A Combinatorial, Pollutant Microenvironment Instrument Applied to Deployed Force Health Monitoring

$1,000,000

University of Maine
Orono, ME

The purpose is to develop a unique microenvironment instrument that will enable a quantitative study of the correlation of exposure to combinations of pollutants and toxins of deployed troops with associated health risks, disease epidemiology, and wound healing.

Advanced High Speed Coastal Patrol Craft

$2,000,000

Lyman-Morse Boatbuilding
Thomaston, ME

The new craft will incorporate new, fully vetted hull design configurations developed over the course of the last decade by the U.S. Navy to provide a hull form that can: (10 meet demanding sea state and high speed mission requirements, (2) accommodate several deck configurations to meet specific mission requirements, (3) dampen impacts on crews, and (4) incorporate new electric propulsion, surveillance and weapons platforms.

Airbeam Shelter Protection at Remote Forward Operating Bases

$5,000,000

University of Maine
Orono, ME

To fabricate and ship ballistic panel systems to field units for in-theater evaluation of tent systems and Containerized Housing Units in response to emergent Army requirements to provide added protection to mobile troops in remote areas.

ANG Block 42 F-16 Engine Upgrade

$38,000,000

Portions of this work will be performed by Pratt & Whitney
North Berwick, ME

The funding will provide 7 additional F100-PW-229 engines along with installation kits and support equipment taking the ANG F-16 combat fleet to approximately 85 percent completion. The Block 42 engine upgrade also enhances ANG F-15 capability as the P&W F100-PW-220 engines removed from the F-16s are installed in F-15C ANG units providing immediate improvement to the F-15 fleet at no additional cost. In the continued tradition of the ANG making funds do double-duty, a 20 percent combat improvement to front-line ANG F-16 fighters plus upgraded F-15Cs is an extremely cost effective investment and preserves jobs in Maine.

Barrier Boat Craft (BBC)

$4,000,000

Pacific Tugboat Service/Washburn & Doughty
East Boothbay, ME

Barriers currently in use provide significant protection for U.S. warships in port. These craft are used as barrier tenders to move and service barrier equipment afloat. To address current shortfalls for BBC, the Navy is using other small craft that must be diverted from other duties and are not equipped to properly handle barrier segments.

Berth 11/13 waterfront support facility

$23,100,000

Portsmouth Naval Shipyard
Kittery, ME

This project will construct a 46,005 SF two-story addition on the west side of the existing high bay of Building 174 to support waterfront repair operations for naval nuclear submarines at Berths 11 and 13. This project will provide a state-of-the-art "LEAN" waterfront support facility. Facility will enhance productivity and promote efficiency and teamwork to the production shops, Ships Force Project Teams and Engineering Personnel.

C-17 Globemaster III

$3,600,000,000

Portions of this work will be performed by Pratt & Whitney
North Berwick, ME

The U.S. Army and Marines have begun adding 90,000 new combat troops and associated equipment. To meet their strategic mobility requirements, the C-17 line must not be allowed to close. Without added C-17's in FY10, the C-17 industrial base is at risk and production lines

will begin to close. The program is on-cost and ahead of schedule, but the USAF was unable to budget for additional C-17 aircraft in FY10. The C-17 and associated workforce are national resources that must not be lost until final requirements can be determined.

Cellulose Nanocomposites for Forward Operating Base Infrastructure and Troop Protection

$3,000,000

University of Maine
Orono, ME

The Cellulose Nanocomposites project will cost-effectively reduce the weight and enhance blast/ballistic properties of lightweight, rapidly erectable, field structures as well as other Class IV construction materials through continued development of high-performance cellulose nanocomposites.

Center for Regenerative Medicine

$1,184,000

Mount Desert Island Biological Laboratory (MDIBL)
Salisbury Cove, ME

Regenerative medicine represents the next frontier in clinical medicine. Currently, military personnel suffering from severely damaged limbs, traumatic brain injury, spinal cord damage or severe burns are often permanently disabled and face years of costly medical treatment and rehabilitation. MDIBL seeks develop improved treatments for those injured in combat. Military personnel suffering from combat-related injuries are often permanently disabled and face years of costly medical treatment and rehabilitation.

Chemical/Biological Infrared Detection System

$2,500,000

Orono Spectral Solutions
Old Town, ME

Due to the continued threat from the potential use of chemical and biological weapons both at home and abroad, it is critical that an advanced detection system is developed to meet these emergent threats. Orono Spectral Solutions has developed technology that has the potential to combine both chemical and biological detection using a common platform. This platform, which

has successfully undergone initial live agent testing, is also adaptable to emerging novel agents and toxic industrial chemicals.

Civil Air Patrol (CAP) Corp

$4,400,000

Civil Air Patrol
Nationwide

CAP, the official auxiliary of the U.S. Air Force, is a nonprofit organization with 57,000 members nationwide. CAP performs 90 percent of continental U.S. inland search and rescue missions as tasked by the Air Force Rescue Coordination Center and was credited by the AFRCC with saving 91 lives in FY08. Its volunteers also perform homeland security, disaster relief and counter-drug missions at the request of federal, state and local agencies.

Consolidation of structural shops

$36,600,000

Portsmouth Naval Shipyard
Kittery, ME

This project modernizes the existing steel fabrication facility and constructs an annex to this facility to further consolidate operations. It is the second in a series of projects that are physically realigning the facilities of the Shipyard to better support the operational processes and to implement a parent/satellite shop concept.

Design Optimization of Composite High-Speed Boats using Advanced Composite Manufacturing and Non-Destructive Evaluation

$2,000,000

Hodgdon Defense Composites
Portland, ME

Building on the success of the Office of Naval Research-funded research into composite reliability, non-destructive evaluations, advanced composite design and manufacturing, as well as workforce training programs, funding will assist in developing a design and manufacturing practice that incorporates the knowledge gained through these programs, resulting in highly-optimized, low weight craft produced in a high-production environment to address new requirements for Special Operations Craft.

F-22 Raptor

$2,800,000,000

United Technologies Corporation - Pratt & Whitney
North Berwick, ME

Growing threats from modern surface to air missiles (SAMs), 5th generation fighters in development by potential threat nations, and loss of significant numbers of the current air superiority fighter, the F-15 Eagle, demand continued F-22 production beyond the current F-22 multi-year procurement, which ends in FY09.

Formable Textile for Complex Shaped Aerospace Composite Structures

$3,000,000

Pepin Associates, Inc.
Greenville, ME

The Fiscal Year 2010 program will focus on testing and certifying Navy aircraft structures made with DiscoTex reinforcements such that the manufacturing cost savings for these and similar structures can be realized.

Fuel Efficient, High Specific Power Free Piston Engine For Unmanned Sea Surface Vessels

$3,500,000

Applied Thermal Sciences
Sanford, ME

This project will develop an innovative high power density free piston engine offering 33 percent more efficiency than diesel engines with approximately seven times the specific power which drastically enhances platform mobility critical for the Navy's USSV's and other military vehicles while reducing fuel demand.

Gate #2 security improvements

$7,100,000

Portsmouth Naval Shipyard
Kittery, ME

This project will construct anti-terrorism/force protection (AT/FP) measures at Gate 2 located at Portsmouth Naval Shipyard (PNSY) to provide the proper AT/FP measures. The project includes construction of a new hardened guard house, active barriers, and a permanent vehicle inspection shelter at Gate 2 for AT/FP measures at PNSY translating into improved security and better protection for base personnel, buildings, and vital submarine repair facilities. Security barriers are required to stop unauthorized vehicles from entering the Shipyard during increased threat conditions.

Hybrid Heavy Lift Logistics Air Vehicle

$3,500,000

Integrated Systems Solutions, Inc. (ISSI)
Caribou, ME

The Hybrid Heavy Lift Logistics Air Vehicle project will support a joint U.S. Navy/European Command research and development project to study, engineer and conduct scale demonstrations of a very large hybrid aircraft that could be used as a heavy lift logistics airlifter in wartime.

In-Theater Evaluation of Ballistic Protection for Remote Forward Operating Bases

$8,000,000

University of Maine
Orono, ME

This technology will provide added protection to our mobile troops operating in remote areas that will reduce casualties from mortar attacks on camps by an order of magnitude. Funding is requested to fabricate and ship ballistic panel systems to field units for in theater evaluations for tent systems and Containerized Housing Units in response to immediate and emergent Army requirements.

Legal Assistance to Maine Military Personnel [LAMMP]

$1,000,000

Pine Tree Legal Assistance
Portland, ME

LAMMP project has been designed to provide free legal assistance to members of Maine's military community and their families around the State who have civil legal needs for which they cannot access other legal services.

LGX High Temperature Acoustic Wave Sensors

$2,000,000

University of Maine
Orono, ME

This program will continue to investigate fundamental sensor materials and device design concepts as well as demonstrate functional prototypes of acoustic wave sensors that will be tested under realistic, operating, high temperature Air Force environments. Sensors that are capable of achieving accurate health monitoring in the field will provide substantial cost savings.

Lightweight Caliber .50 Machine Gun (LW50MG)

$5,000,000

General Dynamics/Saco Defense
Saco, ME

The LW50MG program incorporates new recoil mitigation technology to provide a more accurate, lighter weight variant of the current M2HB machine gun to support new Army approved requirements for a Lightweight .50 Caliber Machine Gun.

Maine Center for Toxicology and Environmental Health -- "Toxic Particles" Research and Equipment

$2,000,000

University of Southern Maine
Portland, ME

The purpose of this project is to study the effects of depleted uranium, chromate and nanoparticle exposure on soldiers to help reduce their effects on veterans of future wars. The research would develop data that directly helps the military with the risk assessment of the toxicity of these particles and understanding their effects on current veterans and veterans of future wars.

Maine Institute for Human Genetics & Health

$4,000,000

Maine Institute for Human Genetics & Health
Brewer, ME

The DoD may use technologies and discoveries developed by the Institute to meet the health care challenges in the military, while the Institute will apply them to address reduction of disease risks in unique population segments exposed to environmental or stress hazards.

Maine National Guard-Rural Reintegration Pilot Program (MNG-RRPP)

$1,000,000

Community Counseling Center
Portland, ME

Maine is a rural state, and a large number of the over 2,000 Maine Guardsmen who have deployed in the Global War on Terror (and their families) are isolated from mental health services. The Maine NG Rural Reintegration Pilot Program would fill this current gap. The MNG-RRPP would ensure mental health services are available to all service members and their families.

Mission Helmet Recording System (MHRS)

$2,500,000

Wilcox Industries
Newington, NH

The Mission Helmet Record System project developed with and purchased by U.S. Navy Special Warfare exists to enhance current intelligence gathering capabilities. This systems' modular design is ready for field employment on already fielded NSW MICH Helmet. The system minimizes the amount of extra equipment the operator must carry into combat while at the same time adds enhanced enemy combatant identification and information dissemination.

MK47 MOD 0 Advanced Lightweight Grenade Launcher

$6,000,000

General Dynamics/Saco Defense
Saco, ME

The MK47 MOD 0 Advanced Lightweight Grenade Launcher (ALGL) replaces the capabilities of the MK19 40mm Grenade Machine Gun with a precision fire crew served weapon system that provides a dramatic increase in lethality and survivability for Special Operations Forces.

New England Defense Job Creation and Supply Chain Initiative

$5,000,000

Maine Manufacturing Extension Project
Augusta, ME

The New England Defense Job Creation and Supply Chain Initiative project will support the New England Defense Job Creation and Supply Chain Initiative which create or retain defense manufacturing jobs in New England, provide DoD rapid response capability to surge demand using the network of New England suppliers and minimize the risk from supply chain disruptions, obsolescence, and battlefield backorders for machined parts.

Portable Non-Magnetic Compass/Positioning/Timing Device

$2,000,000

CrossRate Technologies, LLC
Windham, ME

The primary objective of this program is to provide the war fighter with a tool which will provide heading/compass information from a non-magnetic source. Significant foundational research has been conducted by a variety of institutions on the ability to improve GPS integrity and positioning capabilities through the addition of an accurate (10-9) external timing reference.

Random Obfuscating Compiler Anti-Tamper Software

$2,000,000

ANGEL Secure Networks, Inc
Orono, ME

This project is for further development of ANGEL's Random Obfuscating Compiler Anti-Tamper Software. DoD has previously sponsored Small Business Innovation Research (SBIR) efforts with this company, ANGEL Secure Networks, Inc., Orono, Maine. ANGEL has developed DASH™ software to secure content delivery and host authentication, which are of critical importance to protect DoD's technological edge. DoD needs DASH to help maintain its technological edge by protecting critical information and weapons systems from capture and reverse engineering by U.S. adversaries.

Rapid Data Management System (RDMS)

$5,000,000

Global Relief Technologies
Portsmouth, NH

To deploy RDMS to Iraq to support critical MEDIVAC operations. Using RDMS, the Maine Army National Guard will better coordinate with other entities.

Real Time Test Monitoring of Chemical Agents, Chemical Agent Stimulants and Toxic Industrial Chemicals

$2,500,000

Sensor Research & Development, Inc.
Orono, ME

The purpose of the requested funding is to advance DoD's individual and collective protection and decontamination initiatives by implementing a next generation chemical monitoring system for both field and laboratory use.

Ripsaw Unmanned Ground Vehicle (UGV) Weaponization

$3,500,000

Howe and Howe Technologies, Inc.
North Berwick, ME

The Army Research Development & Engineering Center (ARDEC), in partnership with Howe & Howe Technologies Inc., is actively proving the combat effectiveness of the Ripsaw Unmanned Ground Vehicle (UGV). One of the principal benefits of Ripsaw UGV will be to take soldiers out of harm's way. This platform has been tested as an UGV via Virtual Remote Control Technology (VRCT). It provides a full-size high speed all terrain weapons platform that can be controlled from over six miles away.

Security Protection using Ballistic CORE Technology

$5,000,000

Tex Tech Industries
North Monmouth, ME

The Ballistic CORE Technology project provides enhanced protection against fragmentation from blasts and a variety of bullets. The ballistic material provides improved protection for U.S.

Soldiers, law enforcement personnel, vehicles, and buildings. The CORE Technology works by stabilizing woven fabric layers using needle punching systems.

Small Craft Threat Identification Program

$1,800,000

Technology Systems Inc. (TSI)
Brunswick, ME

This project's intent is to enable this technology to be rapidly configured and deployed on small craft as needed. This funding will support additional development of the threat identification program, as well as test and demonstration on small craft to allow for tailoring the system for small craft operators. This project fully supports the requirements set forth in the Navy Expeditionary Combat Enterprise Science & Technology Strategic Plan.

Smart Valve Automatic Fire Suppression System

$4,000,000

Portland Valve
South Portland, ME

The Smart Valve is the enabling technology behind the AFSS, which provides the sensing capability to detect the ruptures in the fire main piping system that occur during a damage event; the "muscle" to isolate the damaged sections of the piping system; and the embedded "intelligence" to reconfigure the system to maintain firefighting capability where it is most needed – all without any operator intervention. The DDG-51 modernization program objective is to upgrade the ship class with the latest technology and improved manning reduction hull, machinery and electrical systems. The Smart Valve meets this program requirement.

Woody Biomass Conversion to JP-8 Fuel

$3,000,000

University of Maine
Orono, ME

The Woody Biomass Conversion project will develop Integrated Forest Products Refinery processes and technologies to efficiently and cost effectively replace petroleum-derived JP-8 with woody biomass alternatives to support DoD compliance with governing Energy Policy Acts and Executive Orders.

DDG-51 Restart Program

Support the President's Budget

General Dynamics Bath Iron Works
Bath, ME

The last procurement of DDG-51 ships took place in the FY02-05 multiyear procurement, which when complete will bring the program to a total of 62 ships. DoD has stated its intent to truncate the DDG-1000 program to three ships, and add as many as 8-12 DDG-51 Class ships to the DDG-51 Program. Delays in awarding construction contracts for surface combatants places workforce challenges on BIW. The surface combatant suppliers face similar challenges sustaining their workforce and controlling costs.

DDG-1000 Destroyer Shipbuilding Program

Support President's Budget

Bath Iron Works
Bath, ME

The purpose is to fully fund the balance of the 3rd DDG-1000 in FY10. Surface combatants are a key element of the Navy's Maritime Strategy. The DDG-1000 is a revolutionary ship that supports the Navy and the Marine Corps mission needs while revolutionizing how the ships are manned and operated. The DDG-1000 is designed to have a substantially lower operating and support costs. The Navy now intends to buy a total of three DDG-1000 Class ships; the first two were authorized in FY07 and appropriated through split-funded across FY07 and FY08; the third ship was partially funded in FY09 with the remainder of the funding in FY10.

Joint Strike Fighter (F-35)

Support President's Budget

Portions of this work will be performed by Pratt &Whitney
North Berwick, ME

This program is the Department's focal point for defining affordable next generation strike aircraft for the Navy, Air Force, Marines, and our allies. The program is in the system development and demonstration phase with the aircraft being powered by the Pratt F135 engine. The FY10 President's request provides for procurement of F-35 aircraft, advanced procurement for future aircraft, and continued funding for the development of the F135 engine.

LCS Program

Support President's Budget

General Dynamics Bath Iron Works
Bath, ME

The LCS is a focused-mission ship designed to be a compact, fast surface combatant that uses modular "plug-and-fight" mission payload packages, including unmanned vehicles. Primary missions will be countering enemy mines, submarines, and small high-speed vessels in heavily contested littoral waters (near-shore).

Machine Gun, Cal .50 M2 ROLL – Army Procurement – FY10

Support President's Budget

General Dynamics/Saco Defense
Saco, ME

The M2 .50 Caliber Machine Gun is an automatic, belt-fed, recoil-operated, air-cooled crew-served weapon. The M2s high degree of accuracy and broad versatility make it a primary weapon system used extensively in combat.

Marine Corps Reserve Center

Support President's Budget

Marine Corps Reserve Center,
Brunswick, ME

Funding for this project facilitates the relocation of the Marine Corps Reserve unit at Topsham to Brunswick. The project affirms the commitment by the Marine Corps to construct a joint Armed Forces Reserve Center (AFRC) with the Maine National Guard. Construction is planned on a 51-acre site for the joint AFRC with the Maine National Guard.

MK-19 MOD 3 Grenade Machine Gun (40mm) – Army

Support President's Budget

General Dynamics/Saco Defense
Saco, ME

The MK19 MOD 3 Grenade Machine Gun is an air cooled, blow-back operated, belt fed crew served 40mm automatic weapon system. The MK19 is used to engage point targets up to 1500 meters and provide suppressive fire at ranges up to 2000 meters.

Replace Aircraft Maintenance Hangar and Shops

Support President's Budget

Bangor International Airport
Bangor, ME

The current Aircraft Maintenance Hangar at the Bangor Air National Guard base in Bangor, Maine was originally designed to accommodate propeller-driven fighter planes over 45 years ago. The facility is in need of great repair and is inadequate for the current needs of the military. The existing heating system has exceeded its economic life, the fire suppression system requires upgrading, and the fire detection system is outdated. Both the electrical and plumbing systems are failing at an increasing rate. There is no heating, ventilation, and air conditioning system, and the communications apparatus does not meet the current mission requirements. The hangar doors operating system is antiquated and requires maintenance. There is poor drainage around the facility and water enters under the hangar doors during severe rainstorms.