can make it extremely difficult for the service members in the field to detect how far away the enemy is. The radar has unique ranges that can help counter that.

"We can reach out to 50K in a 90-degree fan or a 60K in a narrower fan, said Dupre'. "It can also do 360 degrees and pick up anything from any direction but that has a much shorter range."

During Michigan National Guard's largest joint forces, multinational exercise, units utilized this opportunity to gain additional training and experience. NS21 exercise is designed to challenge the participants with multiple forms of convergence that advances interoperability, gain training and enhance readiness.

"A lot of things were learned as our Soldiers with us are in new positions," said Childs. "All the leaders are new to the level of leadership they were given, and they were given time with their Soldiers to learn how to lead—especially in the technical side of their role. Even to understand proper preparation as far as equipment comes to getting here and being successful."

Others had a different learning experience unique to their specialty.

"We experienced an issue that I have not experienced in my career—I had rounds that didn't go off and couldn't locate," said La Vay. "We contacted the 197th and because of them, we were quickly able to locate the duds because we had radar."

Overall, the training and experience received at NS21 has been accepted.

"It took some work and with committed individuals who wanted to help us and work through it, our training was successful in the end," said Childs.

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