



# Domestic Capability Priorities Book

2022



# FOREWORD



This past year has challenged our nation in extraordinary ways. From natural disasters and civil unrest, to the COVID-19 pandemic, the Air National Guard (ANG) provided resources and expertise to support the American people's needs. To prepare for such a large array of eventualities we may face, an extraordinary amount of planning and coordination is required. Every year, the first step towards posturing the ANG for homeland response is through the annual Domestic Capability Priorities (DCP) Conference. During the DCP, ANG representatives from the 54 states and territories and our 90 wings gather in-person and virtually to identify and prioritize capability gaps.

Accordingly, National Guard representatives must identify, prioritize, and organize capabilities per the Federal Emergency Management Agency (FEMA) and their respective States Emergency Support Functions (ESFs). The product of the DCP is an ANG-endorsed capability gaps priorities book that serves as the foundation for allocating our limited procurement funds. The ANG strives to keep this process transparent and repeatable while documenting, analyzing, and validating priorities from the ground up.

Guard Airmen stand ready to respond to our national emergencies and defend the homeland, while providing our Air Force with an *Operational Reserve with Strategic Depth*. I am grateful to our Airmen and partner agencies across the country who participate in the DCP process and help guide the ANG's domestic modernization program towards success. These efforts exemplify our steadfast commitment to our communities, states, territories, and this nation, and help make our Air National Guard *Ready Today...Stronger Tomorrow!*

A handwritten signature in black ink that reads "Michael A. Loh".

MICHAEL A. LOH  
Lieutenant General, USAF  
Director, Air National Guard



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# INTRODUCTION



The 2022 Air National Guard (ANG) Domestic Capability Priorities (DCP) Book documents capability priorities identified during the May 2021 ANG DCP Conference in Denver, Colorado. The conference welcomed over 330 military and civilian attendees representing 54 states and territories from the ANG wings and state Joint Force Headquarters, other government agencies, civil partners, as well as National Guard Bureau (NGB) staff. The objective of the ESF working groups was to identify capabilities needed by the ANG to effectively execute the domestic incident response mission, classified by urgency of need: Critical (crucial within the next 1 to 3 years), Essential (vital within the next 3 to 5 years), or Desired (enhances mission success beyond 5 years).

<b>National Response Framework (NRF) Emergency Support Functions (ESF)</b>
<b>ESF 1 – Transportation</b>
<b>ESF 2 – Communications</b>
<b>ESF 3 – Public Works and Engineering</b>
<b>ESF 4 – Firefighting</b>
<b>ESF 5 - Information and Planning</b>
<b>ESF 6 - Mass Care, Emergency Assistance, Temporary Housing, &amp; Human Services</b>
<b>ESF 7 – Logistics Management and Resource Support</b>
<b>ESF 8 - Public Health and Medical Services</b>
<b>ESF 9 - Search and Rescue</b>
<b>ESF 10 - Oil and Hazardous Materials Response</b>
ESF 11 - Agricultural and Natural Resource (No ANG Equity)
ESF 12 - Energy (No ANG Equity)
<b>ESF 13 - Public Safety and Security</b>
ESF 14 – Long-Term Community Recovery (Superseded by National Disaster Recovery Framework)
ESF 15 – External Affairs (No ANG Equity)

The introductory section of the 2022 DCP book includes a State/FEMA Matrix which identifies states and FEMA regions where working groups recommended fielding equipment. The book identifies domestic critical capability shortfalls valued at over \$510,000,000 organized into 11 ESF tabs; each beginning with an ESF mission description followed by a summary page of critical, essential and desired capabilities. An information paper describes each capability classified as critical. Each information paper captures: Background (I.e. capability description) and Program Details (I.e. quantity of equipment needed, estimated unit costs, and overall estimated program cost).



# CONTACTS



**Brig Gen Mark Mitchum**  
NGB/A5/8  
Director, Plans & Programs  
240-612-9382 DSN 612-9382

[Mark.mitchum@us.af.mil](mailto:Mark.mitchum@us.af.mil)



**Col Christopher Sheppard** NGB/A5  
Deputy Director, Plans & Requirements  
240-612-9366 DSN 612-9366

[christopher.sheppard@us.af.mil](mailto:christopher.sheppard@us.af.mil)



**Mr. Frank Ballinger** NGB/A5  
Associate Director, Plans & Requirements  
240-612-9351 DSN 612-9351

[franklin.ballinger@us.af.mil](mailto:franklin.ballinger@us.af.mil)



**Col Jason Halvorsen** NGB/A5R  
Chief, Operational Requirements  
240-612-7068 DSN 612-7068

[jason.halvorsen.us.af.mil](mailto:jason.halvorsen.us.af.mil)



**Mr. Ronald Skaggs** NGB/A5P  
Chief, Program Integration  
(240) 612-7992 DSN 612-7992

[ronald.skaggs.2@us.af.mil](mailto:ronald.skaggs.2@us.af.mil)



**Brig Gen Wendy Wenke** NGB/A1  
Director, Operations  
240-612-9223 DSN 612-9223

[wendy.wenke@us.af.mil](mailto:wendy.wenke@us.af.mil)



**Brig Gen Keith MacDonald** NGB/A2/3/6/10  
Director, Operations  
240-691-9454 DSN 612-9454

[keith.macdonald.2@us.af.mil](mailto:keith.macdonald.2@us.af.mil)



**Brig Gen Donald Carpenter** NGB/A4/7  
Director, Logistics  
240-612-9590 DSN 612-9590

[donald.carpenter@us.af.mil](mailto:donald.carpenter@us.af.mil)



**Col Kenneth Egerstrom** NGB/SG  
Director, ANG Surgeon General  
240-612-8570 DSN 612-8570

[kenneth.egerstrom.1@us.af.mil](mailto:kenneth.egerstrom.1@us.af.mil)



**Col Jeremiah Tucker** AATC/CC  
Commander  
520-295-6900 DSN 844-6900  
[jeremiah.tucker@us.af.mil](mailto:jeremiah.tucker@us.af.mil)

**2022 Domestic Capability Priorities Book Edited by NGB/A5P**





# State and FEMA Matrix

Current and potential locations for capabilities identified in this book

	ESF 1 Transportation	ESF 2 Communications	ESF 3 Public Works and Engineering	ESF 4 Firefighting	ESF 5 Information and Planning	ESF 6 Mass Care	ESF 7 Logistics	ESF 8 Public Health	ESF 9 Search and Rescue	ESF 10 Oil and HAZMAT Response	ESF 13 Public Safety and Security	
	Heavy Lift Lowboy Trailer Heavy Mobile Equipment Maintenance Truck Debris Clearance and Route Opening Prime Movers Cargo and Utility Vehicles Fleet Modernization	Multi-Vehicle Driving Simulator JISCC Modernization Rapid Deployable Communications Solution	EOD Standardized Utility Cargo Body EOD Mast and Camera Upgrade High Capacity Water Pump Kits Prime Power Modernization	Self-Contained Lighting System Aerial Firefighting Modernization Individual Wildland Firefighting Kits	Deployable Incident Commander Liaison Kit Aircraft and Structural Live-Fire Training Equipment Structural Firefighting Vehicles Personal Protective Equipment Cleaning Capability Aerial Firefighting Modernization	Wide-Area Multi-Spectral Imagery Generator Modernization Service Member Bed Down Temperature Control Trailers Disaster Relief Mobile Kitchen Trailer	Modular Aircraft Loading Ramps Standardized Triage Mobile Pack Generator Modernization Service Member Bed Down Temperature Control Trailers Disaster Relief Mobile Kitchen Trailer	25,000 Pound High-Reach Aircraft Loader All-Terrain 13,000 Pound Fordlift Mobile Loading Dock and Trailer Ramps Hard-Sided Expandable Small Air Mobile Shelter Modular Aircraft Loading Ramps	USAR Kit Modernization Water Rescue Package Integrated Active Shooter Body Armor MQ-9 National Airspace Integration USAR Mobility Package	Multi-Layer Portable Power Bank Trailer Mounted Cascade Air System Small Unmanned Aerial System HAZMAT PPE Modernization	Security Forces Scalable Emergency Kit Security Forces Conducted Electrical Device Mod Security Forces Utility Task Vehicle Scalable Emergency Logistics Resource Vehicle Security Forces Less Than Lethal Endosed Trailer	
<b>FEMA Region IV</b>												
AL	*	*	*	*	*	*	*	*	*	*	*	*
FL	*	*	*	*	*	*	*	*	*	*	*	*
GA	*	*	*	*	*	*	*	*	*	*	*	*
KY	*	*	*	*	*	*	*	*	*	*	*	*
MS	*	*	*	*	*	*	*	*	*	*	*	*
NC	*	*	*	*	*	*	*	*	*	*	*	*
SC	*	*	*	*	*	*	*	*	*	*	*	*
TN	*	*	*	*	*	*	*	*	*	*	*	*
<b>FEMA Region V</b>												
IL	*	*	*	*	*	*	*	*	*	*	*	*
IN	*	*	*	*	*	*	*	*	*	*	*	*
MI	*	*	*	*	*	*	*	*	*	*	*	*
MN	*	*	*	*	*	*	*	*	*	*	*	*
OH	*	*	*	*	*	*	*	*	*	*	*	*
WI	*	*	*	*	*	*	*	*	*	*	*	*
<b>FEMA Region VI</b>												
AR	*	*	*	*	*	*	*	*	*	*	*	*
LA	*	*	*	*	*	*	*	*	*	*	*	*
NM	*	*	*	*	*	*	*	*	*	*	*	*
OK	*	*	*	*	*	*	*	*	*	*	*	*
TX	*	*	*	*	*	*	*	*	*	*	*	*





*Transportation*

# Transportation

**Transportation (ESF 1)** – ESF 1 encompasses intermodal transportation, aviation and airspace management, transportation safety, restoration and recovery of transportation infrastructure, movement restrictions, and impact assessment. To move essential resources during a disaster, ANG assistance may be required to restore the transportation system. The ANG can provide temporary alternative transportation when infrastructure is damaged, unavailable, or overwhelmed. The ANG supports the movement of personnel and materiel, to include heavy equipment, medical first responders and patients, bulk and palletized cargo, fire suppression systems, water, petroleum, oil, lubricants, and ground transportation, across a multitude of damaged surfaces.





# **ESF 1 - Transportation**

## **2021 Domestic Capability Priorities Conference**

### ***Critical Capabilities List***

- Cargo and Utility Vehicle Fleet Modernization
- Debris Clearance and Route Opening Prime Movers
- Heavy Mobile Equipment Maintenance Truck
- Heavy Lift Lowboy Trailer
- Multi-Vehicle Driving Simulator

### ***Essential Capabilities List***

- Deployable Aviation Refueling Point
- High Water Rescue Vehicle
- Prime Mover for Prime Power
- Ramps to Load Trailers on Aircraft
- Remotely Piloted Aircraft Sense and Avoid System

### ***Desired Capabilities List***

- 13,000 Pound All-Terrain Forklift
- Shop in a Box
- Unmanned Aircraft System Sustainment Capability
- Prime Mover and Trailer to Make Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives Enhanced Response Force Package Modular
- High-Reach Aircraft Loaders

*Transportation*

**CARGO AND UTILITY VEHICLE FLEET MODERNIZATION**

**1. Background.** The ANG requires the ability to tow 10,000-20,000 pound Disaster Relief Bed-down Sets (DRBS), Fatality Search and Recovery Trailers (FSRT), Reverse Osmosis Water Purification Units (ROWPU), Disaster Relief Mobile Kitchen Trailers (DRMKT), Joint Incident Site Communications Capability trailers (JISCC), and Hazardous Materials (HAZMAT) response trailers and serve as Explosive Ordnance Disposal (EOD) prime movers, in support of an array of emergency situations. The current ANG cargo and utility vehicle fleet is aging and half of the ANG's 1,720 cargo and utility vehicles are eligible for new vehicle replacements. All new vehicles must meet the following requirements: medium-duty class ½-to-2 ½ ton vehicle, with crew cab, diesel engine, four-wheel drive, dual rear wheels, heavy-duty towing package and suspension. Additionally, the ANG's High Mobility Multipurpose Wheeled Vehicle (HMMWV) are in dire need of modernization. The fleet is expected to be replaced by the Joint Light Tactical Vehicle (JLTV), but the recapitalization period extends for years. Additionally, mass transportation vehicles are antiquated and unreliable. The ANG requires modernization of 860 cargo and utility vehicles, 72 HMMWV vehicles, 90 44-passenger busses and 90 29-passenger buses to meet domestic mission requirements.

**2. Program Details.**

Quantity	Unit Cost	Program Cost
<b>860 Cargo and Utility Vehicles Fleet Modernization (3080)</b>	<b>\$41,000</b>	<b>\$35,260,000</b>
<b>72 Modernized HMMWV Vehicles</b>	<b>\$130,000</b>	<b>\$9,360,000</b>
<b>90 44 Passenger Busses</b>	<b>\$150,000</b>	<b>\$13,500,000</b>
<b>90 29 Passenger Busses</b>	<b>\$125,000</b>	<b>\$11,250,000</b>
<b>Total</b>		<b>\$69,370,000</b>

*Transportation*

**DEBRIS CLEARANCE AND ROUTE OPENING PRIME MOVERS**

**1. Background.** The ANG requires ability to provide transportation for debris clearance and route opening equipment packages. During disaster response missions, roads and airfields must be cleared of debris to facilitate the movement of emergency response vehicles, equipment and personnel. The ANG vehicle inventory lacks adequate trucks for this purpose. Each of the ANG's 90 wings requires one 2 ½ ton truck.

**2. Program Details.**

<b>Quantity</b>	<b>Unit Cost</b>	<b>Program Cost</b>
<b>90 2 ½ Ton Trucks (3080)</b>	<b>\$74,000</b>	<b>\$6,660,000</b>
<b>Total</b>		<b>\$6,660,000</b>

*Transportation*

**HEAVY MOBILE EQUIPMENT MAINTENANCE TRUCK**

**1. Background.** The ANG requires the ability to perform mobile maintenance in support of heavy equipment, emergency vehicles, and large trucks. During domestic response scenarios, quickly and effectively addressing heavy equipment and vehicle breakdown is difficult without specialized systems that can access potentially remote areas necessary to make repairs on-site. All 90 ANG wings require a one-ton service body truck, crew cab trucks equipped with four-wheel drive, a mobile crane, welder, air compressor, and hand tool kits.

**2. Program Details.**

<b>Quantity</b>	<b>Unit Cost</b>	<b>Program Cost</b>
<b>90 One-Ton 4x4 Crew Cab Chassis (3080)</b>	<b>\$49,000</b>	<b>\$4,410,000</b>
<b>90 Service Bodies (Maintenance Equipment) (3080)</b>	<b>\$66,000</b>	<b>\$5,940,000</b>
<b>90 Sets of Hand Tools (3080)</b>	<b>\$22,000</b>	<b>\$1,980,000</b>
<b>Total</b>		<b>\$12,330,000</b>

*Transportation*

**HEAVY LIFT LOWBOY TRAILER**

**1. Background.** The ANG requires modernization of its trailer fleet to enhance domestic response capabilities. Logistics Readiness Squadrons (LRS) are responsible for moving personnel, equipment, supplies, and vehicles. Some ANG units require a drop deck gooseneck trailer with a 35-ton capacity to expedite the movement of all rolling stock and other domestic response support materiel. Other ANG units require a rear-loading trailer with higher ground clearance more advantageous to their unique circumstances and operating environments. Both types of trailers enable logisticians to transport vehicles and equipment to areas affected by disasters, facilitating more efficient loading/offloading of equipment and vehicles at remote end-use locations where ramps are unavailable. Ultimately, these trailers enable Logistics Readiness Squadrons a wider array of transportation options and capabilities to transport equipment safely and efficiently, while reducing man-hours to load/unload equipment and deliver products to users. The ANG has 45 units that need a drop deck gooseneck trailer and 45 units that need a non-hydraulic, rear- loading lowboy trailer.

**2. Program Details.**

<b>Quantity</b>	<b>Unit Cost</b>	<b>Program Cost</b>
<b>45 Drop Deck Gooseneck Trailers (3080)</b>	<b>\$35,779</b>	<b>\$1,610,055</b>
<b>45 Non-Hydraulic Rear Loading Trailers (3080)</b>	<b>\$46,335</b>	<b>\$2,085,075</b>
<b>Total</b>		<b>\$3,695,130</b>

**MULTI-VEHICLE DRIVING SIMULATOR**

**1. Background.** The ANG requires the ability to train and provide all personnel operating government vehicles with the proper mechanics for safe and effective driving in all weather and traffic conditions. Many vehicle operators are not familiar with the basics of driving a manual transmission vehicle, which are present in approximately 80% of all ANG units. A driving simulator provides a safe environment for learning basic vehicle handling, shifting, and braking in all types of weather and traffic conditions. The simulator should replicate all types of vehicles operated in the ANG and should provide immediate feedback to the student. Each of the ANG's 90 wings requires one driving simulator.

**2. Program Details.**

<b>Quantity</b>	<b>Unit Cost</b>	<b>Program Cost</b>
<b>90 Multi-Vehicle Driving Simulators (3080)</b>	<b>\$8,000</b>	<b>\$720,000</b>
<b>Total</b>		<b>\$720,000</b>



# Communications

## Communications (ESF 2) –

Communication enablers are comprised of a full spectrum of interoperable capabilities to include voice, data, cellular, radio, and video capabilities over sophisticated networks establishing shared situational awareness among federal, state, and local agencies in response to disaster recovery efforts. These capabilities include bridging critical communications, facilitating coordination of

emergency response operations, and acting as a conduit between responding federal, state, and local agencies. The communications functions encompass close coordination with the commercial information technology industry, reestablishment, and sustainment of

communications. Also included in communications is the defense and oversight of information technology resources, incident management, and response operations centers.



The ANG has 62% of the AF communications capability. Field representatives from the ANG addressed operational shortfalls and proposed updated communications capabilities to improve the ANG's ability to respond quickly and function efficiently during emergency operations in support of civil authorities, federal, and state partners. The capabilities identified improve the security of communications devices and networks, support cyber defense and mitigation activities, and increase interoperability among responders while reducing response times.



# **ESF 2 – Communications**

## **2021 Domestic Capability Priorities Conference**

### ***Critical Capabilities List***

- Rapid Deployable Communications Kit
- Joint Incident Site Communications Capability Modernization
- Tactical Radio Interoperability
- Low Earth Orbit Data Transport
- High Frequency Auxiliary Radio System

### ***Essential Capabilities List***

- Intermediate Command and Control Capability
- Joint Incident Site Communications Capability Prime Mover
- Airborne Interoperability Communications Node

### ***Desired Capabilities List***

- None

## Communications

### RAPID DEPLOYABLE COMMUNICATIONS KIT

**1. Background.** The ANG requires the ability to use satellite voice, cellular, data and video streaming to fill communications gaps when existing communications infrastructure has been degraded or disabled. Emergency Management (EM) flights and Incident Awareness and Assessment units require any communications kit to be rapidly-deployable with organic power generation that provides basic cellular and Commercial Space Internet (CSI) connectivity in a localized area. This capability consist of easily deployed, lightweight cellular based endpoints that support 5G and Gigabit-Class LTE connectivity as well as Ethernet and Wi-Fi, with multiple simultaneous sim support, support for all major Carriers, four or more GbE LAN/WAN switchable ports, and ruggedized. The CSI portion must provide connectivity to a world-wide mesh network of internet communication providing real time data into and out of remote areas and disaster areas. To meet the interoperability and situational awareness needs of an Incident Commander an interoperability module and controller (or suitable substitute such as a laptop and H.264 multi-channel video encoder should be included). This will enhance communication of responders from different agencies and provide better situational awareness with the ability to share video footage via Internet Protocol. In order to operate independently in remote locations, small generators should accompany each communications kit. The generators need to be man-portable, weighing no more than 47 pounds (dry weight), incorporate an inverter for computers and sensitive equipment, and be capable of a 120 volt, 2200 watt maximum (18 amperes) output. The mobile workstations would be used to locally manage the endpoint and need a dedicated ethernet port. All of this would be contained and ready for deployment in a dedicated dustproof and waterproof rugged protective case. The ANG requires one complete kit for each of the Emergency Management flights and Unclassified Processing, Assessment and Dissemination (UPAD) sites.

### 2. Program Details.

Quantity	Unit Cost	Program Cost
110 Cellular Endpoints (3080)	\$2,000	\$220,000
110 CSI Ground Terminals (3080)	\$3,500	\$385,000
110 Mobile workstations (3080)	\$1,000	\$110,000
110 Protective Cases (3080)	\$100	\$11,000
90 Radio Interoperability Modules (3080)	\$7,000	\$630,000
90 Four Channel H.264 based Network Video Encoders (3080)	\$450	\$40,500
90 Generators (3080)	\$1,000	\$90,000
<b>Total</b>		<b>\$1,486,500</b>

**JOINT INCIDENT SITE COMMUNICATIONS CAPABILITY (JISCC)  
MODERNIZATION**

**1. Background.** The ANG requires the ability to provide reach-back and interoperability communications in support of Defense Support of Civil Authorities (DSCA) operations, to include natural disasters (wildfires, hurricanes, blizzards, floods, etc.) and communications support to Homeland Response Force (HRF) and CBRNE Enhanced Response Force Package (CERFP) elements. Since fielding, the JISCC Block III's size, weight, and power (SWaP) footprint has continued to expand, now requiring multiple C-130 cargo aircraft to deploy the system to an incident site. Additionally, the communications-electronic hardware and software has reached the end of life and end of support milestones, which increases cybersecurity vulnerabilities as well as affects the lifecycle sustainability of the system. The new terminal will make use of small form factor network equipment and solid-state electronics to modernize the core network subsystem; wireless subsystem (Wi-Fi 802.11 a/b/g/n/ac); radio communication subsystem (HF/VHF/UHF/TacSat/Interoperability); and the remote network expansion switches, all integrated into a lightweight, modular, and rapidly deployable kit. The modernized system must be able to project wireless mesh networks to multiple locations within the incident site footprint. Modernization of this kit must also reduce power, HVAC and space requirements, reducing the logistical footprint to a single C-130 aircraft for rapid deployments. The ANG requires one JISCC Modernization Kit for each of the 41 JISCC Block III units.

**2. Program Details.**

Quantity	Unit Cost	Program Cost
41 JISCC Modernization Fielded Units (3080)	\$400,000	\$16,400,000
Total		\$16,400,000

## TACTICAL RADIO INTEROPERABILITY

**1. Background.** The ANG requires the ability to use tactical communications compatible with current commonly found civilian radio systems operating on legacy or P25 Trunked/Non-Trunked networks. Purchasing radio sets that integrate with the various state and local agencies is cost prohibitive and requires extremely cumbersome pre-planning in rapidly changing locations. Emergency response units require the ability to integrate with any commercially available radio set in order to transmit over tactical frequencies in the field. A ruggedized plug and play solution with common data interface cables and connectivity to laptops using a graphical user interface will take the input of local civilian radios and rebroadcast using common military tactical radios. This connection will bridge the gap between state/local/federal response and military ground and aviation assets. The ANG requires one kit for each wing.

### 2. Program Details.

Quantity	Unit Cost	Program Cost
94 Tactical Gateways with Connections (3080)	\$10,000	\$940,000
Total		\$940,000

**LOW EARTH ORBIT DATA TRANSPORT**

**1. Background.** The ANG requires the capability to provide low latency, high bandwidth, and secure commercial internet service at disaster response locations. Historical response to events has consistently highlighted interference and lack of availability for cellular based communications. Available high speed data is critical for responders to ensure robust C2 capabilities and employment of forces in order to rapidly save lives and protect infrastructure. The recent availability of a secure high bandwidth, low cost satellite data transport service allows for a low latency connection that is agnostic of system type. With a low latency connection responders can use commercial or government devices with VPN to facilitate commercial or NIPR connections. This will ensure that critical C2 information is delivered to decision makers in a timely manner regardless of network. Based upon wing and state need, connection subscription plans can be tailored individually. The ANG requires one kit for each wing.

**2. Program Details.**

Quantity	Unit Cost	Program Cost
94 CSI Ground Terminals Standard Kit (3080)	\$2,500	\$235,000
<b>Total</b>		<b>\$235,000</b>



*Communications*

**HIGH FREQUENCY AUXILIARY RADIO SYSTEM**

**1. Background.** The ANG requires a High Frequency (HF) Auxiliary Radio System capable of radio communications beyond line of site. Currently units rely on line of site, space-based satellites or other long-haul transmission means to communicate. In addition to basic voice radio communications, the system needs to send and receive email traffic via a global radio email service, WinLink and/or HF Data Link. The HF capability will require minimal equipment including a radio, tuner, modem, laptop, antenna, small generator, cables, and operable by a small two-person team. The base system will be transported in two ruggedized transit cases and have a total set-up time of less than two hours. The ANG requires one HF Auxiliary Radio capability for each of the 90 wings.

**2. Program Details.**

<b>Quantity</b>	<b>Unit Cost</b>	<b>Program Cost</b>
<b>90 High Frequency Auxiliary Radio Systems (3080)</b>	<b>\$9,000</b>	<b>\$810,000</b>
<b>Total</b>		<b>\$810,000</b>

## Public Works and Engineering

### Public Works and Engineering (ESF 3)

– The United States Army Corps of Engineers is the primary agency for providing the public works and engineering ESF technical assistance, engineering, and construction management resources during response activities. ESF 3 provides road clearing, airfield recovery, electrical power generation and distribution, emergency repair of water treatment facilities (potable water, ice, and wastewater). Contracting support is provided for construction management, real estate use, life-saving and life-sustaining actions, damage mitigation, expedient bridging, and Explosive Ordnance Disposal (EOD) following a major disaster.



In a major disaster or emergency response, operations may be beyond state and local response capabilities. Homes, public buildings, bridges, and other facilities may have to be reinforced or demolished to ensure safety. Public utilities may be partially or fully inoperable. A major disaster may affect the lives of many state and local response personnel and their facilities, preventing them from performing their prescribed emergency response duties. Similarly, emergency response equipment in the immediate disaster area may be damaged or inaccessible; therefore, sufficient resources may not be available to state and local agencies to meet emergency response requirements. Federal assistance may be required to identify and deploy resources from outside the affected area to ensure a timely, coordinated, and effective response.

## **ESF 3 - Public Works and Engineering**

### **2021 Domestic Capability Priorities Conference**

#### ***Critical Capabilities List***

- Home Station Equipment Shelters
- Route Clearance Kit Trailer Modernization
- Route Clearance Kit Modernization
- Explosive Ordnance Disposal Standardized Utility Cargo Body
- Flood Control Barrier System

#### ***Essential Capabilities List***

- Upgraded 6 passenger truck
- DRBS modernization
- Outdoor covers for CE equipment
- Potable water production
- Prime mover (ESF-1)

#### ***Desired Capabilities List***

- Front end loaders
- All terrain utility vehicles
- High-capacity water pump
- Low boy trailer (ESF-1)
- Heavy equipment simulator

## HOME STATION EQUIPMENT SHELTERS

**1. Background.** The ANG requires a temporary shelter system to provide protection for vehicles and mobile equipment supporting domestic response. With the inability for inside storage, the vehicles and mobile equipment are exposed to the outside elements causing degradation and reduced lifespan. A temporary shelter would provide protection without affecting the base's real property or square footage authorization. The shelter must be flame-retardant, UV-resistant, and able to withstand strong winds, rain, and snow. Because of varying location characteristics, the anchor package must have the ability to be installed in dirt, gravel, concrete, or asphalt. Some locations may require a fully-enclosed shelter, while others may only need a sunshade. The shelter must at least have access on both ends to provide easy movement of vehicles and equipment in and out of the shelter system. Each shelter will need to be uniquely sized for the amount of domestic response vehicles and equipment each unit has assigned, with the option to be professionally installed per each unit's requirements. The ANG requires home station equipment shelters for each of the 90 wings.

### 2. Program Details.

Quantity	Unit Cost	Program Cost
90 Home Station Equipment Shelters (3080)	\$85,000	\$7,650,000
Total		\$7,650,000

**ROUTE CLEARANCE KIT TRAILER MODERNIZATION**

**1. Background.** The ANG requires rapidly-deployable route clearance kits to support local, state, and federal agencies. Following natural and man-made disasters, ANG members expediently clear roadways for emergency and utility vehicles. The existing equipment package is one of the most versatile and utilized in the civil engineer DOMOPS inventory. Many of the trailers are not properly rated for current mission load-outs, nor do they have multiple-sized front landing gear. Several critical issues have occurred, including hot brakes, multiple blown tires, and blown hubs. Stakeholders met several times to reduce trailer loads and meet minimum mission requirements, but at a reduced capability. It was determined that 25% of the fleet still requires more robust trailers with the following specifications: 30-foot long, tandem-axle, dual-wheel flatbed with pintle hitch system, heavy duty electric or air brakes, dual landing gear for equipment and personnel safety, and a Gross Vehicle Weight Rating (GVWR) of 30,000 pounds. 80% of the ANG’s legacy debris clearance kits and trailers require modernization.

**2. Program Details.**

Quantity	Unit Cost	Program Cost
18 30 Foot Tandem Axle, Dual Wheel Flat-bed Trailer (3080)	\$25,000	\$450,000
<b>Total</b>		<b>\$450,000</b>

**ROUTE CLEARANCE KIT MODERNIZATION**

**1. Background.** The ANG requires modernized route clearance capabilities. Each year ANG kits provide critical support to local, state, and federal agencies. Following natural and man-made disasters, ANG members expediently clear roadways for emergency and utility vehicles. Because several regions utilize this equipment multiple times per year, our kits’ capabilities are rapidly degrading. Additionally, our Compact Track Loader (CTL) fleet is aging, increasing the time it takes to clear an emergency route. To restore this capability, approximately 10% of the current 144-skid-steer fleet must be modernized. In order to operate the existing attachments, the skid steers require at least a 5,000-pound lift capacity, 90 HP diesel motor, and 23 GPM hydraulic pump. To prevent our teams causing unnecessary damage to existing grounds, the current flat-bottom grapple bucket must be replaced with a 72-inch wide sifting grapple bucket with a rake bottom. Additional items include a lightweight container/storage system and hydraulic hose guide to prevent blow-outs. 80% of the ANG’s legacy debris clearance kits and trailers require modernization.

**2. Program Details.**

Quantity	Unit Cost	Program Cost
72 Sifting Grapple Buckets for CTL (3080)	\$2,699	\$194,328
14 Compact Track Loaders (3080)	\$75,000	\$1,050,000
(44 Hydraulic Hose Guides (3080)	\$50	\$7200
72 Lightweight Container/Storage Systems (3080)	\$2500	\$180,000
<b>Total</b>		<b>\$1,431,528</b>

**EXPLOSIVE ORDNANCE DISPOSAL BOMB SQUAD EMERGENCY  
RESPONSE VEHICLE STABILIZED MAST AND CAMERA  
UPGRADE**

**1. Background.** The ANG Explosive Ordnance Disposal (EOD) forces require the ability to conduct long range reconnaissance and monitor downrange incident sites for known or suspected hazards in order to maintain situational awareness during emergency responses in support of domestic operations. The existing cameras on the Bomb Squad Emergency Response Vehicle (BSERV) lack infrared (IR) and thermal capabilities, which significantly reduce their effectiveness in inclement weather and during hours of darkness. The existing cameras also lack stabilization, which renders them nearly useless during moderately windy conditions, and when utilizing the on-board generator. Each of the ANG's 17 EOD flights requires an enhanced, stabilized electro-optical (EO), IR and thermal camera system for their BSERV.

**2. Program Details.**

<b>Quantity</b>	<b>Unit Cost</b>	<b>Program Cost</b>
<b>17 Vehicle Mounted EO/IR/Thermal Stabilized Cameras (3080)</b>	<b>\$175,000</b>	<b>\$2,975,000</b>
<b>Total</b>		<b>\$2,975,000</b>

*Public Works and Engineering*

**FLOOD CONTROL BARRIER SYSTEM**

**1. Background.** The ANG requires rapidly deployable barrier capabilities to effectively respond to flooding events. Increasing flooding events throughout the nation have demonstrated a bona fide need for deployable barrier solutions which can rapidly protect against damaging floodwaters. Rising waters across every area of responsibility present an increased threat to life and property. In response, our domestic capabilities must evolve beyond the difficult and time-consuming task of filling and placing sandbags. This capability requires a modular, easily transportable system that can be rapidly deployed with minimum manpower. Following employment, the barrier system must have the capability to be safely disassembled and effectively stored for future use. Additionally, this package requires trailered storage and transport. The ANG requires one flood control barrier system for each of the 90 wings.

**2. Program Details:**

<b>Quantity</b>	<b>Unit Cost</b>	<b>Program Cost</b>
<b>90 Flood Control Barrier Kits</b>	<b>\$50,000</b>	<b>\$4,500,000</b>
<b>Total</b>		<b>\$4,500,000</b>



# Firefighting

**Firefighting (ESF 4)** – Firefighting capabilities include detecting and suppressing wildland, rural, and urban fires from the ground and air, while managing and coordinating those firefighting efforts. The management of a large firefighting operation often involves thousands of people and equipment from many agencies and jurisdictions. A major disaster may impose extraordinary demands and exceed local firefighting capabilities.



ANG Fire and Emergency Services (FES) personnel can augment local firefighting resources because ANG firefighters maintain the same certifications as their civilian counterparts. The firefighting team consists of managers, incident commanders, and firefighters. In addition to



traditional fire and rescue capabilities, ANG firefighters provide hazardous materials response to include Chemical, Biological, Radiological, Nuclear, and Explosives (CBRNE) events.

Proper personnel protective equipment (PPE), tools, and training are needed for each firefighting specialty in order to reduce the inherent risks of fighting fires.

The ANG firefighting enterprise consists of 62 FES units, three C-130 units and three HH-60 units for airborne firefighting. The three Mobile Aircraft Fire Fighting System (MAFFS) units are utilized every year in support of the United States Forest Service for wildland firefighting when civilian resources are exhausted. The rotary wing resources are in constant demand for quick deployment to assist with perimeter control and spot fire elimination.



# **ESF 4 - Firefighting**

## **2021 Domestic Capability Priorities Conference**

### ***Critical Capabilities List***

- Structural Firefighting Vehicles
- Individual Wildland Firefighting kits
- Personal Protective Equipment modernization
- Aircraft and Structural Live-Fire Training Equipment
- Aerial Firefighting modernization

### ***Essential Capabilities List***

- Full Motion Video Direct Feeds from Aerial Assets
- All-In-One Trauma Aid Kit for First Responders
- Ultrasonic Mask Cleaner
- High Resolution Thermal Viewer

### ***Desired Capabilities List***

- Fire Responders Rehab Saunas
- Harris Radio Modernization

*Firefighting*

**STRUCTURAL FIREFIGHTING VEHICLES**

**1. Background.** The ANG Fire and Emergency Services (FES) units require an additional fire engine. ANG FES flights are provided fire apparatus according to Allowance Standard Code (ASC) 010, which is based on the assigned aircraft at a given location. All ANG FES flights require two P-22 fire engines, but currently only have one. Structural firefighting capability on ANG installations is dramatically reduced when the single P-22 fire engine is out of service. Additionally, a second P-22 will provide force projection capacity for off-base missions into the local community during times of disaster, while maintaining mission-essential levels of service at ANG bases. One additional P-22 fire engine is required at each of the ANG's 62 FES units.

**2. Program Details.**

<b>Quantity</b>	<b>Unit Cost</b>	<b>Program Cost</b>
<b>62 Fire Engine P-22 Vehicles (3080)</b>	<b>\$275,000</b>	<b>\$17,050,000</b>
<b>Total</b>		<b>\$17,050,000</b>

*Firefighting*

**INDIVIDUAL WILDLAND FIREFIGHTING KITS**

**1. Background.** The ANG FES flights are required to complete free National Wildland Coordinating Group (NWCG) training in order to appropriately provide initial response to wildland fires and provide Wildland Urban Interface protection to their installation. In order to receive the free training through the NWCG ANG FES flights, must properly equip their flights in accordance with NFPA 1977 upon completing the training. Each of the 63 FES units plus five non-FES units (68 total units), require 10 kits for the ANG to have a fully equipped teams of wildland firefighters to meet this critical state and Defense Support to Civil Authorities missions.

<b>Quantity</b>	<b>Unit Cost</b>	<b>Program Cost</b>
<b>680 Wildland Firefighting Kits (3080)</b>	<b>\$850</b>	<b>\$578,000</b>
<b>Total</b>		<b>\$578,000</b>

## Firefighting

### PERSONAL PROTECTIVE EQUIPMENT MODERNIZATION

**1. Background.** The ANG FES units require the modernization of PPE in order to maintain compliance with Nation Fire Protection Association (NFPA) standards. The Air Force started converting from proximity gear to structure gear in 2012. The ANG departments started receiving structure gear between 2012 and 2013. This puts the ANG's departments initial set of gear at 8-9 years of age. Per NFPA 1851, 10.1.2; "Structural firefighting ensembles and ensemble elements shall be retired IAW 10.2.1 or 10.2.2, no more than 10 years from the date the ensemble or ensemble elements were manufactured". Per NFPA 1851, 3.3.32 an Ensemble Element is "The compliant products that provide protection to the upper and lower torso, arms, legs, head, hands and feet". The ANG's initial set of gear is set to be non-complaint in 1-2 years. The PPE are required items that will assist the ANG in performance of domestic operations mission. The ANG requires 27 modernized personal protective equipment kits for each of the 62 Fire departments.

#### 2. Program Details.

Quantity	Unit Cost	Program Cost
1,674 Turnout Coats	\$1,325	\$2,218,050
1,674 Turnout Trousers	\$878	\$1,469,772
1,674 Helmets	\$258	\$431,892
1,674 Gloves	\$90	\$150,660
1,674 Nomex Hoods	\$98	\$164,052
1,674 Boots	\$450	\$753,300
<b>Total</b>	<b>\$3,099</b>	<b>\$5,187,726</b>

## *Firefighting*

### **AIRCRAFT AND STRUCTURAL LIVE-FIRE TRAINING EQUIPMENT**

**1. Background.** The ANG requires modernized portable live-fire training equipment to support Fire and Emergency Services (FES) unit annual training needs. ANG FES personnel are required to conduct annual aircraft and structural live-fire training for Aircraft Rescue Fire Fighters (ARFF), under 14 Code of Federal Regulations part 139. The vast majority of ANG FES flights do not possess this capability on-site, and must travel to accomplish their annual certifications. ANG Regional Training Sites (RTS) and Combat Readiness Training Centers (CRTC) possess live-fire training assets, but they are routinely out of service and are increasingly obsolete. With the introduction of new technologies, ARFF personnel have the option to train on both mobile as well as fixed training facilities. Mobile live-fire trainers located in each Federal Emergency Management Agency (FEMA) region would be shared between all ANG FES units, allowing for flexible training options and the ability to conduct training with assigned firefighting resources at the home station. The ANG requires a mobile aircraft and structural burn training system in each of the ten FEMA regions.

#### **2. Program Details.**

<b>Quantity</b>	<b>Unit Cost</b>	<b>Program Cost</b>
<b>10 Mobile Structural Burn Trailers (3080)</b>	<b>\$550,000</b>	<b>\$5,500,000</b>
<b>5 Mobile Aircraft Burn Trailers Large Frame (3080)</b>	<b>\$750,000</b>	<b>\$3,750,000</b>
<b>5 Mobile Aircraft Burn Trailers Small Frame (3080)</b>	<b>\$750,000</b>	<b>\$3,750,000</b>
<b>Total</b>		<b>\$13,000,000</b>



## *Firefighting*

### **AERIAL FIREFIGHTING MODERNIZATION**

**1. Background.** The ANG requires the ability to respond to fire seasons increasing in length and intensity. The Aerial Firefighting community consists of three C-130 ANG Mobile Aircraft Fire Fighting System (MAFFS) units and three HH-60 rotary wing units. The three MAFFS units each require a fixed fire retardant storage tank to enhance airborne firefighting capabilities. The installation of a 100,000 gallon tank and associated pump equipment for a fixed pit adjacent to the MAFFS pits will reduce the response time from 24 hours to 3 hours, and promote efficient support to civil agencies in this critical Defense Support of Civil Authorities (DSCA) mission. In addition to the fixed based pits, all three units require one new compressor system, with a spare at one location. The current compressors are failing due to age and are owned by the United States Forest Service. The compressors need to be a self-driven and self-contained compressor assembly with a capacity of 350 cfm at full load pressure rating of 1200 psi. The compressor will be capable of filling a 57 cubic foot reservoir to 1200 psi in 15 minutes at 6,000 ft. elevation or 13 minutes at sea level. The ANG has established a requirement to modify the existing MAFFS II to increase retardant capacity by decreasing the systems empty weight, improve aircraft integration and compatibility, and improve system control. Each MAFFS unit requires two I-MAFFS. I-MAFFS will provide constant flow 3,300 gallon capacity, roll-on and roll-off aerial firefighting system for the C-130H and C-130J aircraft. I-MAFFS is a safer and more efficient way to do business original MAFFS design, and will be owned by the ANG. Last, the ANG rotary wing units require a sling-loaded fire-bucket system that provides helicopters the ability to fight wildland fires and eliminate spot fires. Rapid response with precision helicopter water drops are part of the reason that over 80% of wildfires are contained in the Continental United States before they threaten any structures or dwellings. The ability to control the volume of water dropped from the bucket and to fill the bucket from small sources of water (ponds, pools, etc.) will greatly enhance firefighting effectiveness. Each rotary wing unit requires four fire-bucket systems. These upgrades will enable the rapid projection of military and civilian aerial firefighting resources in the infancy of a wildland fire, and allow the Governors of the states to tap into guard resources before having to coordinate between the lead federal agencies, the Defense Coordinating Officer and the Secretary of Defense.

#### **2. Program Details.**

Quantity	Unit Cost	Program Cost
3 MAFFS Tanker Base Fixed Pits (3080)	\$550,000	\$1,650,000
4 MAFFS Ground Based Compressor (3080)	\$300,000	\$1,200,000
6 I-MAFFS Systems (3080)	\$6,000,000	\$36,000,000
12 Aerial Firefighting Bucket Systems, 530-Gallon (3080)	\$48,200	\$578,400
<b>Total</b>		<b>\$37,943,400</b>

## Information and Planning

### Information and Planning (ESF 5) –

Information and Planning has grown tremendously as the sheer volume of information available to responders and incident commanders has exponentially increased with the wide-scale fielding of new technology and communication devices. ESF 5 encompasses the Processing, Analyzing, and Dissemination (PAD) of information needed for coordinating responses and utilizing the resources available. This effort relies on the information generated from ground and air assets used for Incident Awareness and Assessment (IAA). The Command and Control and PAD effort



is supported by the ability to receive ground truth information from responders and communicate it accurately to decision makers.



# **ESF 5 - Information and Planning**

## **2021 Domestic Capability Priorities Conference**

### ***Critical Capabilities List***

- Low Earth Orbit (LEO) Satellite Commercial Space Internet (CSI)
- Unified Common Operating Picture
- Emergency Management Response Trailer Modernization
- Rapid Deployable Detection Grid Suite
- Integrated Unmanned Situational Awareness System

### ***Essential Capabilities List***

- Fly Away Full-Motion Video Downlink Kit
- Wide Area Multi-Spectrum Imagery
- Mobile Emergency Operations Center Modernization
- Exercise and Evaluation Design Toolkit

### ***Desired Capabilities List***

- None

**Low Earth Orbit (LEO) Satellite Commercial Space Internet (CSI)**

**1. Background.** The ANG requires ground and airborne access to Commercial Space Internet (CSI), to include command and control of assets through CSI. Rapid and robust data passage is critical to the needs of the Incident Commander. With CSI terminals, decision makers will be able to start receiving and providing information at a fraction of the time required to set up legacy systems. Having these terminals on both ground and air platforms will allow for multiple nodes to communicate the required information quickly and seamlessly between various entities. The ANG requires one ground terminal for each of the Emergency Management (EM) flights, High Assurance Internet Protocol Encryptors (HAIPes), and air terminals for different aircrafts. The ANG requires one capability for each of the 90 wings.

**2. Program Details.**

Quantity	Unit Cost	Program Cost
<b>90 Ground Terminals (3080)</b>	<b>\$500</b>	<b>\$45,000</b>
<b>90 HAIPes (3080)</b>	<b>\$5,295</b>	<b>\$476,550</b>
<b>NRE per aircraft (3080)</b>	<b>\$5,000,000</b>	<b>\$5,000,000</b>
<b>50 air terminals (3080)</b>	<b>\$100,000</b>	<b>\$5,000,000</b>
<b>Total</b>		<b>\$10,521,550</b>

**UNIFIED COMMON OPERATING PICTURE**

**1. Background.** The ANG requires a single solution that will translate the data from responders in the field to share with local responders, Joint Operations Center personnel, and our Active Duty counterparts. The domestic operations enterprise requires a Common Operating Picture (COP) that facilitates crisis management and collaboration with the forthcoming Air Force enterprise solution, State National Guard Joint Force Headquarters (JFHQ), and local jurisdictions. To provide a holistic sight picture of response actions taking place across the enterprise, based on the incident level, the currently fielded COP needs to be able to collect and disseminate information across disparate systems. Air Force, JFHQs, States and local jurisdictions all use different systems to track similar data and information at different levels. These legacy data collection systems do not share data and require redundant data entry from system to system at all levels. Non-recurring engineering is needed to share data for up channeling and sharing with the appropriate level, based on the type of incident, without taking away the existing capability provided to responders in the field. Advancements in government off the shelf technology have aided in integration of sensors used to track personnel and equipment, and need to be fed into existing COPs to give a better accountability of resources and incident statuses. These advances allow for integration of existing fielded communication systems to provide location-based data and tracking information. The ANG requires NRE to integrate the systems of record and integrate currently fielded equipment at each of the 90 wings.

**2. Program Details.**

<b>Quantity</b>	<b>Unit Cost</b>	<b>Program Cost</b>
<b>90 NRE for integration of systems of record (3080)</b>	<b>\$14,000</b>	<b>\$1,260,000</b>
<b>90 NRE for currently fielded equipment integration (3080)</b>	<b>\$12,000</b>	<b>\$1,080,000</b>
<b>Total</b>		<b>\$2,340,000</b>

**EMERGENCY MANAGEMENT RESPONSE TRAILER  
MODERNIZATION**

**1. Background.** The ANG requires CBRN response trailers be retro-fitted to provide increased capability to ANG units. Retro-fitting existing trailers into a multi-capable incident response trailer will provide data connections, increased work area and improved environment controls to support incident command and Joint Task Force teams. By installing additional cooling and heating, along with increasing the insulation to maintain needed temperatures, the interior temperatures of the trailer will be achievable. To increase the workspace footprint by 600 square feet, a collapsible, ruggedized, and weather resistant shelter that attaches to the trailer is required. One shelter to attach to the rear of the trailer and provide a shelter of at least 20’x20’ as well as a shelter that attaches to the side entrance door/passenger side and provides an area of at least 10’x20’. The shelter systems will come with proper anchoring for all surfaces and Heating and Air Conditioning to regulate temperatures. A “reel” type power connection to provide at least 10ea 110v power outlets to each of the attached shelters. Power supply will be controlled by the on board generator and be professionally wired to the generator and breakers. To be able to utilize external communication backhauls, a wireless router will be needed, providing a high speed Wi-Fi bubble around the work area. Finally, all trailers currently without a hitch, will receive a sway control/weight distribution hitch kit proper for the trailers to increase safety while in transport. ANG requires modernization of the existing trailers located at the 65 Emergency Management Flights.

**2. Program Details**

Quantity	Unit Cost	Program Cost
<b>65 Trailer Skin Refurbishment (3080)</b>	<b>\$5,000</b>	<b>\$325,000</b>
<b>65 Insulation Kits (3080)</b>	<b>\$4,000</b>	<b>\$260,000</b>
<b>65 Heating Kits (3080)</b>	<b>\$4,500</b>	<b>\$292,500</b>
<b>65 Air Conditioner Upgrade (3080)</b>	<b>\$3,500</b>	<b>\$227,500</b>
<b>65 Expansion Shelters (3080)</b>	<b>\$75,000</b>	<b>\$4,875,000</b>
<b>65 Communications Plug In Kits (3080)</b>	<b>\$5,000</b>	<b>\$325,000</b>
<b>65 Sway Control Bar Systems (3080)</b>	<b>\$1,500</b>	<b>\$97,500</b>
<b>Total</b>		<b>\$6,402,500</b>



**RAPID DEPLOYABLE DETECTION GRID SUITE**

**1. Background.** The ANG Emergency Management career field requires rapid deployable Chemical, Biological, Radiological detection grid suite that facilitates rapid flow of information from the field level sensors to the team lead. This suite will utilize an Android based Government off-the-shelf software as the backbone and have its own independent wireless mesh network for data transfer. Currently fielded sensors that are not compatible with the Android based software and the mesh network will require non-recurring engineering or replacement. End user devices are also needed to provide situational awareness and control the sensors remotely. This suite will provide the near real-time data needed for Emergency Management personnel to provide rapid, accurate Mission Oriented Protective Posture (MOPP) recommendations for decision makers to determine lifesaving actions. Finally, integration will be needed for the inclusion of data into the current Common Operational Picture for the ANG. This suite is needed at all 91 ANG Emergency Management units as well as at the 9 Emergency Management training sites.

**2. Program Details.**

Quantity	Unit Cost	Program Cost
NRE for integration of existing systems of record (3080)	\$500,000	\$500,000
NGB leadership update system enhancements (3080)	\$500,000	\$500,000
NRE for currently fielded equipment integration (3080)	\$300,000	\$300,000
400 End User Devices for Integration (3080)	\$25,000	\$10,000,000
400 Tactical Gear for End User Devices (3080)	\$4,000	\$1,600,000
400 Mobile Ad-Hoc Network Radios (3080)	\$15,000	\$6,000,000
<b>Total</b>		<b>\$18,900,000</b>

## **INTEGRATED UNMANNED SITUATIONAL AWARENESS SYSTEM**

**1. Background.** The ANG requires a suite of unmanned systems that can be used simultaneously while providing situational awareness to a single node of users. These unmanned systems include ground and aerial assets. Each asset, regardless of ground or air, must be capable of transporting multiple sensors that are also providing live data back to the same single node of users. Each asset must also be field repairable utilizing three dimensional printing technology. These sensors include, but are not limited to, visual, thermal, chemical, and radiological. Additionally, all sensor feeds will need to have the ability to be controlled through an Android based government off-the-shelf software. This system is needed at all 91 ANG Emergency Management units as well as at the 9 Emergency Management training sites.

### **2. Program Details.**

<b>Quantity</b>	<b>Unit Cost</b>	<b>Program Cost</b>
<b>100 Medium Unmanned Ground System (3080)</b>	<b>\$100,000</b>	<b>\$10,000,000</b>
<b>100 Unmanned Aerial System (3080)</b>	<b>\$50,000</b>	<b>\$5,000,000</b>
<b>NRE for integration into ATAK (3080)</b>	<b>\$675,000</b>	<b>\$675,000</b>
<b>200 Mobile Ad-Hoc Network Radios (3080)</b>	<b>\$15,000</b>	<b>\$3,000,000</b>
<b>Total</b>		<b>\$18,675,000</b>

## **Mass Care, Emergency Assistance, Temporary Housing & Human Services**

**Mass Care, Emergency Assistance, Temporary Housing, & Human Services (ESF 6)** – During a disaster, mass care response includes the delivery of mass shelter, feeding, and first aid to disaster survivors, fatality management, religious support to responders, and systems to distribute emergency relief supplies to disaster survivors. Disaster survivor check-in and status reporting systems are used to coordinate rescuers, report on victim status, and assist families with reuniting.



The ANG provided key services in past mass care events, including the first major hurricane to make landfall in nearly two decades during the 2018, 2019 and 2020 hurricane seasons. During these events, thousands of Soldiers and Airmen were called upon to provide emergency assistance and temporary housing. Additionally, another severe wildfire season in California in 2019 demonstrated how ANG mass care resources can mobilize to assist federal, state, and local authorities.

The ANG needs additional materials, processes, and training to better reach the people and areas requiring assistance, provide essential services once on the scene, and achieve a more effective response to a mass care situation



# **ESF 6 - Mass Care, Emergency Assistance, Temporary Housing & Human Services 2021 Domestic Capability Priorities Conference**

## ***Critical Capabilities List***

- Disaster Relief Mobile Kitchen Trailer (DRMKT)
- Generator Modernization
- Ultra-Light Terrain Vehicle (ULTV)
- Service Member Bed Down
- Purified Water Generation

## ***Essential Capabilities List***

- Standardized Triage Mobile Pack

## ***Desired Capabilities List***

- None

**DISASTER RELIEF MOBILE KITCHEN TRAILER**

**1. Background.** The ANG requires additional Disaster Relief Mobile Kitchen Trailers (DRMKT) to support emergency operations. DRMKTs were deployed in support of hurricane relief efforts such as Hurricanes Michael, Harvey, Irma, and Maria, as well as Operation Campfire to assist with the California wildfires. The DRMKT provides a mass field feeding capability, and has been tasked and continually requested for Presidential Inaugurations, Innovative Readiness Training, Deployments for Training, Patriot Exercises, and numerous temporary deployments across the nation. The ANG needs 30 additional DRMKTs to provide one DRMKT in every state and territory.

**2. Program Details.**

<b>Quantity</b>	<b>Unit Cost</b>	<b>Program Cost</b>
<b>30 DRMKTs (3080)</b>	<b>\$750,000</b>	<b>\$22,500,000</b>
<b>Total</b>		<b>\$22,500,000</b>

## **GENERATOR MODERNIZATION**

**1. Background.** The ANG requires generator modernization to effectively respond to domestic incidents. Chemical, Biological, Radiological, and Nuclear (CBRN) Enhanced Response Force Package (CERF-P) Medical Elements and Fatality Search and Recovery Teams (FSRT) respond to mass casualty incidents and provide triage, emergency medicine, patient stabilization, and storage/transportation of human remains to mitigate the effects of a terrorist incident or natural/man-made disaster. These teams are a component of the CBRN Enhanced Response Force and provide Defense Support to Civil Authorities. Disasters such as Hurricane Katrina, Hurricane Ike/Gustav, Washington landslides, Haiti earthquakes, and 9/11 have shown a consistent need for quick and efficient emergency care to mitigate human suffering. It is well established that the patient's chances of survival are greatest if they receive care within a short period of time after a severe injury. The availability of powered medical equipment at the incident location is a prime factor in saving the lives of critical patients, preserving human remains, and increasing the quality of care. The current 17.5 kW gas generators are outdated and need modernization. Each of the ANG's 27 FSRT and 27 CERF-P units requires four new generators.

### **2. Program Details.**

<b>Quantity</b>	<b>Unit Cost</b>	<b>Program Cost</b>
<b>216 17.5 kW Generators (3080)</b>	<b>\$4,500</b>	<b>\$972,000</b>
<b>Total</b>		<b>\$972,000</b>

## **ULTRA LIGHT TERRAIN VEHICLE (ULTV)**

**1. Background.** The ANG Fatality Search and Recovery Teams (FSRT) are required to transport a 4-person team into a mass fatality incident with the ability to transport one human remain to their processing and storage area. With the continuous requests from local and state agencies for assistance in fatality management, the 27 FSRTs equipment is quickly degrading. The current equipment is 10 years old and almost every team in the nation has hindered capabilities due to the degradation of these machines. The modernization of the ULTVs and trailers is essential to mission success in mass fatality incidents. The modernized ULTVs will enhance the mission capabilities by including: a longer, flatbed style back which can carry two human remains per vehicle, a front attachment piece for carrying one additional human remain, 3,500 pound front winch system, windshield wipers, rear and side view mirrors, protective roof with hinged window doors, LED light bar, and defrost kit. The modernized trailers will need to be long enough to support the current ULTVs length. The trailers will be modernized from the current open air flatbed style to a fully enclosed all aluminum storage and transport trailer. The trailers include: a dual load and unload capability (v-nosed front w/ unload ramp, flat back with load ramp), puck style locks for all doors, all aluminum build, side wall vents, frame mounted air load tie down points, a minimum gross vehicle weight rating (GVWR) of 10,000 pound, tandem axles, LED lighting outside and inside trailer for safe working conditions, and anti-sway stabilizer kits for safe transportation. The ANG FSRT requires a full modernization to the three FSRT ULTVs and two trailers located at each of the 27 FSRT deployable units.

### **2. Program Details.**

<b>Quantity</b>	<b>Unit Cost</b>	<b>Program Cost</b>
<b>81 ULTVs</b>	<b>\$50,000.00</b>	<b>\$4,050,000.00</b>
<b>54 Trailers</b>	<b>\$16,000.00</b>	<b>\$864,000.00</b>
<b>Total</b>		<b>\$4,914,000.00</b>

**SERVICE MEMBER BED DOWN**

**1. Background.** The ANG requires rapidly deployable emergency bed down sets for its first responders. ANG units tasked by their state for initial response forces or disaster response do not have the capability to self-billet. Response forces burden local relief efforts because service members bed down in local shelters. Each bed down set must shelter 30 service members on cots, and be self-sustainable with power, air conditioning, heat, and lighting. The ANG requires one bed down set, consisting of three 10-man shelters and associated equipment, for each of its 94 Civil Engineering Units.

**2. Program Details.**

<b>Quantity</b>	<b>Unit Cost</b>	<b>Program Cost</b>
<b>282 10-Man Shelters (3080)</b>	<b>\$18,973</b>	<b>\$5,350,386</b>
<b>2,820 Cots (3080)</b>	<b>\$62.65</b>	<b>\$176,673</b>
<b>94 Generators (3080)</b>	<b>\$26,705</b>	<b>\$2,510,270</b>
<b>282 Environmental Control Units (3080)</b>	<b>\$11,283</b>	<b>\$3,181,806</b>
<b>282 Lighting Kits (3080)</b>	<b>\$15,000</b>	<b>\$4,230,000</b>
<b>Total</b>		<b>\$15,449,135</b>



## **PURIFIED WATER GENERATION SYSTEMS**

**1. Background.** The ANG Civil Engineers require Purified Water Generation capability in the event local utilities lose capability to produce potable water for base populations and specialized limited use applications within the community following a disaster. Most Air Force installations do not have capabilities for water filtration or generating potable water. These installations are solely reliant on the local utility companies to provide potable water for their base population. This requirement further extends to the National Guard's capability to help civilian emergency services in the event of a disaster that may cripple or disable the local utilities capability to provide potable water for life saving services such as medical, CBRN, or for first responders. The Purified Water Generation kits need to include various options specifically tailored to the geography of service location: Atmospheric Water Generation for regions with limited surface water resources or principal aquifers, Reverse Osmosis Water Purification Units for regions with surface water resources, and deep wells drilled at bases with principal aquifers. Without potable water the Air Guard cannot provide aid to first responders and cannot continue its mission.

### **2. Program Details.**

<b>Quantity</b>	<b>Unit Cost</b>	<b>Program Cost</b>
<b>5 Atmospheric Water Generation</b>	<b>\$400,000</b>	<b>\$2,000,000</b>
<b>82 Deep Well Drilled at base</b>	<b>\$16,600</b>	<b>\$1,361,200</b>
<b>10 ROWPU at FEMA Regions</b>	<b>\$250,000</b>	<b>\$2,500,000</b>
<b>Total</b>		<b>\$5,861,200</b>

# Logistics

**Logistics (ESF 7)** – The logistics function encompasses those capabilities necessary for the delivery of supplies, equipment, services, and facilities. Integral to logistics is the coordination of supply sources, acquisition, resource tracking, facility space acquisition, and transportation coordination. Logistics includes a centralized management of supply chain functions in support of local, state, and federal governments during domestic incidents. Logistical planning requires integration with community logistics partners through prior planning and crisis collaboration to reestablish local and state self-sufficiency as rapidly as possible.



## **ESF 7 - Logistics**

### **2021 Domestic Capability Priorities Conference**

#### ***Critical Capabilities List***

- Modular Aircraft Loading Ramps
- Mobile Loading Dock and Trailer Ramps
- Hard-Sided Expandable Small Air Mobile Shelter
- Transportable Fuel Storage and Pump Capacity
- 25,000 Pound High-Reach Aircraft Loader

#### ***Essential Capabilities List***

- Self-Loading 8,000 Pound Forklift and Trailer Combination
- Stackable Modular Agile Storage Solution (ISU 90 Size)
- Mobile Aviation Refueling System
- High-Reach Wide Body Aircraft Loader
- Deployable Ice Making Capability

#### ***Desired Capabilities List***

- Polar Tactical Airlift Extreme Cold Clothing System (PTAECCS)
- Track & Trace DOMOPS Personnel & Equipment Solution

**MODULAR AIRCRAFT LOADING RAMPS**

**1. Background.** The ANG needs modular aircraft loading ramps. The ANG currently uses pre-cut wood shoring to meet the Air Transportability Test Loading Activity (ATTLA) requirements for loading specialized equipment. Often, the wood shoring requires several aircraft pallets for air transport along with the specialized cargo, and adds several thousand pounds of weight. Modular aircraft loading ramps will significantly reduce the number of pallets required and the weight of the shoring. Each ANG wing requires eight sets of modular aircraft loading ramps.

**2. Program Details.**

Quantity	Unit Cost	Program Cost
27 Eight Set Modular Aircraft Ramps (3080)	\$12,000	\$324,000
Total		\$324,000

## MOBILE LOADING DOCK AND TRAILER RAMPS

**1. Background.** The ANG requires mobile loading docks and trailer ramps to enable cargo transfer operations in a variety of configurations and geographic locations to support contingency operations. Mobile loading docks and ramps allow for the transfer of equipment, supplies, and vehicles from commercial transport assets without the need for permanent, stationary loading docks. They also allow Point of Distribution missions for the disbursement of supplies and equipment to disaster-stricken areas. Mobile loading docks capable of supporting up to 100,000 pounds, with manual height adjustment from 32 to 56 inches, better equips ANG units to support domestic incidents. Both loading docks and trailer ramps should be of adequate width to accommodate a variety of typical cargo and equipment loads. During domestic operations, these mobile loading docks and ramps can be used to transfer trailers and vehicles ranging in size from commercial semi-trailers to Light Medium Tactical Vehicles. In addition to supporting the ANG's domestic mission, mobile loading docks and trailer ramps are capable of supporting overseas deployments. Each of the 90 ANG wings requires one mobile loading dock and one mobile trailer ramp.

### 2. Program Details.

Quantity	Unit Cost	Program Cost
94 Mobile Loading Docks (3080)	\$25,000	\$2,350,000.00
6 Trailer Ramps (3080)	\$7,000	\$42,000
<b>Total</b>		<b>\$2,392,000.00</b>

**HARD-SIDED EXPANDABLE SMALL AIR MOBILE SHELTER**

**1. Background.** The ANG requires a standardized, portable operations center to receive and coordinate critical supplies and personnel in both austere and domestic locations. During domestic operations, the portable work centers can be used for flight line visibility, load planning, in-transit visibility, joint inspection, cargo and passenger manifesting. This shelter needs to be portable and transportable utilizing one 463L pallet position. Additionally, it needs to be able to be uploaded/downloaded with a 10,000 pound forklift. All 90 ANG wings, plus one additional at each of the five wings with a Contingency Response unit, needs a hard-sided expandable small air mobile shelter.

**2. Program Details.**

Quantity	Unit Cost	Program Cost
95 Small Air Mobile Shelters (3080)	\$239,445	\$22,747,275
<b>Total</b>		<b>\$22,747,275</b>

**TRANSPORTABLE FUEL STORAGE AND PUMP CAPACITY**

**1. Background.** The ANG requires transportable consolidated motor gas and diesel fuel storage/delivery capability for fueling a wide range of vehicles and equipment including rescue and recovery vehicles, ground debris removal equipment, and generators. The capability must be environmentally safe, self-contained, securable, and designed to be easily loaded onto stake bed trucks or service trailers with standard Material Handling Equipment (MHE) for quick response and transportation to urban, semi urban, and remote sites. Northern tier bases require units with integrated heaters to maintain fuel integrity and prevent diesel gelling. Alaska requires suitability for operating in arctic conditions down to -60 degrees Fahrenheit for extended periods of time. Each ANG wing requires a quantity of four (up to) 300 gallon capacity transportable consolidated fuel storage/delivery systems capable of transporting and storing diesel or gasoline.

**2. Program Details.**

Quantity	Unit Cost	Program Cost
148 300 gallon diesel transportable fuel containers with pumps	\$6,500	\$962,000
148 300 gallon gasoline transportable fuel containers with pumps	\$6,500	\$962,000
80 300 gallon diesel transportable fuel containers with pumps with heater	\$8,800	\$704,000
80 300 gallon gasoline transportable fuel containers with pumps with heater	\$8,800	\$704,000
<b>Total</b>		<b>\$3,330,000</b>

## 25,000 POUND HIGH-REACH AIRCRAFT LOADER

**1. Background.** The ANG requires modern 25,000 pound high-reach loaders (K-loaders) that meet or exceed current Air Force loading equipment standards in order to quickly load heavy cargo and equipment onto wide-body aircraft to support domestic response and Combatant Command mobility operations. Modern K-loaders are disbursed throughout the ANG, mainly across 44 heavy lift aircraft wings (C-130, C-17, and KC-135); however, eight ANG units are still equipped with outdated K-loaders approaching the end of their useful design life. These K-loaders present maintenance challenges due to frequent malfunctions and growing parts obsolescence, costing each unit approximately \$25,000 per year for upkeep. These outdated K-loaders prevent ANG Airmen from training on the same equipment they are expected to operate during deployed contingency operations. Replacing these eight aging assets will greatly enhance the ANG's ability to rapidly support state missions during domestic response operations as well as Combatant Command tasking's. Each of the eight K-loaders approaching end of life need to be replaced.

### 2. Program Details.

Quantity	Unit Cost	Program Cost
8 25,000 Pound High Reach Aircraft Loaders (3080)	\$800,000	\$6,400,000
Total		\$6,400,000



## Public Health and Medical Services

**Public Health/Medical Care (ESF 8)** – Public health and medical services include emergency medical management of health service resources, such as preventive and curative health measures, triage of injured or sick, evacuation of the injured or sick, fatality management, blood management, medical supply, equipment, stress control, medical, dental, veterinary, laboratory, optometric, nutrition therapy, bioenvironmental health, and medical intelligence services. These services also include civilian emergency medical management in coordination with religious support teams. Public health and medical services support the public health system in the distribution and administration of vaccines and antidotes, implementation of state emergency medical response plans, protection of critical force health, and delivery of mortuary support.



ANG medical services may be called upon to support medical emergencies independently or cooperatively, depending on the emergency. These services continue to develop cooperative efforts of medical response and support with local emergency medical management organizations at the state, county, and city levels.



Over the last several years, the ANG has developed a robust Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives (CBRNE) response plan that includes Civil Support Teams (CST), Homeland Response Forces (HRF), and CBRNE Enhanced Response Force Packages (CERFP). These emergency response forces are equipped and trained to respond to hazards, to include specialized skills needed at CBRNE-type events.

## **ESF 8 - Public Health and Medical Services**

### **2021 Domestic Capability Priorities Conference**

#### ***Critical Capabilities List***

- Critical Care Air Transport Team / Enroute Patient Staging System Kits
- Rapid Response Shelters
- Oxygen Generation System
- Tactical Combat Casualty Care Medical Kits
- Aeromedical Evacuation Equipment Kits

#### ***Essential Capabilities List***

- Bariatric Litters
- Tactical Interoperable Radios
- Infectious Disease Patient Movement
- Patient Tracking System
- Telemedicine

#### ***Desired Capabilities List***

- None

**CRITICAL CARE AIR TRANSPORT TEAM/ ENROUTE PATIENT STAGING SYSTEM KITS**

**1. Background.** The ANG requires critical care equipment to safely move patients. Critical Care Air Transport Teams (CCATTs) and En-Route Patient Staging Systems (ERPSS) to assist with carrying out the mission of Defense Support of Civil Authorities (DSCA) and the Aeromedical Evacuation (AE) system, which includes air transport of patients under medical supervision while delivering optimal care. CCATT/AE serves as a distributive medical treatment facility (MTF). The CCATTs are utilized as a supplementation package to the primary medical AE crew. CCATTs maintain/enhance the standard of care provided to critically ill/injured/burned patients who require continuous stabilization and advanced care during transport to the next level of care. Once deployed, the CCATTs are an AE asset and fall under the expeditionary AE squadron to which they are assigned/attached. CCATTs are a limited, rapidly-deployable resource available in selected situations to supplement the AE system. They are engaged after the patient has received essential, stabilizing care by supported ground medical support personnel. CCATTs are able to continuously monitor and maintain stabilization of critically ill/injured/burned patients during patient movement activities in either an inter theater or intra theater AE mission support role. A CCAT training equipment set is also required to conduct required training for CCAT personnel to maintain proficiency. The ERPSS has a two-fold mission: provide support and continuity of medical care for patient movement and serve as an integral patient interface to the Air Force components of the Global AE system and the Air National Guard DSCA mission. The Global AE system consists of unregulated movement via Casualty Evacuation (CASEVAC), Medical Evacuation (MEDEVAC), and/or AE from the point of patient injury, illness, or wounding, through successive roles within the theater, to include evacuation to definite care when warranted. The ERPSS provides personnel and equipment necessary for 24-hour patient staging operations, administrative processing and patient ground transportation between the staging facility and the aircraft. Equipment is required for each of the 10 CCAT units and the 2 ERPSS units.

**2. Program Details.**

Quantity	Unit Cost	Program Cost
10 CCAT Equipment Kits (3080)	\$250,000	\$2,500,000
1 CCAT Training Equipment Set (3080)	\$1,636,000	\$1,636,000
2 ERPSS Equipment Kits (3080)	\$2,200,000	\$4,400,000
<b>Total</b>		<b>\$8,536,000</b>

## RAPID RESPONSE SHELTERS

**1. Background.** The ANG medical element of the Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives (CBRNE) Enhanced Response Force Package (CERFP) requires rapid response shelters to provide medical care in a timely manner. The new medical shelters must be designed to network together through a simple connection process and must not require tools, ladders or equipment to deploy. The interior frame should allow support barscapable of suspending up to 50 pounds of medical equipment and have rigid double doors to provide a large entry way with a ramp to move gurneys and large equipment. Roof cap vents toreduce condensation and a flame retardant vinyl that is resistant to ultraviolet light, mildew andabrasion is required. The rapid response shelter should have anchor sets with water bladders; a heating, ventilation and air conditioning (HVAC) system; light emitting diode (LED) lighting; and ground fault circuit interrupter (GFCI) outlets. The ANG needs six rapid response tents foreach of its 27 CERFP teams.

### 2. Program Details.

Quantity	Unit Cost	Program Cost
162 Rapid Response Shelters (3080)	\$20,804	\$3,370,248
162 Air Shelter Anchor Sets w/Water Bladders (3080)	\$625	\$101,250
162 Air Shelter Radiant Barrier Insulation Kits with HVAC Plenum (3080)	\$3,200	\$518,400
162 LED Lighting System/Control Box Kits for Shelters (3080)	\$5,527	\$895,374
162 Equipment Fastening Rod Kits/Equipment GFCI Outlets (3080)	\$500	\$81,000
<b>Total</b>		<b>\$4,966,272</b>

## OXYGEN GENERATION SYSTEM

**1. Background.** The ANG requires a lightweight, self-contained, deployable oxygen generation system capable of producing medical-grade, 93% oxygen from ambient air at the point of use. The availability of medical oxygen in a mass casualty incident is a prime factor in saving the lives of critical patients. The ANG's current oxygen distribution system is no longer supported by the manufacturer and replacement parts are no longer available. In addition, the use of high-pressure oxygen cylinders creates an unacceptable logistical burden associated with transportation, refill, and storage. A self-contained oxygen generation system eliminates resupply requirements. Each of the ANG's 27 Homeland Response Force / Chemical, Biological, Radiological, Nuclear, and Explosives (CBRNE) Enhanced Response Force Package (CERFP) medical elements needs an oxygen generation system.

### 2. Program Details.

Quantity	Unit Cost	Program Cost
27 Deployable Oxygen Generation Systems (3080)	\$72,000	\$1,944,000
<b>Total</b>		<b>\$1,944,000</b>

## TACTICAL COMBAT CASUALTY CARE MEDICAL KITS

**1. Background.** The ANG requires Tactical Combat Casualty Care (TCCC) Medical Kits at each ANG medical unit. In April 2020, TCCC replaced Self Aid Buddy Care (SABC) as the new standard of initial response medical treatment and care. All ANG personnel will require TCCC training on a recurring basis as well as prior to deployment. Medical (clinical personnel) will also require a more in depth recurring two day course. A strategic partnership with the National Association of Emergency Medical Technicians (NAEMT) in conjunction with the Military Training Network (MTN) at the Uniformed Services University of the Health Sciences will provide the necessary educational infrastructure to increase the quality of TCCC training in the DoD and, as a result, improve outcome for our nation’s combat wounded. The ANG does not currently possess the equipment needed in order for all members to be instructed in TCCC. Two TCC Medical Kits are required at each of the 94 ANG Medical Units.

### 2. Program Details.

Quantity	Unit Cost	Program Cost
<b>188 TCCC Course Materials (NAEMT) (3080)</b>	<b>\$12,618</b>	<b>\$2,372,184</b>
<b>188 TMK – IFAK Pouch &amp; Insert Supplies (3080)</b>	<b>\$8,984</b>	<b>\$1,688,992</b>
<b>188 Medical Supplies (3080)</b>	<b>\$19,088</b>	<b>\$3,588,54</b>
<b>188 Manikin (3080)</b>	<b>\$134,200</b>	<b>\$25,229,600</b>
<b>Total</b>		<b>\$32,879,320</b>

## AEROMEDICAL EVACUATION EQUIPMENT KITS

**1. Background.** ANG Aeromedical Evacuation (AE) units require an additional Flight Equipment Kits (IFK) used during AE Missions. The ANG needs AE IFKs to safely move critical and non-critical patients. During mass civilian evacuations, the ANG is tasked with supporting the air transport of non-critical and critically ill patients located in hospitals in the affected area. An AE IFK, consisting of a defibrillator, vital signs monitor, intravenous (IV) infusion pump, suction pump, airway management kit, and patient care supplies will significantly improve a patient’s chances of survival during transport. Based on disaster relief efforts, the ANG requires enough AE IFKs to move up to 560 patients in 24 hours. AE crews and IFKs are required for all patient movement to include critically ill patients. One AE IFK is required at each of the ten ANG AE units.

### 2. Program Details.

Quantity	Unit Cost	Program Cost
10 Aero Medical Evacuation Kits (3080)	\$350,000	\$3,500,000
Total		\$3,500,000

## Search and Rescue

**Search and Rescue (ESF 9)** – The ANG performs search and rescue utilizing 62 Urban Search and Rescue (USAR) teams distributed across the 10 Federal Emergency Management Agency FEMA regions. All teams are organized and trained to rapidly deploy and provide an initial search and rescue capability within hours of an incident or natural disaster. These teams provide Land Search and Rescue (SAR), Maritime/Coastal/Waterborne SAR, and structural collapse USAR. SAR services include distress monitoring, incident communications, locating distressed personnel, coordination, and execution of rescue operations including extrication and/or evacuation, along with providing medical assistance and civilian services. Recent natural disasters which the ANG units responded to include, but are not limited to, hurricanes, earthquakes, civil unrest, chemical spills, and forest fires.



Three ANG Rescue Wings perform long-range, over-water rescue operations in the East Pacific, West Atlantic, and Gulf Coast regions. Additionally, the ANG performs search and rescue operations in Alaska and, as the area becomes more accessible, the remote Arctic regions of North America.





# **ESF 9 - Search and Rescue**

## **2021 Domestic Capability Priorities Conference**

### ***Critical Capabilities List***

- Urban Search and Rescue Enhancement/ Mobility Package
- Sense and Avoid Detection System
- Integrated Active Shooter Body Armor
- Water Rescue Package
- Urban Search and Rescue Small Unmanned Aerial System

### ***Essential Capabilities List***

- Extreme Cold Weather Personal Protective Equipment
- Communications for Search and Rescue to Military Air Assets
- Global Positioning System Tracker
- Helicopter Sling-Load Harness Kit

### ***Desired Capabilities List***

- None

**URBAN SEARCH AND RESCUE ENHANCEMENT / MOBILITY PACKAGE**

**1. Background.** ANG Urban Search & Rescue (USAR) teams require a cache of equipment suitable to support training and rescue requirements, as well as improved mobility in the mission area. An administrative kit will enable USAR teams to offer real time asset tracking, use preloaded aerial maps, access real-time maps via Domestic Operations Awareness and Assessment Response Tool (DAART), print and ruggedize maps, and have internet capability. Additionally, a mobility kit will allow for deployment to disaster and advancement of USAR equipment and assets from the trailer to the working area. A rope rescue kit will enable USAR teams to have the ability to perform high-line, high-angle, and low-angle rescues. In accordance with National Fire Protection Association (NFPA) 1858, this rope rescue kit will remedy existing rope rescue compliance shortfalls. Saw, Drill and Cutting kits will allow for cutting, break, and drilling of concrete and metals, allowing teams to access trapped victims. Personal protective equipment (PPE) kits will give personnel the proper specialized PPE to safely work in USAR and disaster environments. Finally, a recording kit will enable responding vehicles to record travel to emergencies for reference and training. Each of the 62 response units requires one of each of the above kits.

**2. Program Details.**

Quantity / Description	Unit Cost	Program Cost
62 Logistics Admin Readiness Kit	\$8,100	\$502,200
62 Mobility Kits	\$209,200	\$12,970,400
62 Rope Rescue Kits	\$6,622	\$410,564
62 Saw Kits	\$2,345	\$145,390
62 Drill Kits	\$2,370	\$146,940
62 E-Draulic Kits	\$12,000	\$744,000
62 US&R PPE Kits	\$9,000	\$558,000
62 Vehicle Recording Kits	\$800	\$49,600
<b>Total</b>		<b>\$15,527,094</b>

## SENSE AND AVOID DETECTION SYSTEM

**1. Background.** ANG MQ-9 units require both ground-based and air-based detect and avoid radar solutions to fulfill Federal Aviation Administration (FAA) requirements to safely operate within domestic airspace alongside civilian aircraft. ANG MQ-9 units also require an agile launch-and-recovery system to enable expeditionary operations including an auto take-off and land capability to mitigate transitory airspace challenges and extend airframe reach. ANG MQ-9 units are not authorized to launch without a “chase plane” during Visual Flight Rules conditions, resulting in delays of up to 24 hours to coordinate for support; and ANG MQ-9 units are currently not authorized to launch at all during Instrument Flight Rules conditions, resulting in many mission cancellations and delays. ANG MQ-9 units also lack the ability to stage within the vicinity of a domestic emergency similar to other aircraft, resulting in excessive daily transit times and additional airspace challenges, impacting on-station direct-support times by as much as 50%, or over six hours per day. This modernization effort will minimize weather-related delays and cancellations, and negate the need to fund annual service contracts for chase planes. Radar installations and launch-and-recovery systems are required for all five ANG MQ-9 wings, and airborne detect and avoid systems are required for each of the 30 ANG MQ-9 aircraft.

### 2. Program Details.

Quantity	Unit Cost	Program Cost
5 Ground-Based Detect and Avoid (GBDAA) Sites (3010)	\$3,200,000	\$16,000,000
30 Airborne-Based Detect and Avoid System (3010)	\$2,200,000	\$66,000,000
5 Expeditionary Launch and Recovery Element (3010)	\$500,000	\$2,500,000
<b>Total</b>		<b>\$84,500,000</b>

## INTEGRATED ACTIVE SHOOTER BODY ARMOR

**1. Background.** The ANG emergency response force requires integrated body armor to provide personal protection and communications equipment to provide situational awareness during active shooter incidents and natural disaster responses. Emergency responders currently lack protective equipment to prevent injury while responding to active shooter incidents and situational awareness tools to enhance capabilities in response to domestic emergencies. The system should include a ballistic vest, ballistic helmet, and individual first aid kit (IFAK) for personal protection. Additionally, the team leaders' systems should include end user devices, communication and power distribution hubs, and the necessary cables for Team Awareness Kits (TAK). To ensure TAKs can operate in remote locations and locations with stressed or disabled communications infrastructure, a communications hub and mesh backup network capability are required. This system will improve personal safety and enable improved life-saving capabilities across all domestic response situations from an active shooter to natural disasters. ANG emergency responders require eight active shooter body armor kits for each of the 62 response units, and two of the eight kits should be equipped with domestic operations TAK kits. Additionally, each of the 62 response units will require a TAK communications hub to ensure reliable communications.

### 2. Program Details.

Quantity	Unit Cost	Program Cost
496 Ballistic Vests with Level III Plates (3080)	\$3,000	\$1,488,000
496 Ballistic Helmets (3080)	\$800	\$396,800
496 IFAKs (3080)	\$80	\$39,680
124 Domestic Operations TAK Systems (3080)	\$5,500	\$682,000
62 TAK Communications Hubs (3080)	\$600	\$37,200
<b>Total</b>		<b>\$2,643,680</b>

## WATER RESCUE PACKAGE

**1. Background.** The ANG Fire and Emergency Services (FES) units require the proper equipment to execute search and rescue operations in areas affected by flood water from hurricanes and heavy storms. The ANG Technical Urban Search and Rescue teams have missed requested deployments because they lacked the ability to operate in flooded areas prior to and with their FEMA counterparts. Providing this capability will enable the ANG to rescue people from flood stricken areas. This program will outfit 30 of the 62 ANG FES units with a tiered combination of two inflatable boats, two Rapid Intervention Team (RIT) craft, one aluminum boat with trailer, and 20 sets of Personal Protective Equipment (PPE).

### 2. Program Details.

Quantity	Unit Cost	Program Cost
<b>40 Inflatable Boats (3080)</b>	<b>\$11,053</b>	<b>\$442,120</b>
<b>10 Aluminum Boats w/ Trailers (3080)</b>	<b>\$30,516</b>	<b>\$305,160</b>
<b>60 RIT Craft (3080)</b>	<b>\$1,800</b>	<b>\$108,000</b>
<b>600 Water PPE (3080)</b>	<b>\$1468</b>	<b>\$880,800</b>
<b>Total</b>		<b>\$1,736,080</b>

**URBAN SEARCH & RESCUE SMALL UNMANNED AERIAL SYSTEM**

**1. Background.** The ANG Fire and Emergency Services (FES) units require modernized Urban Search and Rescue (USAR) equipment to provide recon and search capability to reduce human risk during disaster response. The USAR Small Unmanned Aerial System (sUAS) would enable units to search hazardous elevated areas and larger wide search areas. The sUAS needs to include the following: infrared camera to provide the ability to search and locate victims in the dark or debris clouded atmosphere; ruggedized tablet system with controller for operational patch to command and control; fixed wing vertical take-off and landing; battery capability of extended operational time; hazardous atmosphere monitoring to include radiation. Each of the 62 ANG FES units needs one sUAS, additionally 30 of the 62 FES units need fixed wing capability.

**2. Program Details.**

Quantity	Unit Cost	Program Cost
62 sUAS	\$4000	\$248,000
62 sUAS Air Monitors	\$1200	\$74,400
62 Air Monitor Calibration Kits	\$600	\$37,200
30 Fixed Wing sUAS	\$16,500	\$495,000
<b>Total</b>		<b>\$854,600</b>

# Oil and Hazardous Materials Response

**Oil and Hazardous Materials Response (ESF 10)** – ANG Emergency Management (EM), Fire and Emergency Services (FES), and response teams are among the experts available to detect, contain, and mitigate the effects of hazardous materials and Chemical, Biological, Radiological, and Nuclear (CBRN) incidents. ANG units have responded to hazardous material incidents with increasing frequency, particularly for large scale incidents.



Through the Domestic Capability Priorities conference process, EM and FES personnel identified capability gaps for detection modernization, CBRN initial response equipment, and responder rehabilitation shelters which were purchased and provided to the field. This equipment provides initial response teams the capability to accurately and safely identify and contain hazardous materials. EM and FES personnel continue to identify capability gaps which will make them more effective and increase their capability to train and respond when required.



# **ESF 10 - Oil and Hazardous Material Response**

## **2021 Domestic Capability Priorities Conference**

### ***Critical Capabilities List***

- Hazardous Materials Structural Personal Protective Equipment Modernization
- Foam Rapid Resupply and Attack Trailer
- Trailer Mounted Air System
- Hazardous Materials ABC Kits with Training Aids
- Lightweight Mobile Decontamination System

### ***Essential Capabilities List***

- Small Unmanned Aerial System
- Realistic Training Aids for CBRN
- All-In-One Decontamination Agent
- Improved Chemical Gear
- Multi-Layer Portable Power Bank

### ***Desired Capabilities List***

- Canister/PAPR/SCBA Mask
- Health Biometrics Kit with Remote Monitoring
- WMD-Based Training Kit
- Dual-Use Mask for CBRNE/Firefighting Operations



**HAZARDOUS MATERIALS STRUCTURAL PERSONAL  
PROTECTIVE EQUIPMENT MODERNIZATION**

**1. Background.** ANG Fire and Emergency Services (FES) units require a second set of structural Personal Protective Equipment (PPE) to maintain a 100% firefighter response capability. Per National Fire Protection Association 1851, *Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting*, firefighting protective equipment must be cleaned and decontaminated every time there is contact with a hazardous material or bodily fluid. The cleaning, decontamination, and drying process can take several hours to several days, depending upon the severity of soiling and contamination. While this gear is out of service, the capability to continue to respond to emergencies with the appropriate protective ensemble is still required. A second set of structural PPE will provide firefighters the ability to respond to an emergency while the primary set is being repaired or cleaned. This gear will also replace damaged and/or PPE that has met shelf life. The ensemble should include pants, coats, gloves, and hood. Each of the ANG's 62 FES units requires one set of PPE per assigned firefighter.

**2. Program Details.**

Quantity	Unit Cost	Program Cost
2000 Structural Ensembles (3080)	\$3,200	\$6,400,000
<b>Total</b>		<b>\$6,400,000</b>

## FOAM RAPID RESUPPLY AND ATTACK TRAILER

**1. Background.** ANG Fire & Emergency Services (FES) response agencies are required to maintain one complete resupply foam for all assigned crash apparatus. A rapid resupply capability must be maintained to support the potential for on-scene resupply during emergency operations. Additionally, large amounts of foam concentrate are needed to suppress large POL tank and spill fires. Providing an un-staffed monitor on the trailer that is capable of large quantity flow amounts will provide the additional capability of rapid POL tank fire suppression. Trailers would be sized at 330 gallons, 690 gallons, and 1,110 gallons, based on the assigned vehicle core set of fire apparatus identified in Allowance Standard Code 010, *Vehicle Sets and Authorizations*, or whatever the closest off-the-shelf size available is best suited to the vehicle set. The trailers will meet the following requirements: The ANG requires one foam trailer for each ANG wing with a fulltime fire department that supports on-site flying operations and/or has large quantity POL storage, for a total of 51 units.

### 2. Program Details.

Quantity	Unit Cost	Program Cost
19 Foam Trailer (330 gallons)	\$80,000	\$1,520,000
16 Foam Trailer (690 gallons)	\$90,000	\$1,440,000
16 Foam Trailer (1,110 gallons)	\$105,000	\$1,680,000
<b>Total</b>		<b>\$4,640,000</b>

## TRAILER MOUNTED AIR SYSTEM

**1. Background.** ANG Emergency Management (EM) and Fire Emergency Services (FES) flights and their associated domestic operations incident response teams require an industrial mobile air system. EM and FES suffer from limited capability to provide self-contained breathing air resupply during hazmat situations while downrange. The mobile air system must be a tandem-axle, heavy-duty, mobile/portable air trailer. This system will need to have a 6,000 psi compressor capable of a charging rate of at least 13 cubic feet per minute as well as a two-position containment fill station for self-contained breathing apparatus (SCBA) cylinders that includes a four bank dual function panel with an air direction valve. Additionally, this asset will need an integral SCBA storage capability for up to 12 cylinders as well as an air purification system and hydraulic surge brakes with breakaway activator. Lastly, the mobile air system must have outside area lighting capability to support 24-hour operations. The ANG requires one mobile air system for each of its 90 wings.

### 2. Program Details.

Quantity	Unit Cost	Program Cost
90 Trailer Mounted Air System (3080)	\$123,200	\$11,088,000
<b>Total</b>		<b>\$11,088,000</b>

**HAZARDOUS MATERIALS ABC KITS WITH TRAINING AIDS**

**1. Background.** ANG Emergency Management (EM) and Fire and Emergency Services (FES) flights require Hazardous Material (HAZMAT) ABC Response Kits and associated training aids. EM and FES personnel suffer from limited capacity to adequately provide essential equipment to contain a HAZMAT spill. These kits will allow EM and FES to effectively manage a HAZMAT spill in accordance with National Fire Protection Association 472 with US Department of Transportation approved equipment. Additionally, hands-on training aids for each of the A, B, and C kits will provide the capability for personnel to be properly trained on these kits in a controlled environment. ANG EM and FES requires one A, B, and C kit, plus one training aid per each of its 90 flights.

**2. Program Details.**

Quantity	Unit Cost	Program Cost
90 Chlorine Institute Cylinder Emergency Kits (3080)	\$2,475	\$222,750
90 Chlorine Institute Emergency Kits for US DOT 106A500X Ton Containers (3080)	\$2,495	\$224,550
90 Chlorine Institute Tank Car/Truck Emergency Kits (3080)	\$2,850	\$256,500
90 Chlorine Training Cylinders (3080)	\$995	\$89,550
90 Chlorine One Ton Training End with Wheels (3080)	\$2,945	\$265,050
90 Chlorine Rail Car/Tank Truck Training Dome (3080)	\$3,530	\$317,700
<b>Total</b>		<b>\$1,376,100</b>

**LIGHTWEIGHT MOBILE DECONTAMINATION SYSTEM**

**1. Background.** ANG Emergency Management (EM) and Fire & Emergency Services (FES) require a light-weight, portable and wearable (back-pack style) decontamination system for fire, biological, chemical (CWA’s) and industrial hazardous materials. Current decontamination systems are required to be staged and set-up in a decontamination area (personal) or require multiple pieces of set-up for decontamination of a fixed area/equipment. Having a portable/wearable system allows expeditionary and quick decontamination “on the run” for personnel and objects/areas. Additionally, some systems are also able to be multi-use for both decontamination and fire suppression (spot fires) offering longer spray life than typical heavy hand carried extinguishers. Systems are able to convert five gallons of water into as much as 175 gallons of finished foam and able to apply this foam as far as a 30 foot distance. One decontamination system is needed at each of the 90 wings

**2. Program Details.**

Quantity	Unit Cost	Program Cost
91 Compress air foam systems	\$4,157	\$378,287
91 Nozzle kits	\$569	\$51,779
182 Decontamination 4 gallon kits	\$224	\$40,768
<b>Total</b>		<b>\$470,834</b>

## Public Safety and Security

**Public Safety and Security (ESF 13)** – ANG security forces comprise over 7,750 Defenders from the 50 states, 3 territories, and District of Columbia. ANG security forces units work in cooperation with local, state and federal public safety and security organizations to support a full range of incident management activities. Security forces provide law enforcement operations, access control, presence patrols, and protection of personnel and equipment.



ANG security forces units are equipped with “less-than-lethal” use of force, explosive detection, and traffic control/crowd management equipment. These items are used to support local, state and federal authorities during events like natural disasters, civil unrest, as well as high visibility crowd control events.

In 2020, ANG security forces personnel responded to multiple natural disasters from the California wildfires to hurricanes along the east coast; and assisted in the COVID-19 pandemic response. In addition, ANG Defenders assisted local and federal law enforcement agencies with civil disturbance operations throughout the nation. Critical equipment and vehicles procured, as a result of past Domestic Capabilities Priorities Conferences, directly enhanced Defenders effectiveness during these events.



# **ESF 13 - Public Safety and Security**

## **2021 Domestic Capability Priorities Conference**

### ***Critical Capabilities List***

- Logistics Resource Vehicle
- Conducted Electrical Device Modernization
- Less than Lethal Equipment Modernization
- Compressed Air Launcher System
- Utility Task Vehicle

### ***Essential Capabilities List***

- Enhanced Communication and Hearing Protection
- Truck Bed Storage System
- Radio Repeater/Antenna Mast
- Crowd Control Personal Protective Equipment
- Mobile Traffic Control Kit

### ***Desired Capabilities List***

- Long Range Acoustic Device/Multi-Speaker System Modernization
- Response Force Personnel Location System
- Sustainment Equipment Load System
- Small Unmanned Aircraft System
- Patrol/Rescue Response Water Craft

## LOGISTICS RESOURCE VEHICLE

**1. Background.** The ANG Security Forces (SF) require logistics resource vehicles to perform domestic operations wing support for federal and state missions. New vehicles will include a law enforcement package designed for transporting equipment, supplies, weapons, and ammunition to ensure units are capable of responding to real-world incidents and training mission requirements. This capability provides a standardized vehicle fleet that will allow diversified mission capability opportunities and meet hauling requirements for weapons qualifications at each wing. Each of the remaining 59 ANG SF squadrons requires one logistics resource vehicle.

### 2. Program Details.

Quantity	Unit Cost	Program Cost
59 SF Logistics Resource Vehicles (3080)	\$50,000	\$2,950,000
Total		\$2,950,000



**CONDUCTED ELECTRICAL DEVICE MODERNIZATION**

**1. Background.** The ANG Security Forces (SF) require replacement of the TASER X26E due to diminished manufacturing sources. Modernized cartridges and batteries will support both federal and domestic operations. The conducted electrical device training kit includes training cartridges, live cartridges, targets, training suites, downloading cables, and software. Each of the 100 ANG SF squadrons require conducted electrical devices for each of their Security Forces Less Than Lethal Kit (QFLLL) Unit Type Codes UTC.

**2. Program Details.**

<b>Quantity</b>	<b>Unit Cost</b>	<b>Program Cost</b>
<b>3,666 Conducted Electrical Devices (3080)</b>	<b>\$1,700</b>	<b>\$6,232,200</b>
<b>100 Conducted Electrical Device Training Kits (3080)</b>	<b>\$12,000</b>	<b>\$1,200,000</b>
<b>Total</b>		<b>\$7,432,300</b>

**LESS THAN LETHAL EQUIPMENT MODERNIZATION**

**1. Background.** The ANG Security Forces (SF) units require upgrades and modernization to existing Less-Than-Lethal kits. This would provide upgrades to necessary safety equipment and the ability to extend operations and provide more on scene capabilities. Riot shields, modern and light weight personal protective equipment, and laser eye protection will safeguard Airmen from the growing and emerging threats. Portable power, self-contained lighting systems, and a generator will allow for better C2 and extended field operations for each of the 100 ANG SF Security Forces Less Than Lethal Kit QFLLL Unit Type Codes

**2. Program Details.**

Quantity	Unit Cost	Program Cost
232 Domestic Operations Modernization Kits (3080)	\$16,800	\$3,897,600
Total		\$3,897,600

**COMPRESSED AIR LAUNCHER**

**1. Background.** The ANG Security Forces (SF) require a Compressed Air Launcher (CAL) Kit to be paired with the Security Forces Less Than Lethal (QFLLL), to provide additional security and deterrence for our rapidly deploying SF personnel in support of operations such as confrontation management, riot control, border security, civil unrest, inaugurations, and counterdrug operations. This less than lethal system is capable of delivering reduced force, but still allows enough power to subdue and discourage any further escalation. The compressed air launcher is a hand-held, direct-fire, low-hazard, non-penetrative system intended to produce less than-lethal effects; to include chemical deterrence/incapacitation or marking effects upon impact with a target. Each of the 100 ANG SF QFLLL require a minimum of two systems.

**2. Program Details.**

Quantity	Unit Cost	Program Cost
<b>464 Compressed Air Launcher Kits (3080)</b>	<b>\$6,310</b>	<b>\$2,927,840</b>
<b>464 Compressed Air Launcher Training Kits</b>	<b>\$1,800</b>	<b>\$835,200</b>
<b>100 Compressed Air Stations</b>	<b>\$1,000</b>	<b>\$100,000</b>
<b>Total</b>		<b>\$3,863,040</b>

*Public Safety and Security*

**UTILITY TASK VEHICLE**

**1. Background.** The ANG Security Forces (SF) requires the capability to move personnel and equipment through various terrain that is not accessible for a full size vehicle. A diesel powered, fully contained, crew sized Utility Task Vehicle (UTV) with light emitting diode light bar, SF markings and winch provides SF Defenders with a rapid mobile response vehicle capable of transporting up to six personnel and their equipment in austere environments. Additionally, a UTV Trailer with rapid deployment capabilities is needed for the UTV to be effectively positioned in the area of operation. Each of the 100 ANG SF units will be equipped with one fully packaged UTV and UTV Trailer.

**2. Program Details.**

<b>Quantity</b>	<b>Unit Cost</b>	<b>Program Cost</b>
<b>100 Utility Task Vehicle (3080)</b>	<b>\$45,000</b>	<b>\$4,500,000</b>
<b>100 Utility Task Vehicle Trailer</b>	<b>\$5,000</b>	<b>\$500,000</b>
<b>Total</b>		<b>\$5,000,000</b>

