

Arctic Capable Prepositioned Shelters (\$10M): Funds requested will support RDT&E efforts to design expeditionary base camp systems capable of providing life support, mission command, critical asset storage and large area maintenance shelter (LAMS) capability in an Arctic environment at temperatures as low as -65F. Requested funds will enable continued system modification, augmentation, and testing at the U.S. Army Engineer Research and Development Center (ERDC) Arctic Infrastructure Research Center in Fairbanks, Alaska to ensure the ability to operate in extreme Arctic conditions.

Explanation: Existing expeditionary shelters in Army Prepositioned Stocks can operate at temperatures as low as -25F. The most recent research and development efforts have demonstrated Arctic modifications that increase performance capability to temperatures as low as -40F. The requested funds (\$4.5M) enable RDT&E in support of base camp equipment capable of operations at temperatures as low as -65F in cooperation with the ERDC Arctic Infrastructure Research Center.

Current LAMS capability in prepositioned stocks can operate at temperatures as low as -20F but require a temperature of +25F to set up. The requested funds (\$5.5M) enable the Air Force Civil Engineer Center in cooperation with the ERDC Arctic Infrastructure Research Center to conduct RDT&E in support of LAMS capable of operations at temperatures as low as -65F.

The National Defense Strategy (NDS) notes that the United States seeks a secure and stable Arctic region. Developing equipment that enables campaigning in the harsh Arctic environment reduces risk in the Department of Defense (DoD) to generate and deploy forces to the region if needed to support on-going stability.

LIN: F05020 APE: 654804VR7

LIN: TBD AFPE: 0604617F BPAC: 652895

Counter Strategic Competitors in the Western Hemisphere (\$5.2M): Requested funds will enable DOD/USNORTHCOM to support expanded intelligence and aerial / land detection and monitoring capabilities for U.S. Federal Law Enforcement Agencies and the Mexican Military. These capabilities will better position lead agencies, as part of a whole of government approach, to reduce the threat to the Homeland from transnational criminal organizations and deter Strategic Competitors in the Western Hemisphere, and particularly in Mexico.

Explanation: USNORTHCOM's relationships with Allies and partners support integrated deterrence by using additional tools at the Department's disposal to deter competitors and potential adversaries from aggression and undue influence. DOD's alignment of counter transnational criminal organization policies, investments, and activities sustain and strengthen deterrence by reinforcing the United States as the partner of first choice.

Increasing air and land domain awareness in the approaches to the Homeland directly supports deterrence by denial as noted in the NDS by maintaining our ability to advance U.S. national interests.

LIN: TBD

PE: 21147F

SAG: 15C

Domain Awareness Technology Development (\$9.75M): The funds requested will provide for a demonstration of Cryogenic Exploitation of Radio Frequency (CERF) sensor technology in an operational environment (Alaska).

Explanation: The CERF prototype provides an ultra-wide band passive sensor that contributes to all domain awareness for USNORTHCOM and NORAD Homeland Defense missions. The system leverages Intelligence Community (IC) investments to provide operational indication and warning of potential threats by means of RF transmissions. Funding would enable deployment planning, transportation, sensor installation, communications architecture, and sensor demonstration as well as sensor employment in an operationally relevant environment (Alaska). The communications architecture will provide domain awareness data to existing exploitation systems. The National Security Agency's Warfighter Integration Program and Tactical Investment Portfolio program managers in Y1432 will execute funding. Additional details and applications are available at higher classification levels.

Aligned with the NDS, domain awareness reduces risk and aids in escalation management. Additionally, in the event of crisis, globally integrated domain awareness capabilities increase warning and allow for flexible decision making to respond, as necessary.

LIN: TBD

PE: TBD

SAG: TBD

ARCHER (\$27M): The funds requested will advance air domain awareness capabilities by completing the planned ARCHER fielding in Alaska and provide RDT&E funding required to deploy ARCHER well north of the Arctic Circle.

Explanation: ARCHER is a passive sensor that contributes to all domain awareness for USNORTHCOM and NORAD Homeland Defense. The systems leverage commercial-off-the-shelf technology within an Air Force TENCAP rapid acquisition effort. There are currently 21 of 35 planned systems in Alaska. The requested funding would transition ARCHER from the rapid acquisition process into the long-term sustainment process (\$17M). The funding request also includes RDT&E to develop improved system shelters (\$2.5M), communications pathways (\$2.5M), and upgraded geolocation software (\$5M) to enable deployment of ARCHER systems into remote Arctic locations further north than the current North Warning System.

Aligned with the NDS, domain awareness reduces risk and aids in escalation management. Additionally, in the event of crisis, globally integrated domain awareness capabilities increase warning and allow for flexible decision making to respond, as necessary.

LIN: TBD

PE: 12412F

SAG: TBD

Three-Dimensional Expeditionary Long Range Radars (3DELLR) (\$211.5M): The funds requested will procure nine (9) 3DELLR's to fill surveillance gaps caused by existing radar failures.

Explanation: Current long range radars fielded in the 1980s reach the end of program life in 2025 and will begin to fail at increasing rates. These radars include 45 Federal Aviation Administration (FAA) Air Route Surveillance Radars (ARSR-4) ringing CONUS, 14 (FPS-117) radars at the North Warning System and 15 in the Alaska Radar System. Procuring 3DELLR systems enable deploying a gap filler capability when existing radar systems cannot be repaired

in a timely manner. Additionally, 3DELLR can be used to defend critical infrastructure as required. There is no current Program of Record to replace the existing radars, making 3DELLR the only option to maintain required domain awareness for Homeland Defense.

Increasing air domain awareness in the approaches to the Homeland directly support deterrence by denial as noted in the NDS. Further, this capability is a risk mitigation in defending the Homeland – the number one NDS priority.

LIN: TBD

PE: 0207455F

WSC 833060

Modernize Homeland Defense Communications System (HDCS) Infrastructure (\$4.2M):

The funds requested will enable procurement and sustainment of infrastructure and technology updates for 61 radio sites; and the Eastern Air Defense Sector and Western Air Defense Sector that supports access to 386 radars. The investment will mitigate risk-to-mission from equipment facing accelerated end-of-life timelines.

Explanation: Hardware and software upgrades at each site are required for sensor data access and transport, communications transmission, and information sharing enabling aircraft scramble capability, cyber security needs, and Domain Awareness for Homeland Defense, POTUS travel, and National Security Special Events.

Air domain awareness in the interior and approaches to the Homeland directly support deterrence by denial as noted in the NDS. Further, this capability is a risk mitigation in defending the Homeland – the number one NDS priority.

LIN: TBD

PE: 12331F

SAG: N/A

Modernize NCR Domain Awareness [Enhanced Regional Situational Awareness (ERSA)]

(\$33.21M): The funds requested will modernize the legacy standard definition ERSA camera system in and around the National Capital Region (NCR) with high-definition systems.

Explanation: The ERSA camera system includes 21 electro optical/infrared cameras and 8 visual warning systems. The standard-definition cameras are designed to provide a timely and accurate local air picture of low altitude, slow- and fast-moving aircraft that pose particular identification problems within the NCR. Replacing the standard definition with high-resolution cameras will provide a better visual identification and characterization solution and be more cost effective than sustaining the legacy cameras (with limited capabilities) and scrambling US Coast Guard helicopters and/or USAF fighters to investigate and visually identify tracks of interest.

Increasing air domain awareness in the approaches to the Homeland directly support deterrence by denial as noted in the NDS. Further, this capability is a risk mitigation in defending the Homeland – the number one NDS priority.

LIN: N/A

PE: 12326F

SAG: N/A

Core Technology Investment (\$13.85M): The requested funds will enable procurement and installation of hardware and data transmission technologies that support data sharing and collaboration to enhance domain awareness and information dominance. Component modernization will address shortfalls in Unclassified, Secret, and Nuclear Command, Control, and Communications (NC3) networks.

Explanation: Rapid and agile communications infrastructure increase the capability to see, understand, and share information that increases the decision space for senior leaders. Specific investments will address the NC3 network (\$1.1M); video teleconference deficiencies (\$2.25M); the transition of the unclassified telephone system to modern Voice Over Internet Protocol (VOIP) technologies (\$4.6M); and deficient network servers, fiber optic systems, and encryption devices (\$5.9M).

Improving domain awareness and information dominance support increased global integration--the foundational elements to integrated deterrence. Funding this request will reduce risk in the NDS priority to defend the homeland.

LIN: TBD

PE: 0201130F

SAG: N/A