Requests are listed by Service Component and then alphabetically by Item Name.

ARMY NATIONAL GUARD

Item Name: Legal Assistance to Maine Military Personnel
Request: $1,000,000
Account: Operation and Maintenance, Army National Guard
Suggested Recipient: Pine Tree Legal Assistance
Suggested Location of Performance (major portion of the work): Portland, Maine
Purpose/Project Description: The Legal Assistance to Maine Military Personnel (LAMMP) project would eliminate the barriers to justice for those who are serving or have served our country. The project will provide direct legal services, training, outreach and a new web-based resource center for veterans that will serve as a model for other legal services programs around the country.

Item Name: Maine National Guard-Rural Reintegration Pilot Program (MNG-RRPP)
Request: $2,500,000
Account: Operation and Maintenance, Army National Guard
Suggested Recipient: Community Counseling Center of Maine
Suggested Location of Performance (major portion of the work): Portland, Maine
Purpose/Project Description: Maine is a rural state, and a large number of the Maine Guardsmen who have deployed are isolated from mental health services. This funding would implement the Maine NG Rural Reintegration Pilot Program that would fill this current gap. The MNG-RRPP would ensure mental health services are available to all service members & their families via: -Building network of mental health providers across Maine; -Treatment for rural service members & families through Mobile Peer Outreach Workers; -Telephone counseling utilizing licensed clinicians trained on military mental health issues; - and training for statewide mental health providers on reintegration, military culture, PTSD, TBI, suicide prevention.

ARMY

Item Name: Airbeam Shelter Protection at Remote Forward Operating Bases
Request: $5,000,000
Account: Research and Development, Army
Line: 27 – warfighter technology
PE: 0602786A
Suggested Recipient: University of Maine
Suggested Location of Performance (major portion of the work): Orono, Maine
Purpose/Project Description: The Army is pursuing the development of lightweight, affordable, modular, rapidly erectable, re-usable ballistic facilities protection that can be transported and moved along with the Force Provider camps currently being introduced into Afghanistan. Working with the US Army Soldier RDECOM lab, the University successfully demonstrated a lightweight, low-cost ballistic tent panel. A ballistic protection system for the new airbeam based Force Provider tent is currently being

developed for ATEC evaluation in early 2010. FY10 funding will complete the development and technology transition of the airbeam based Force Provider Modular Ballistic Protection System and to improve the performance of ballistic panels beyond what is available today at an affordable cost.

Item Name: Cellulose Nanocomposites Panels For Forward Operating Base Infrastructure and Troop Protection
Request: $5,000,000
Account: Research and Development, Army
Line: 25
PE: 0602784A
Suggested Recipient: University of Maine
Suggested Location of Performance (major portion of the work): Orono, Maine
Purpose/Project Description: Working with the ERDC labs, the University of Maine has successfully demonstrated a lightweight, low-cost ballistic tent panel. Based on the success of the University's ballistic tent panel blast testing, the University is convinced that the next step is to cost effectively reduce the weight and enhance the blast and ballistic properties of these panels is through the use of cellulose nanomaterials in the panels. Lower cost nanocomposites made from cellulose can provide the next generation of lightweight high-performance, bio-based materials for a variety of defense applications. In this program, the University will focus on improved blast and ballistic protection, but other applications include lighter DOD Class IV construction materials, lighter weight military ground vehicles, ships and airframes, and multifunctional coatings.

Item Name: Center for Regenerative Medicine
Request: $1,184,000
Account: Research and Development, Army
Line: 25
PE: 0602787A
Suggested Recipient: Mount Desert Island Biological Laboratory
Suggested Location of Performance (major portion of the work): Salisbury Cove, Maine
Purpose/Project Description: MDIBL seeks to establish a Center for Regenerative Medicine to study marine vertebrates known to regenerate organs and limbs to learn how humans can regain this capacity. The goal is to 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. This project benefits taxpayers by providing a unique approach to unlocking the potential for stem cell-based therapies to restore damaged tissues to original appearance and functionality, and to improving the health and well-being of the warfighters.

Item Name: Combinatorial, Pollutant Microenvironment Instrument Applied to Deployed Force Health Monitoring
Request: $1,000,000
Account: Research and Development, Army

Line: 25
PE: 0603002A
Suggested Recipient: University of Maine
Suggested Location of Performance (major portion of the work): Orono, Maine
Purpose/Project Description: Exposure to pollutants and toxins of deployed soldiers and the associated health risks, disease epidemiology, and wound healing is a critical area of investigation within DoD's Deployment Related Medical Research Program (DDRMRP). Knowledge of how genetic variants and environmental exposures contribute to disease and normal tissue repair can be effectively used to develop new criteria for earlier diagnosis, and lead to new, more effective and targeted therapies for returning troops. The development and testing of the instrument will leverage a newly established, world-class microfabrication and nanotechnology facility at the University of Maine.

Item Name: HMMWV recapitalization program
Request: $14,500,000
Account: Other Procurement, Army
Line: 13
Suggested Recipient: Maine Military Authority
Suggested Location of Performance (major portion of the work): Limestone, Maine
Purpose/Project Description: Armor capable, recapitalized HMMWVs remain in critical shortage throughout the DoD. Increasing MMA's production by 300 HMMWVs per year will result in higher production rates and ease the critical shortage of HMMWVs for the Army and National Guard in support of OIF and OEF and domestic operations at a reduced cost to the tax payer. The additional 300 units will be produced at a cost of $48.5k each, which is lower than any other source. The requested increase will fund the requested increase in production. TACOM supports this request for additional funding and production.

Item Name: In-Theater Evaluation of Ballistic Protection for Remote Forward Operating Bases
Request: $8,000,000
Account: Research and Development, Army
Line: 70
PE: 0603804A
Suggested Recipient: University of Maine
Suggested Location of Performance (major portion of the work): Orono, Maine
Purpose/Project Description: The Army is pursuing the development of new affordable, lightweight, rapidly erectable, modular protective structures and blast/ballistic-resistant materials able to host up-armoring materials to meet different threat levels. When applied to mobile FOB's and other structures like Containerized Housing Units, will provide added protection to mobile troops operating in remote areas against mortar, rocket and IED attacks. Working with US Army Soldier RDECOM, the University of Maine has successfully demonstrated a lightweight, low-cost ballistic tent panel. FY10 funding will be used to fabricate and ship ballistic panel systems for tent systems and Containerized Housing Units to field units for in-theater evaluation.

Item Name: Lightweight Caliber .50 Machine Gun (LW50MG) - formerly XM312
Request: $8,000,000
Account: Research and Development, Army
Line: 82
PE: 0604601A
Suggested Recipient: General Dynamics Armament and Technical Products (GDATP)
Suggested Location of Performance (major portion of the work): Saco, Maine
Purpose/Project Description: The Lightweight Caliber .50 Machine Gun (LW50MG) program is being developed under the Advanced Crew Served Weapon (ACSW) program that focuses on the Army's next generation of heavy machine guns. This request supports the Army's approved requirements for a LW50MG. It continues the reliability growth of the LW50MG to include fabrication of weapons to support the Army's Limited User Tests (LUT); provides the remaining funding necessary to complete Development Testing (DT) and Operational Testing (OT) leading to type classification of the LW50MG in the 4th Quarter, FY 10.

Item Name: M2 .50 Cal Machine Gun
Request: Support President's Budget
Account: Weapons and Tracked Combat Vehicles, Army
Line: 25
Suggested Recipient: General Dynamics Armament and Technical Products (GDATP)
Suggested Location of Performance (major portion of the work): Saco, Maine
Purpose/Project Description: This request supports the critical shortage of serviceable M2s due to high tempo weapon usage by Soldiers participating in OIF and OEF. It replaces the aging inventory of M2s that are quickly reaching the end of their service life and replenishment of severely depleted inventories of M2s at the Service depots.

Item Name: MK-19 MOD 3 Grenade Machine Gun (40mm)
Request: Support President's Budget
Account: WTCV
Line: 27
Suggested Recipient: General Dynamics Armament and Technical Products (GDATP)
Suggested Location of Performance (major portion of the work): Saco, Maine
Purpose/Project Description: Additional procurement funding for new MK19s will address the critical shortage of available MK19s due to the Army Modular Force transformation and Global War on Terror requirements; upgrade the aging U.S. Armed Forces inventory of MK19s that are quickly reaching the end of their service life; reduced logistical costs and increase functionality, capability and service life of the currently fielded MK19s; and increase commonality of all MK19 weapon system components with the Army and Marine Corps.

Item Name: Maine Institute for Human Genetics and Health
Request: $5,244,000
Account: Research and Development, Army
Line: 30
PE: 0603002A

Suggested Recipient: Maine Institute for Human Genetics and Health
Suggested Location of Performance (major portion of the work): Brewer, Maine
Purpose/Project Description: The mission of the Maine Institute for Human Genetics and Health (MIHGH) is to develop as a regional magnet translational research organization that builds on the strengths of its parent institutions, EMHS, Eastern Maine Medical Center, The Jackson Laboratory (TJL) and the University of Maine (U Maine), to improve clinical care of its target diseases, and reduce healthcare disparities in the under-served populations of rural Maine. The DoD will 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. MIHGH has developed the BioGeoBank of Maine, which links high quality tissue data with disparate maps of spatial information on environmental pollutants with changes over time.

Item Name: Muscle Degeneration and Military Preparedness
Request: $1,600,000
Account: Research and Development, Army
Line: 30
PE: 0603002
Suggested Recipient: Jackson Laboratory
Suggested Location of Performance (major portion of the work): Bar Harbor, Maine
Purpose/Project Description: Muscle weakness and degeneration have an impact on force readiness in the military. The Department of Defense currently funds research at Children's National Medical Center on Duchenne Muscular Dystrophy (DMD). Duchenne muscular dystrophy (Duchenne) is the most common fatal genetic disorder diagnosed in childhood. These researchers need a reliable source of fully characterized mouse models of DMD to make further progress with preclinical drug toxicity studies. Funding for equipment, mouse model development and acquisition would enable The Jackson Laboratory, the world's largest repository of mouse models of human disease, to create a complete repository of research mice related to muscle deterioration.

Item Name: New England Manufacturing Supply Chain Initiative
Request: $5,000,000
Account: Operation and Maintenance, Army
BA: 1
Suggested Recipient: Maine Manufacturing Extension Partnership
Suggested Location of Performance (major portion of the work): Augusta, Maine
Purpose/Project Description: The project will increase defense jobs in New England small manufacturers by increasing their success for awards for production of machined parts utilizing a newly developed and proven turn-key production system. The Turn-Key Rapid Production System significantly minimizes the lead times from design to finished product. Benefits include: (a) Create or retain 200 defense manufacturing jobs in small manufacturers; (b) Provide DoD rapid response capability to surge demand using the network of New England suppliers; and (c) Provide DoD risk mitigation of supply chain disruptions, obsolescence, and battlefield backorders for machined parts.

Item Name: Portable Non-Magnetic Compass/Positioning/Timing Device
Request: $2,000,000
Account: Research and Development, Army
Line: 23
PE: 0602782A
Suggested Recipient: Cross Rate Technologies
Suggested Location of Performance (major portion of the work): Standish, Maine
Purpose/Project Description:

This program, in collaboration with the U.S. Army Research Development & Engineering Command (ARDEC), directly supports the warfighter by developing a non-magnetic hand-held compass/positioning/timing device for troops involved in urban patrols and operations. Applications exist for integrating the device on myriad manned & unmanned ground vehicles, weapons systems & communication devices.

Item Name: Ripsaw Unmanned Ground Vehicle (UGV) Weaponization
Request: $7,000,000
Account: Research and Development, Army
Line: 17
PE: 0602624A
Suggested Recipient: Howe and Howe Technologies
Suggested Location of Performance (major portion of the work): in North Berwick, Maine
Purpose/Project Description: Properly outfitted, Ripsaw U.G.V. will have offensive and defensive capabilities never seen before on the battlefield while risking no human life. Ripsaw benefits include but are limited to, force protection, down soldier recovery, IED detection, and advanced ARDEC weaponzation. **Vice Chief of the Army, General Peter Chiarelli at an Army Science press conference called Ripsaw "an amazing piece of gear"** and directly influenced a **R**apid **E**quipping **F**orce investigation. This funding will directly fund this testing effort and prepare Ripsaw to be the first safety certified weaponized UGV fielded by the US Army.

Item Name: Toxic Particles
Request: $2,000,000
Account: Research and Development, Army
Line: 2
PE: 0601102A
Suggested Recipient: University of Southern Maine
Suggested Location of Performance (major portion of the work): Portland, Maine
Purpose/Project Description: This project would expand the scope of ongoing efforts to examine DU toxicity to other cell types (e.g. skin and brain) and allow for comparisons with other related particles used by DoD, such as nanoparticles and chromates. An understanding of how these particles causes genotoxicity and carcinogenicity provides essential information to better assess the relative risk of exposure for both soldiers and non-combatants and, in the long-term, may help reduce their effects by determining which steps are key for protecting cells from particle-induced carcinogenesis. In addition, the research will provide biological fingerprints to better detect soldiers who

may have been exposed to harmful levels of these particles.

NAVY

Item Name: Advanced Composite Manufacturing and Non-Destructive Evaluation Design Optimization of Composite High-Speed Boats
Request: $2,000,000
Account: Research and Development, Navy
Line: 5
PE: 0602123N
Suggested Recipient: Hodgdon Defense Composites
Suggested Location of Performance (major portion of the work): East Boothbay, Maine
Purpose/Project Description: The recent success of the Mk V.1 Composite Technology Demonstrator built by Hodgdon Defense Composites (HDC), in partnership with the University of Maine has demonstrated the viability and value of using composites for high-speed military boats. In laboratory testing, composites have proven to be superior to conventional materials (aluminum) in shock-absorption (wave-slamming). In addition, the lightweight composite materials used in the Mk V.1 will deliver superior performance at a weight equal to or less than aluminum, improving the range and speed of the vessel. In order to achieve the extremely light weight boats required by USSOCOM and others, existing design practices will need to be modified to incorporate the knowledge gained through these past research efforts, and develop a design and manufacturing practice that is capable of producing high-performance, weight-optimized craft in a high-production environment.

Item Name: Advanced High Speed Coastal Patrol Craft
Request: $8,000,000
Account: Research and Development, Navy
Line: 15
PE: 0603114N
Suggested Recipient: Lyman Morse Boatbuilding
Suggested Location of Performance (major portion of the work): Thomaston, Maine
Purpose/Project Description: Lyman Morse will design and construct thick section composite watercraft that will incorporate new fully vetted hull design configurations developed over the course of the last decade by the US Navy to provide a hull form that can: (1) 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.

Item Name: Advanced Maintenance and Environmental Monitoring Technologies for Public Shipyards
Request: $3,000,000
Account: Research and Development, Navy
PE: 0605013N

Suggested Recipient: Orbis
Suggested Location of Performance (major portion of the work): Portsmouth, New Hampshire
Purpose/Project Description: Through the SBIR program the U.S. Navy has invested significant resources to develop advanced machinery monitoring technologies aimed at reducing maintenance costs, increasing uptime of key capital industrial assets (e.g. cranes) and ensuring environmental compliance. These technologies are maturing rapidly and are appropriate for procurement and installation on end-use industrial plant equipments in public shipyards such as Portsmouth Naval Shipyard. Portsmouth has served as the development environment using previous RDT&E investment, resulting in a mature equipment health and usage monitoring capability and a supporting secure wireless network and IT infrastructure. This issue addresses continuation, expansion and support of capital asset management capability at Portsmouth Naval Shipyard.

Item Name: Autonomous Undersea Vehicle Application Center (AUVAC)
Request: $2,900,000
Account: Research and Development, Navy
Line: 11
PE: 0602435 N – Ocean Warfighting Environment Applied Research
Suggested Recipient: Autonomous Undersea Systems Institute at the Portsmouth Naval Shipyard.
Suggested Location of Performance (major portion of the work): Kittery, Maine
Purpose/Project Description: This request will fund the establishment of the Autonomous Underwater Vehicle (AUV) Applications Center to provide access to standardized AUV systems for vital concept demonstration/ experimentation by the national ocean community. The Center will directly address the six goals outlined in the DoD Unmanned Systems Roadmap, issued in December 2007, for the development and acquisition of unmanned systems. AUVAC provides a national center for sharing autonomous undersea vehicle (AUV) assets (platforms and sensing systems), information, technological advancements, and insight. The Center will also provide a structure whereby potential users, military and civilian, are able to obtain access to existing AUV systems, technologies, and operational /development support.

Item Name: Barrier Boat Craft
Request: $6,000,000
Account: Other Procurement, Navy
Line: **25**
Suggested Recipient: Washburn & Doughty Associates
Suggested Location of Performance (major portion of the work): East Boothbay, ME
Purpose/Project Description: The requested funding will enable the procurement of three Barrier Boat Craft to provide security and support services to Navy Fleet assets. These craft are used as barrier tenders to move and service barrier equipment afloat. As demonstrated by the attack on the USS Cole, US warships are vulnerable to attack from small, fast moving boats while in port and in transit.

Project Name: Berth 11/13 waterfront support facility
Request: $23,100,000
Account: Military Construction, Navy
Project Number: P-286
Service Component: Navy
Project Location: Portsmouth Naval Shipyard, Kittery, ME
Project Description: This project will construct a 46,005 SF two-story addition on the west side of the existing high bay of Bldg. 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. The facility will enhance productivity and promote efficiency and teamwork to the production shops, Ships Force Project Teams and Engineering Personnel.

Project Name: Consolidation of structural shops
Request: $36,600,000
Account: Military Construction, Navy
Project Number: P-266
Service Component: Navy
Project Location: Portsmouth Naval Shipyard, Kittery, ME
Project Description: This project will consolidate Structural Shop operations located throughout Portsmouth Naval Shipyard. The existing Building 92, Structural Shop, will be modernized and a new annex of 51,484 SF will be constructed between Building 92 and Building 76, (Forge and Heat Treat Shop). The Annex construction will maintain the north and south double gable ends of Building 76 due to their Historical significance. This addition is needed to incorporate the consolidation of the Structural Shop operations which are located throughout the Shipyard. This project modernizes the existing steel fabrication facility and constructs an annex to this facility to further consolidate operations.

Item Name: DDG-1000
Request: Support President's Budget
Account: Shipbuilding and Conversion, Navy
Line: 10
Suggested Recipient: General Dynamics, Bath Iron Works
Suggested Location of Performance (major portion of the work): Bath, Maine
Purpose/Project Description: The DDG-1000 is a multi-mission ship with a significant naval surface fire support capability, incorporating several new radar, propulsion and combat system technologies. Request is to support President's budget request to complete procurement funding of the 3rd DDG-1000 ship in fiscal year 2010, which is essential to meeting mission requirements and to sustaining the irreplaceable shipbuilding industrial base for complex surface combatants.

Item Name: DDG-51 *Arleigh Burke*-Class destroyer
Request: Support President's Budget
Account: Shipbuilding and Conversion, Navy
Line: 12

Suggested Recipient: General Dynamics, Bath Iron Works and Northrop Grumman Ship Systems
Suggested Location of Performance (major portion of the work): Bath, Maine, and Pascagoula, Mississippi.
Purpose/Project Description: Providing required ship procurement funding for the DDG-51 Restart program in FY10 is essential to meeting mission requirements and to sustaining the irreplaceable shipbuilding industrial base for complex surface combatants.

Item Name: Formable Textile for Complex Shaped Aerospace Composites
Request: $3,000,000
Account: Research and Development, Navy
Line: 16
PE: 0603123N
Suggested Recipient: Pepin Associates
Suggested Location of Performance (major portion of the work): Greenville, Maine
Purpose/Project Description: This request builds upon FY08 and 09 programs to transition the Pepin DiscoTex® reinforcing fabrics to advanced composite structures for Navy and other DOD systems. The FY10 program will focus on testing and certifying Navy platform components made with DiscoTex reinforcements such that the manufacturing cost savings for these and similar structures can be realized.

Item Name: Fuel Efficient, High Specific Power Free Piston Engine for USSVs
Request: $5,000,000
Account: Research and Development, Navy
Line: 5
PE: 0602123N
Suggested Recipient: Applied Thermal Sciences
Suggested Location of Performance (major portion of the work): Sanford, Maine
Purpose/Project Description: This project will develop an innovative high power density free piston engine offering 33% 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.

Project Name: Gate #2 security improvements (AT/FP)
Request: $7,100,000
Account: Military Construction, Navy
Project Number: P-280
Service Component: Navy
Project Location: Portsmouth Naval Shipyard, Kittery, ME
Project Description: 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. The gates/guard stations are the installation's first line of defense against terrorist attacks. The major threat at PNSY is a car or truck, with a bomb or some other form of weapon, breaching the base's security. The base assets are vulnerable because a speeding vehicle could reach some of the Navy's vital submarine repair facilities within minutes. This project is consistent with the base wide security plan, including gate 1 security improvements, parking structure to remove vehicles from operating areas, and dry dock caisson security improvements.

Item Name: Hybrid Heavy Lift Logistics Air Vehicle
Request: $3,500,000
Account: Research and Development, Navy
Line: 27
PE: 0603216N
Suggested Recipient: Integrated Systems Solutions, Inc
Suggested Location of Performance (major portion of the work): Limestone, Maine
Purpose/Project Description: This funding 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. The project will be executed at the former Loring Air Force Base near Caribou, Maine. A hybrid aircraft is cross between a conventional aircraft that uses airflow over the wings to create lift and a lighter-than-air vehicle that uses an envelope inflated with a gas to create lift. Although the hybrid will have a significantly lower cruising speed than a conventional, fixed-wing airlifter, the huge capacity and ability to operate from unprepared terrain will allow the hybrid aircraft to move significant amounts of equipment and supplies to build decisive combat power much more rapidly.

Item Name: Hydrodynamic Design Tools for Navy Patrol Craft Design
Request: $2,000,000
Account: Research and Development, Navy
PE: 0602123N
Suggested Recipient: Maine Marine Composites
Suggested Location of Performance (major portion of the work): Portland, Maine
Purpose/Project Description: Maine Marine Composites, LLC (MMC) in partnership with The Combatant Craft Division (CCD) of Naval Surface Warfare Center, Carderock Division (NSWCCD) and the University of Maine will develop and test a hybrid integrated software system that will combine the best attributes of CFD with efficient time-domain simulation to solve problems such as shock mitigation in high speed craft, maneuvering performance of new vessels, and hull/propulsor interactions. The effort is important to the development of high speed patrol craft for industry and the government.

Item Name: Joint Strike Fighter (F-35)
Request: Support President's Budget
Account: Aircraft Procurement, Navy
Line: 6

Item Name: Joint Strike Fighter (F-35)
Request: Support President's Budget
Account: Aircraft Procurement, Navy
Line: 7

Item Name: Joint Strike Fighter (F-35)
Request: Support President's Budget
Account: Research and Development, Navy
Line: 126
PE: 0604800N
Suggested Recipient: Portions of this work will be performed by Pratt&Whitney
Suggested Location of Performance (major portion of the work): North Berwick, Maine
Purpose/Project Description: 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 FY2010 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.

Item Name: LCS Program
Request: Support President's Budget
Account: Shipbuilding and Conversion, Navy
Line: 13
Suggested Recipient: General Dynamics, Bath Iron Works
Suggested Location of Performance (major portion of the work): Bath, Maine and Mobile, Alabama
Purpose/Project Description: Providing required ship procurement funding for the LCS program in FY2010 is important to meeting mission requirements in the challenging littoral environment and to reducing acquisition costs of this required fleet capability.

Item Name: Low Cost Flight Test Platform for Developing Advanced Propulsion Systems
Request: $4,000,000
Account: Research and Development, Navy
Line: 4
PE: 0602114N
Suggested Recipient: Applied Thermal Sciences
Suggested Location of Performance (major portion of the work): Sanford, Maine
Purpose/Project Description: The development of hypersonic systems will require new and enhanced test and facilities resources in several areas such as flight testing to characterize all aspects of the vehicle including propulsion systems, structures and materials, and guidance and control. The ability to obtain in stream measurements on hypersonic flight vehicles will be critical to a cost-effective and successful flight program. This project will provide a low-cost hypersonic flight test capability to optimize in-flight test instrumentation and propulsion system performance prior to vastly

more expensive large-scale test programs.

Item Name: Mission Helmet Recordable System
Request: $4,780,000
Account: Other Procurement, Navy
Suggested Recipient: Wilcox Industries
Suggested Location of Performance (major portion of the work): Newington, NH
Purpose/Project Description: The Mission Helmet Record System developed with the US Navy Special Warfare expanded on can be utilized by US Navy Explosive Ordnance Disposal community to enhance current intelligence gathering capabilities. This systems' modular design is ready for field employment on already fielded EOD MICH Bomb Suit Helmets.

Item Name: Mobile Valve and Flex Hose Maintenance (MVFM)
Request: $1,000,000
Account: Research and Development, Navy
Line: 36
PE: 0603513N
Suggested Recipient: ARA Inc
Suggested Location of Performance (major portion of the work): Brunswick, Maine.
Purpose/Project Description: One focus area of The Navy's S&T Strategic Plan is to reduce acquisition and lifecycle cost of Naval platforms and systems through design tools, reduced maintenance, intelligent diagnostics, and automation. To implement this vision, the Navy will focus on the three main cost drivers for the Navy and Marine Corps: acquisition of platforms and systems, maintenance and life-cycle, and manpower. Currently a DDG 51 Class Destroyer has over 10,000 valves and 1, 600 hoses that should be inspected during the Post Maintenance Inspection. This program will identify all valves and hoses that need to be inspected and allow the inspector to record data into the PDA to be downloaded into the data terminal upon completion of the inspection. This is the last year of this program as it will be complete with FY 10 funding.

Item Name: Smart Valve Automatic Fire Suppression System
Request: $6,000,000
Account: Other Procurement, Navy
Line: 7
Suggested Recipient: Portland Valve, Inc
Suggested Location of Performance (major portion of the work): South Portland, Maine
Purpose/Project Description: In response to a Navy requirement, Portland Valve developed a Smart Valve based Autonomic Fire Suppression System (AFSS) that is being installed on the DDG-1000 class of ships to contain and suppress shipboard fires in the primary damage area following a non-overwhelming weapon hit. 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 & electrical systems. The Smart Valve meets this program requirement.

Item Name: Swimmer Detection Sonar Network
Request: $5,870,000
Account: Research and Development, Navy
Line: 60
PE: 0603725N
Suggested Recipient: Scientific Solutions, Inc
Suggested Location of Performance (major portion of the work): Portsmouth, Naval Shipyard, Kittery, Maine.
Purpose/Project Description: The Swimmer Detection Sonar Network (SDSN) for the Portsmouth Naval Shipyard is a local platform to help advance this system. Ultimately SDSN will be a low cost system that already has proven to perform better than existing legacy systems. SDSN has been tested and is being installed at two overseas navy bases but in a very primitive version. The US Navy has great interest and has been following the development primarily because of the firm's success in areas of classification and detection while reducing false alarms. SDSN at PNS will have two prime objectives. The first and primary will be to provide a local test bed for a more rapid development of this system. Bi-statics and better detection and classification work will be performed here. Much of the intended design fits well with other efforts being supported by the PNS including work with AUV's which fits nicely with future integration with other systems.

Item Name: US Naval Sea Cadet Corps
Request: $651,000
Account: Operation and Maintenance, Navy
BA: 03
Suggested Recipient: US Naval Sea Cadet Corps
Suggested Location of Performance (major portion of the work): throughout U.S.
Purpose/Project Description: This Congressionally chartered program is focused upon development of youth ages 11-17, serving almost 9,000 Sea Cadets and adult volunteers in 387 units country-wide. It promotes interest and skill in seamanship and aviation and instills qualities that mold strong moral character in an anti-drug and anti-gang environment. Summer training onboard Navy and Coast Guard ships and shore stations is a challenging training ground for developing self-confidence and self-discipline, promotion of high standards of conduct and performance and a sense of teamwork. The requested funds will be utilized to offset training expenses. The program has significance in assisting to promote the Navy and Coast Guard, particularly in those areas of the U.S where these Services have little presence.

AIR FORCE

Item Name: ANG Block 42 F-16 Engine Upgrade
Request: $38,000,000
Account: Aircraft Procurement, Air Force

Line: 30
Suggested Recipient: Portions of this work will be performed by Pratt&Whitney
Suggested Location of Performance (major portion of the work): North Berwick, Maine
Purpose/Project Description: 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% 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% combat improvement to front-line ANG F-16 fighters plus upgraded F-15Cs is an extremely cost effective investment of $38M, and preserves jobs in Maine.

Item Name: C-17 Globemaster III
Request: $3,600,000,000
Account: Aircraft Procurement, Air Force
Line: 5
Suggested Recipient: Portions of this work will be performed by Pratt&Whitney
Suggested Location of Performance (major portion of the work): North Berwick, Maine
Purpose/Project Description: The US 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 FY-10, 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.

Item Name: Civil Air Patrol
Request: $4,400,000
Account: Operation and Maintenance, Air Force
Suggested Recipient: Civil Air Patrol
Suggested Location of Performance (major portion of the work): throughout U.S.
Purpose/Project Description: If the Civil Air Patrol program is not fully funded, the ability and readiness to support disaster relief, community service missions, search and rescue, youth leadership development and homeland security initiatives will be significantly degraded. A funding cut will directly translate into reduced field support of operational missions, training and exercises for volunteer professionals. For example, it is forecast that CAP would be forced to fly 17 percent fewer search and rescue as well as Homeland Security mission because of funding cuts.

Item Name: F-22 Raptor
Request: $2,800,000,000
Account: Aircraft Procurement, Air Force
Line: 3

Item Name: F-22A Raptor
Request: $505,000,000
Account: Research and Development, Air Force
Line: 133
PE: 0207138F

Suggested Recipient: Portions of this work will be performed by Pratt&Whitney
Suggested Location of Performance (major portion of the work): North Berwick, ME
Purpose/Project Description: The F22 is the only fighter that can provide the air dominance necessary to ensure freedom of maneuverability for U.S. and allied ground, air, and naval forces in contingency and combat operations. The unique design of the F-22A combines stealth technologies and vectored thrust with high thrust-to-weight performance to provide unprecedented maneuverability and survivability. *Supercruise*, the ability to operate at supersonic speeds without afterburning, gives the *Raptor* exceptional combat performance without compromising mission range. The F-22 production line is setting the standard for the aerospace industry, and it provides strength for the economy and jobs. As we face one of the most trying economic times in our history, it is imperative to continue production and preserve existing high paying, specialized jobs that are critical to our economy, national security, and the U.S. industrial base. The F-22 provides 95,000 jobs from over 1,000 suppliers in 44 states

Item Name: Joint Strike Fighter (F-35)
Request: Support President's Budget
Account: Aircraft Procurement, Air Force
Line: 1

Item Name: Joint Strike Fighter (F-35), advance procurement
Request: Support President's Budget
Account: Aircraft Procurement, Air Force
Line: 2

Item Name: Joint Strike Fighter (F-35)
Request: Support President's Budget
Account: Research and Development, Air Force
Line: 81
PE: 0604800F
Suggested Recipient: Portions of this work will be performed by Pratt&Whitney
Suggested Location of Performance (major portion of the work): North Berwick, Maine
Purpose/Project Description: 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 FY2010 President's request provides funding for F-35 aircraft, advanced procurement for future aircraft, and continued funding for the development of the F135 engine.

Item Name: LGX High Temperature Sensors for Health Monitoring of Aerospace Components
Request: $2,000,000
Account: Research and Development, Air Force
Line: 8
PE: 0602102F -- Materials
Suggested Recipient: University of Maine
Suggested Location of Performance (major portion of the work): Orono, Maine
Purpose/Project Description: The key aspect of the technology is the development of a new 'LGX family' of piezoelectric sensor materials that exhibit stable operation at temperatures where other piezoelectric materials cannot perform. Prototype sensor devices will be evaluated to determine their viability and accuracy as temperature, pressure, strain, and vibration sensors. Several thin film coatings will also be developed to quantitatively measure high temperature corrosion behavior and monitor high temperature degradation of Air Force components. The work will build upon well established and patented UMaine technology and will require new developments in sensor packaging, on-chip electronics and wireless communication protocols

DEFENSE-WIDE

Item Name: MK47 MOD 0 Advanced Lightweight Grenade Launcher (ALGL)
Request: $10,000,000
Account: Procurement, Defense-Wide
Line: 65
Suggested Recipient: General Dynamics – Saco Defense
Suggested Location of Performance (major portion of the work): Saco, Maine
Purpose/Project Description: The MK47 ALGL is designed to support the USSOCOM requirement for a vehicle and man-portable high velocity grenade launcher to replace aging MK19 40mm Grenade Machine Guns fielded in operational units. PEO SOF Warrior Systems has established a FY 2010 Unfunded Requirement of $10.0 million for continued IDIQ procurement of the required 269 systems total to meet the current USSOCOM BIOR and this supports an economic production rate for the gun system.

Item Name: Mission Helmet Recordable System
Request: $5,200,000
Account: Procurement, Defense-Wide
Suggested Recipient: Wilcox Industries
Suggested Location of Performance (major portion of the work): Newington, NH
Purpose/Project Description: The Mission Helmet Record System developed with and purchased by US 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. The system employs a common power source and data storage card. In order to fully optimize military operations in the joint service environment, individual operators must have a better method than those currently

available for recording the object or persons they are targeting and quickly disseminating that critical data to combat commanders. The Mission Helmet Record System is water proof for maritime operations and is made of rugged polycarbonate and aerospace alloys capable of withstanding rigorous field use.

Item Name: Random Obfuscating Compiler Anti-Tamper Software
Request: $3,800,000
Account: Research and Development, Defense-Wide
Line: 139
PE: 0605790D8Z
Suggested Recipient: ANGEL Secure Networks, Inc.
Suggested Location of Performance (major portion of the work): Orono, Maine
Purpose/Project Description: Funding will support the transfer of the DASH Anti-Tamper (AT) Software to the embedded system platforms used in DoD weapons systems, in order to maintain DoD's technological edge by preventing capture and reverse engineering of critical DoD information by adversaries. DASH fulfills a Presidential directive to protect critical DoD software.

Item Name: Small Craft Threat Identification Program
Request: $1,800,000
Account: Research and Development, Defense-Wide
Line: 59
PE: 0603826D8Z
Suggested Recipient: Technology Systems, Inc
Suggested Location of Performance (major portion of the work): Brunswick, Maine
Purpose/Project Description: NECC (Naval Expeditionary Combat Command) Science and Technology Strategic Plan defines a requirement (ISR STO-3) for improved maritime sensors for surface and underwater surveillance. The defined NECC Future Naval Combat Capabilities require "Intelligent Surveillance and C2 Technologies for Littoral Domain Awareness". NECC leadership has stated that being able to identify threatening forces in and amongst commercial traffic is a major security issue that needs new solutions. To enable a small craft operating crew to be able to discern a potential enemy in an area thick with commercial activity is a significant challenge. The crew size limitations make augmenting the crew capability with threat analysis capability a challenging but achievable objective. This projects 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 concept, as well as test and demonstration on small craft to allow for tailoring the system for small craft operators.

Item Name: Woody Biomass Conversion to JP-8 Fuel
Request: $3,000,000
Account: Research and Development, Defense-Wide
Line: 41
PE: 0603712S
Suggested Recipient: University of Maine
Suggested Location of Performance (major portion of the work): Brunswick, Maine

Purpose/Project Description: DoD has been directed to explore a wide range of energy alternatives and fuel efficiency efforts to reduce the military's reliance on foreign oil to power its aircraft, ground vehicles and non-nuclear ships. This wood-to-JP-8 program addresses both the national need for renewable JP-8 and the regional need for finding new ways to utilize woody biomass from Maine's forests and existing manufacturing assets of its forest products industry.