**Item Name:** Defense Commissary Agency commissary store, Topsham, Maine
**Request:** Legislative and report language
**Account:** Not applicable
**Line:** Not applicable

**Item Name:** Navy Exchange Service Command store, Brunswick, Maine
**Request:** Legislative and report language
**Account:** Not applicable
**Line:** Not applicable

**Purpose:** The purpose of following requested legislative provisions and accompanying report language is to sustain full service operations of the Defense Commissary Agency commissary store located in Topsham, Maine, and the Navy Exchange Service Command store located in Brunswick, Maine. While the President's budget request for fiscal year 2011 includes funding for operations of the commissary in Topsham, Maine through September 2011, the Department of the Navy has recommended that the commissary be disestablished in March 2011. The Defense Commissary Agency commissary store located in Topsham, Maine, is listed as a store closure for FY11 in the Defense Commissary Agency Fiscal Year 2008 Annual Commissary Certification. According to a Department of the Navy July 1, 2009 memorandum on Department of the Navy Evaluation of Commissary and Exchange Support at NAS Brunswick, Maine, the Navy will cease operations of the Navy Exchange Service Command store located in Brunswick, Maine, in March 2011.

Including the requested language in the bill would result in continuing the provision of an integral component of the compensation that is promised to our soldiers, sailors, airmen, Marines and guardsmen for their service to the Nation. And, in the case of the Navy Exchange Service Command store specifically, including the requested bill language would also provide for a profitability analysis of the Navy Exchange Service Command Store located in Brunswick, Maine. Continuing operations of the commissary and exchange stores is consistent with and support commissary and exchange policy stated in Chapter 147, Title 10, U.S. Code. Both the commissary store located in Topsham, Maine, and exchange store located in Brunswick, Maine, meet Defense Department criteria for continuing operations, including providing support to an active duty mission and a minimum number of active duty personnel. Keeping the commissary and exchange open is supported by the local communities in Maine unanimously and by General Craig McKinley, USAF, chief, National Guard Bureau and Vice Admiral Kevin McCoy, USN, commander, Naval Sea Systems Command, senior military leaders who take responsibly their role of working to ensure that the men and women under their command receive the full compensation package that they have earned. The operations of the commissary and exchange of Fort Benjamin Harrison, a military installation that was closed as a result of the 1991 Base Realignment and Closure proceedings, is a precedent for commissaries and exchanges continuing operations in support of military missions that continue in an area following the closure of the military installation with which those commissaries and exchanges were associated historically. In addition, continuing to provide the commissary and exchange benefits to those who have earned them will also support ninety jobs: 59 at the Navy Exchange store and 31 at the Defense Commissary Agency commissary store.

There are three arguments underlying the decision by the Navy to cease operations of the Navy Exchange Service Command store in Brunswick, Maine, and to recommend closure of the

Defense Commissary Agency commissary store in Topsham, Maine. These reasons are detailed in the July 1, 2009 memorandum on Department of the Navy Evaluation of Commissary and Exchange Support at NAS Brunswick, Maine: first, there will be a decline in the number of authorized patrons; second, that the decline in patrons will result in financial loses; and, third, there will no longer be a full time active duty mission at Naval Air Station Brunswick as of September 2011.

With respect to the issue of the authorized number of patrons, there are two facts that are relevant. First, by the Navy's own estimates, the active duty end-strength in Bath-Brunswick-Topsham community will exceed by over 200 percent the number required under Defense Department policy to maintain a commissary. According to the Navy, following the closure of Brunswick Naval Air Station, there will be at least 300 or more active duty personnel in this area. To put this in context, there will be at least eight commissaries around the nation supporting fewer than 300 active duty personnel. Second, with even the most conservative estimate of authorized patrons, the number of authorized patrons, including active and reserve servicemembers, family members, disabled veterans, etc, in the Bath-Brunswick-Topsham community and surrounding mid-coast region of Maine will remain strong and robust after the closure of NASB as compared to the authorized patron base of other stores nationwide. The patron base defined by DeCA, for example, will exceed the number of patrons of at least 31 commissaries around the country.

In the July 2009 memo, Navy managers argue that historic financial losses as well as projected future losses at the exchange and commissary necessitate terminating benefits to those who have earned them. In preparing pro forma estimates of future revenues, Navy analysts, however, assumed a definition of eligible patrons that was different from the historical definition of eligible patrons for revenue and cost accounting purposes. In pro forma revenue and costs estimates included in the July 2009 memo, Navy analysts defined the eligible patrons by the distance of their residence to the site of the current facilities and assumed a distance for that definition of 20 miles. In contrast, exchange and commissary historical sales and cost data is the result of providing services to all eligible beneficiaries that use those facilities regardless of the distance of the residence of the eligible patron to the commissary or exchange. Quite simply, there is no basis in law or regulation for such a distance-to-existing-facility-based definition of eligible patrons for pro forma forecasting. In fact, doing so is in direct contravention to Defense Department guidance, for example, which states that "requirements for facilities and programs shall consider that all authorized patrons (including reserve components and retirees) shall continue to use the exchange programs." The Navy analysis also failed to note that the average commissary operating costs requiring annual appropriations are approximately $4.6 million per store, well in excess of the amount required to continue services at the Topsham commissary. According to data provided by DeCA, the future operating costs at the Topsham commissary would be less than the operating costs of 80 percent of all commissaries. Following closure of NASB, the commissary would cost at least 50 percent **less** to operate than the average commissary. Indeed, even by DeCA's forecast, the revenues of the Topsham commissary store will increase by 5.2% in the first year of operations following the closure of NASB, to $8.1 million in FY12 from $7.7 million in FY11, and contribute approximately $800,000 to the commissary trust fund over that two-year period.

The Navy's third reason for recommending that exchange and commissary operations cease in March 2011 is that "there will no longer be a full time active duty mission at NASB as of September 2011." Defense Department guidance clearly states that the relevant criteria is

whether an active duty mission will continue to be supported at a military location. While the focus of the Navy's active duty mission is the construction of warships in Bath, Maine, the active duty missions of mid-coast Maine service members in support of ongoing operations in Iraq and Afghanistan, and the families that support them, should not be ignored.

As described in 10 USC 2481(b), the purpose of the commissary and exchange systems is to enhance the quality of life of members of the uniformed services, retired members, and their dependents and to support military readiness, recruitment, and retention. Defense Department guidance states that "the commissary program is an integral element of the pay and benefits package for active duty personnel," and that, "It is DOD policy that the Armed Services exchange programs are vital to mission accomplishment and form an integral part of the non-pay compensation for active duty personnel." To this end, there will be a very real and tangible impact on the value of the compensation for Navy and other active duty service members stationed in Bath-Brunswick-Topsham community if the commissary and exchange are closed. According to the Navy, service members and their families saved an average of 23 percent shopping at their Navy Exchange compared to shopping at other retailers, which, as noted in the Navy Exchange Service Command Annual Report for FY08, "shows that military customers can make their paychecks go even further than ever before when they shop at their NEX." And, as purchases by patrons at Defense commissaries are valued by DeCA at a discount to commercial retailers of more than 30 percent, closing the commissary alone will result in a decrease in compensation of at least $1,161 for single service members, $2,128 for couples, and $3,353 for a military family of four. **Given the current economic environment, such a significant decrease in compensation could not come at a worse time for these servicemembers, as well as the guardsmen, reservists, retirees, disabled veterans and their families who have earned this benefit for their sacrifice of service to the Nation.**

In support of the recommendation to terminate the existing commissary outlined in the Navy's July 2009 memorandum, Navy analysts cited a variety of suggested alternatives available to beneficiaries, to include commissaries located either 110 miles away in Bangor or 82 miles away at the Portsmouth Naval Shipyard. This proposal would be like closing the Keesler and Biloxi commissaries, which are relied on by Navy sailors and their families assigned to Pascagoula, Mississippi, and requiring them, as well as the other eligible patrons in that area, to drive to the commissaries either 94 miles away in New Orleans, Louisiana, or 75 miles away in Pensacola, Florida. At the very least, implicit in the Navy's proposal is that the Navy will be decreasing the pay of active duty service members by at least $500 -- the cost of transportation -- and decreasing their leave time by at least eight days per year – over 26 percent of their annual earned leave – because of the amount of time that they will have to spend traveling to these distant commissaries.

On the issue of shopping alternatives, 74 percent of all commissaries are within 5 miles of a commercial retailer; 90 percent of all commissaries are within 10 miles. Proximity to commercial retailers has never been a standard for terminating commissary or exchange services.

*Legislative language:*

**SEC. ____ OPERATIONS AT DEFENSE COMMISSARY AGENCY COMMISSARY STORE, TOPSHAM, MAINE.**

(a) MAINTENANCE OF FULL SERVICE OPERATIONS THROUGH FISCAL YEAR 2011.—The Secretary of the Navy shall, using amounts appropriated by title II under the heading

''OPERATION AND MAINTENANCE, NAVY'', maintain operations at the Defense Commissary Agency commissary store in Topsham, Maine, at a level of full service operations till September 30, 2011.
(b) PROHIBITION ON USE OF FUNDS FOR TERMINATION OF OPERATIONS.—No amounts appropriated or otherwise made available by this Act may be obligated or expended to reduce the level of operations of, terminate operations of, or otherwise disestablish the commissary store referred to in subsection (a) during fiscal year 2011.

*Accompanying report language:*

**Operations at Defense Commissary Agency commissary store, Topsham, Maine (Sec. ____ )**

The committee recommends a provision that would require the Secretary of the Navy to provide the Defense Commissary Agency with the funds necessary to sustain full service operations of the Defense Commissary Agency store locate in Topsham, Maine, through September 30, 2011.

While the President's budget request for fiscal year 2011 (FY11) includes funding for operations of the commissary in Topsham, Maine, through September 2011, the Department of the Navy has recommended that the Topsham commissary be disestablished in March 2011. Additionally, the Defense Commissary Agency commissary store located in Topsham, Maine, is listed as a store closure for FY11 in the Defense Commissary Agency Fiscal Year 2008 Annual Commissary Certification. The committee notes that (1) there are servicemembers who are assigned to an active duty mission at the Navy Supervisor of Shipbuilding, Conversion, and Repair Command, as well as other military activities in the Brunswick-Bath-Topsham community, who currently are supported by, and receive a valuable portion of their compensation benefit from, the Defense Commissary Agency store in Topsham, Maine; (2) these military activities will remain operational after the closure of Brunswick Naval Air Station; and (3) to cease operation of the commissary would eliminate, or degrade the value of, an integral component of compensation for servicemembers and their families for their service to the Nation. Therefore, in addition to the recommended provision, the committee urges the Secretary of the Navy and the Chief of Naval Operations (1) to recommend to the Defense Commissary Agency Board of Directors, through their respective board representatives, the continuance of Topsham commissary operations, (2) to budget for and request funding in future appropriation proposals for Topsham commissary operations, and (3) to coordinate with the Director, Defense Commissary Agency such actions that will sustain full service commissary operations at the Defense Commissary Agency store in Topsham, Maine.

*Legislative language:*

**SEC. _____ OPERATIONS AT NAVY EXCHANGE SERVICE COMMAND STORE, BRUNSWICK, MAINE.**
(a) CONTINUATION OF OPERATIONS THROUGH FISCAL YEAR 2011.—
(1) IN GENERAL.—The Secretary of the Navy shall operate the Navy Exchange Service Command store in Brunswick, Maine, through September 30, 2011.

(2) PROHIBITION ON REDUCTION IN SALE OF GOODS.—The Secretary shall not take any action to reduce or to terminate the sale of goods at the Navy Exchange Service Command store referred to in paragraph (1) during fiscal year 2011.
(b) OPERATION TO ASSESS PROFITABILITY OF STORE.—Commencing January 1, 2011, the Secretary shall operate the Navy Exchange Service Command store referred to in subsection (a) for a period of not less than one year in a manner designed to provide for a determination of the profitability of the store.
(c) REPORT ON MANAGEMENT OF STORE.—
(1) REPORT REQUIRED.—Not later than February 1, 2011, the Secretary shall submit to the congressional defense committees and to the Comptroller General of the United States a report on the management of the Navy Exchange Service Command store referred to in subsection (a).
(2) ELEMENTS.—The report under paragraph (1) shall include the following:
(A) Financial statements of the store for the five fiscal years ending on September 30, 2010.
(B) A description and analysis of constraints to achieving profitability for the store on a per year basis during the five calendar years ending on December 31, 2010, if profitability for the store was not achieved during such calendar years.
(C) A projection for future profitability for the store during the five calendar years beginning on January 1, 2011, including pro forma financial statements for that period and a detailed discussion of the financial, operational, and other assumptions through which such pro forma statements were developed.
(D) A full description and assessment of management actions required to achieve profitability for the store during the period of assessment under subsection (b) and during the four following calendar years, including such recommendations for legislative or administrative action to enhance the profitability of the store during such five years as the Secretary considers appropriate.
(E) A discussion of the financial implications for the operation of a combined exchange and commissary store of the actions described under subparagraph (D).
(F) Such other matters as the Secretary considers appropriate.
(d) COMPTROLLER GENERAL REPORT.—Not later than April 1, 2011, the Comptroller General of the United States shall submit to the congressional defense committees a report setting forth an audit of the report submitted under subsection (c), including an analysis of the elements in the report and such recommendations regarding the matters covered by the report as the Comptroller General considers appropriate.

*Accompanying report language:*

**Operations at Navy Exchange Service Command store, Brunswick, Maine (Sec. ____ )**

The committee recommends a provision that would prohibit the Secretary of the Navy from closing the Navy Exchange Service Command store located in Brunswick, Maine in fiscal year 2011. In addition, the provision would require the Secretary of the Navy to operate the Navy Exchange Service Command store located in Brunswick, Maine, for a one-year period, to begin January 1, 2011, to establish profitability of the store following the closure of Brunswick Naval Air Station and to submit a report to the congressional defense committees and to the Comptroller General of the United States on management practices implemented by the Navy to establish profitability at the Navy Exchange Service Command store located in Brunswick,

Maine. The provision would also direct the Comptroller General to audit the report of the Secretary of the Navy.

According to a Department of the Navy July 1, 2009 memorandum on Department of the Navy Evaluation of Commissary and Exchange Support at NAS Brunswick, Maine, the Navy will cease operations of the Navy Exchange Service Command store located in Brunswick, Maine, in March 2011. The committee notes that (1) there are servicemembers who are assigned to an active duty mission at the Navy Supervisor of Shipbuilding, Conversion, and Repair Command, as well as other military activities in the Brunswick-Bath-Topsham community, who receive a valuable portion of their compensation benefit from the Navy Exchange Service Command store located in Brunswick, Maine; (2) these military activities will remain operational after the closure of Brunswick Naval Air Station; and (3) to cease operation of the exchange store would eliminate, or degrade the value of, an integral component of compensation for servicemembers and their families for their service to the Nation. The committee notes Defense Department guidelines clearly delineate a process to determine whether to continue independent exchange operations or a combined exchange-commissary store on a closed installation, to include a one-year test period to establish profitability, which was not conducted by the Navy. In addition, the committee notes the poor quality of the financial analysis included in the Navy July 1 2009 memorandum. Therefore, a more disciplined and rigorous analysis, as provided in this section and consistent with Defense Department guidance, will more effectively inform decision making on future operations of either an independent military exchange store or combined commissary-military exchange store in the Brunswick-Bath-Topsham community.

**Item Name:** Random Obfuscating Compiler Anti-Tamper Software
**Request:** $4,800,000
**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:** ANGEL/Hess Secure Nuclear Weapon Detector
**Request:** $2,420,000
**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:** The purpose of this project is to provide a secure sensor to detect nuclear weapons.

**Item Name:** Fuel Efficient, High Specific Power HiPerTEC engine for USVs

**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:** The HiPerTEC free-piston engine offers a 50% increase in fuel efficiency over today's diesel engines, and 10 times the specific power. It is critical for DoD to invest in innovative engine designs in order to develop more fuel efficient and high specific power engines to enhance platform mobility and mission capability.

**Item Name:** Low Cost Ramjet/scramjet flight testing for time critical strike weapons development
**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 Department of Defense has made investments into hypersonic air-breathing propulsion with the goal of developing transformational capabilities addressing time critical targets, prompt global strike and low cost access to space. Current test programs are hindered by complexity and lengthy schedules that result in $100's millions costs and far too few flight tests for effective development. By focusing on the heart of the propulsion system, namely the internal flow-path of the ramjet/scramjet, and not the full weapon, the complexity of flight testing reduces to a point where hundreds, and even thousands of flight tests can be accomplished to significantly reduce the time and cost of development.

**Item Name:** Mobile TIPSS
**Request:** $5,773,000
**Account:** Research and development, defense-wide
**Line:** 59
**PE:** 0603826D8Z
**Suggested Recipient:** Bigge Defense
**Suggested Location of Performance (major portion of the work):** Millinocket, Me
**Purpose/Project Description:** The Mobile Thermal Perimeter Surveillance System or Mobile TIPSS is a tactical surveillance platform that offers encompassing situational awareness and advanced IED protection. Mobile TIPSS provides troop protection and base defense to units in rear areas as well as forward positions by detecting sneak attacks and border & perimeter penetrations through its use of an elevated and reconfigurable sensor package.

**Item Name:** Shipyard Work Control Process Improvement
**Request:** $2,900,000
**Account:** Research and development, Navy
**PE:** 0605013N
**Suggested Recipient:** CACI

**Suggested Location of Performance (major portion of the work):** Portsmouth Naval Shipyard
**Purpose/Project Description:** The purpose of this request is to introduce to the shipyard a pilot Product Life Cycle Management (PLM) software tool that will create an Integrated Data Environment (IDE) that will facilitate the sharing of maintenance information, system drawings, business processes, personnel management, etc., under the umbrella of one interoperable system with a single log on feature.

**Item Name:** Civil Air Patrol
**Request:** $4,500,000
**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.

**Item Name:** MK47 MOD 0 Advanced Lightweight Grenade Launcher (ALGL)
**Request:** $8,000,000
**Account:** Procurement, Defense-Wide
**Line:** 75
**Suggested Recipient:** General Dynamics Armament and Technical Products (GDATP)
**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.

**Item Name:** Lightweight .50 Caliber Machine Gun (XM806)
**Request:** Support President's Budget
**Account:** Weapons and Tracked Combat Vehicles, Army
**Line:** 23
**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:** Machine Gun, Cal .50 M2 ROLL
**Request:** Support President's Budget
**Account:** Weapons and Tracked Combat Vehicles, Army
**Line:** 22
**Suggested Recipient:** General Dynamics Armament and Technical Products (GDATP)
**Suggested Location of Performance (major portion of the work):** Saco, Maine

**Purpose/Project Description:** The purpose of this request is to support the supply of M2s due to high tempo weapon usage by soldiers participating in Operation Iraqi Freedom and Operation Enduring Freedom. It replaces the aging inventory of M2s that are quickly reaching the end of their service life based on deficiencies identified from on-going combat operations in Afghanistan and Iraq, while replenishing severely depleted inventories of M2s at the service depots.

**Item Name:** M2 .50 Cal Machine Gun MODS (M2A1 QCB Kits)
**Request:** $11,000,000
**Account:** Weapons and Tracked Combat Vehicles, Army
**Line:** 37
**Suggested Recipient:** General Dynamics Armament and Technical Products (GDATP)
**Suggested Location of Performance (major portion of the work):** Saco, Maine
**Purpose/Project Description:** The M2A1 QCB Kit plan is designed to upgrade the aging inventory of M2HBs that are quickly reaching the end of their service life based on deficiencies identified from on-going combat operations in Afghanistan and Iraq. The operational benefits include the elimination of safety concerns associated with improper headspace and timing as well as reduced operator headspace and timing training burden. This modification will provide the Soldier with the ability to conduct immediate rapid hot barrel changes in a combat environment while reducing exposure to enemy fire.

**Item Name:** Design Optimization of Composite High-Speed Boats using Advanced Composite Manufacturing and Non-Destructive Evaluation
**Request:** $2,000,000
**Account:** Research and development, Navy
**PE:** PE0602123N
**Suggested Recipient:** Hodgdon Defense Composites
**Suggested Location of Performance (major portion of the work):** East Boothbay, Maine
**Purpose/Project Description:** The purpose of this program is to conduct R&D to reduce structural weight for high-speed composite craft through the use of lightweight composite materials. This effort will build off of the expertise gained in the successful Reliability of Composite Program, MAKO composites craft program, and workforce development programs in Maine to address new requirements for Special Operations Craft.

**Item Name:** Ripsaw Unmanned Ground Vehicle (UGV) Weaponization
**Request:** $6,000,000
**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:** Unmanned Ground Vehicle Ripsaw MS1 is currently unmatched by any in-service military ground vehicle, and is poised to save countless lives on the battlefield but it is not designed for a amphibious operations. This effort will allow Howe and Howe Technologies to provide Navy and Marine Forces with an Amphibious Ripsaw type vehicle.

This vehicle will provide the Navy and Marines with the same tactical advantage that a landed based unit would have in an offshore environment.

**Item Name:** Hybrid Heavy Lift Logistics Air Vehicle
**Request:** $4,000,000
**Account:** Research and Development, Navy
**Line:** 18
**PE:** 0603268N
**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 U.S. Navy research and development project to engineer, design and test key components and achieve a Critical Design Review of a very large hybrid aircraft that could be used as a heavy lift transport in wartime. The project will help to address the U.S. military's future airlift shortfall by providing a highly-efficient hybrid airlifter that will be able to transport a complete combat force (troops, vehicles, helicopters, and supplies) great distances without loss of unit cohesion or physical readiness to fight. This project will immediately create 12 to 15 new jobs at the former Loring Air Force Base near Caribou, Maine and several more research positions at the University of Maine in Bangor. These jobs will be sustained by the project funds for one year. ISSI intends to grow its business at the Loring Commerce Center and bring additional projects to the site to sustain employment over the long run.

**Item Name:** Impact of the battlefield environment on soldiers and veterans health
**Request:** $2,700,000
**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:** This project would investigate genetic factors that aggravate or ameliorate the chronic, unpredictable stress of active duty and reintegration to civilian life in the soldier and veteran populations. It would identify genes that underlie multiple behaviors that may be exhibited following exposure to conditions of war, including the challenges of chronic pain and substance abuse. Military applications include battlefield suitability, military recruiting and veterans' health, and the development of improved support systems for the warfighter and the veteran. An estimated nine jobs will result initially, and up to 30 over three years. Jobs will range from animal care and behavioral and functional testing to the advanced computational analysis of outcomes. Associated jobs will include modification of space, installation and management of equipment, support personnel.

**Item Name:** Maine Institute for Human Genetics and Health
**Request:** $4,370,000
**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:** 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:** Hydrodynamic Design Tools for Navy Patrol Craft Design
**Request:** $1,000,000
**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:** This project is the second phase of an ONR sponsored effort to design and improve these tools. Maine Marine Composites, LLC (MMC) of Portland will join with AeroHydro, Inc. (AHI) of Southwest Harbor to develop a hybrid integrated software system that will combine efficient time-domain simulation with other tools to solve problems such as shock mitigation in high speed craft, maneuvering performance of new vessels, and hull/propulsor interactions.

**Item Name:** Installation Management Command Service Life Extension Program (IMCOM SLEP)
**Request:** $5,000,000
**Account:** Operation and Maintenance, Army
**Suggested Recipient:** Maine Military Authority
**Suggested Location of Performance (major portion of the work):** Limestone, ME

**Purpose/Project Description:** Installation Management Command (IMCOM) has an urgent need to refurbish its widely varied and aged fleet of 70,000 non-tactical vehicles, including fire and rescue vehicles, which are used at more than 70 U.S. Army installations nationwide.

**Item Name:** Carbon nanotube-based radiona hard nano-electronic analog devices
**Request:** $5,000,000
**Account:** Research and Development, Air Force
**PE:** 0305159F
**Suggested Recipient:** National Semiconductor
**Suggested Location of Performance (major portion of the work):** South Portland, ME
**Purpose/Project Description:** This technology will meet the critical need to protect space applications during critical operations from natural radiation and EMP events and will ensure the continual improvement of electronic applications, with particular emphasis on a new generation of devices constructed with single-walled carbon nanotube materials. The devices that will be built through this program will utilize carbon nanotubes to create circuits that will enable significant increases in density, speed, will significantly lower power requirements, and will be able to operate in the harshest environments to provide next generation capability to our Intelligence Community and military operators. These devices will replace the current inventory of products containing radiation and EMP susceptible electronics for space applications, eliminate the need for triple redundancy, and enable state-of-the-art computing for our space assets resulting in new mission opportunities and capabilities.

**Item Name:** Naval Sea Cadet Corps
**Request:** $635,000
**Account:** Operation and Maintenance, Navy
**Suggested Recipient:** 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.

**Item Name:** Production of Wood-Based Diesel and Jet Fuel at Pulp and Paper Facilities
**Request:** $6,500,000
**Account:** Research and development, Army
**Line:** 52
**PE:** 0603734A
**Suggested Recipient:** New Page; Sappi Fine Paper North America
**Suggested Location of Performance (major portion of the work):** Rumford, Skowhagen and Westbrook, Maine

**Purpose/Project Description:** The project includes the construction and operation of a demonstration-scale biorefinery integrated with a pulp and paper mill to promote energy security by demonstrating the production of jet fuel, diesel fuel and fuel blend components from woody biomass.. The integrated biorefinery will produce biobutanol, which can be used as a blendstock for vehicle and aviation fuel and can be inexpensively converted into jet fuel and diesel.

**Item Name:** Tantalum capacitors production capabilities scale up
**Request:** $1,900,000
**Account:** Procurement, defense-wide
**Line:** 1
**PE:** 0902199D8Z
**Suggested Recipient:** DM Technologies
**Suggested Location of Performance (major portion of the work):** Sanford, ME
**Purpose/Project Description:** The DMT conformal coated chip is a critical technology item for high growth defense applications such as radar systems for Joint Strike Fighter and the Patriot Missile System. DM Technologies, the only domestic supplier and one of only two suppliers worldwide to the defense industry, has implemented a robotics based technology resulting in superior parts – the only patentable fused conformal coated chip. The project could create as many as 40 employment positions over the next 3 years.

**Item Name:** DDG-1000
**Request:** Support President's Budget
**Account:** Shipbuilding and Conversion, Navy
**Line:** 9
**Suggested Recipient:** General Dynamics, Bath Iron Works
**Suggested Location of Performance (major portion of the work):** Bath, Maine
**Purpose/Project Description:** DDG-1000 is the centerpiece of the US Navy's surface fleet transformation and will serve as a versatile asset in future Naval Strategy. Designed with sustainable payload, multi-spectral stealth and optimal manning, DDG-1000 will take the fight to the enemy with unprecedented striking power, sustainability, survivability and information dominance.

**Item Name:** DDG-51 *Arleigh Burke*-Class destroyer
**Request:** Support President's Budget
**Account:** Shipbuilding and Conversion, Navy
**Line:** 10 and 11
**Suggested Recipient:** General Dynamics, Bath Iron Works
**Suggested Location of Performance (major portion of the work):** Bath, Maine
**Purpose/Project Description:** The DDG 51 Class of ships is able to operate offensively and defensively, independently or as units of Carrier Strike Groups and Surface Action Groups. The DDG-51 ARLIGH BURKE Class remains the U.S. Navy's most technologically advanced surface combatant currently in service, and the Navy's primary multi-mission surface combatant.

**Item Name:** Center for Regenerative Medicine
**Request:** $2,202,000
**Account:** Research and Development, Army

**Line:** 28
**PE:** 0602787A
**Suggested Recipient:** Mount Desert Island Biological Laboratory
**Suggested Location of Performance (major portion of the work):** Salisbury Cove, Maine
**Purpose/Project Description:** Mount Desert Island Biological Laboratory (MDIBL) seeks funding to expand its Department of Defense sponsored research and development activities within its Center for Regenerative Biology and Medicine. The purpose of these research activities is to further understand and control the mechanisms involved in limb, neuronal and tissue regeneration by studying primitive organisms that have the ability to regenerate their limbs during adulthood. These studies will provide insights into why humans have lost this capacity, and improve clinical treatments for service personnel suffering from combat-related injuries. The MDIBL regenerative medicine research program is a valuable use of taxpayer funds because it directly supports an identified requirement of the Army and is done with the full support of and in strict collaboration with the USAMRMC's Telemedicine and Advanced Technology Research Center at Ft. Detrick.

**Item Name:** Advanced Shipyard Maintenance & Environmental Monitoring
**Request:** $4,200,000
**Account:** Research and development, Navy
**Line:** 128
**PE:** 0605013N
**Suggested Recipient:** Orbis
**Suggested Location of Performance (major portion of the work):** Portsmouth Naval Shipyard
**Purpose/Project Description:** The purpose of this secure wireless equipment monitoring, asset health maintenance and environmental compliance system is to improve productivity, reduce maintenance costs, and enhance safety. Initial installation on overhead heavy cranes has provided significant dollar savings -- by installing the sensors and wireless infrastructure shipyard wide, savings could reach several million dollars per year in avoided maintenance costs.

**Item Name:** Chemical/Biological Infrared Detection System
**Request:** $5,500,000
**Account:** Research and development, defense-wide
**PE:** 0602384BP
**Suggested Recipient:** Orono Spectral Soluntions, Inc
**Suggested Location of Performance (major portion of the work):** Old Town, Maine
**Purpose/Project Description:** 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. The development of this technology has the support of the United States Army (Chemical Biological Defense Program), which to date has allocated funds of $3.9M for this technical approach. With this continued support, it is anticipated that OSS will be able to hire 5 or more additional scientists/engineers.

**Item Name:** Formable Textile For Complex Shaped Aerospace Composite Structures
**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. DiscoTex aligned discontinuous fabric reduces the cost of fabricating complex shaped composite structures by 35% or more and enables the design of components which cannot now be efficiently produced. The FY11 program will focus on infrastructure necessary to produce OEM parts for aerospace platforms.

**Item Name:** Smart Valve Automatic Fire Suppression System
**Request:** $6,000,000
**Account:** Other Procurement, Navy
**Line:** 6
**Suggested Recipient:** Portland Valve, Inc
**Suggested Location of Performance (major portion of the work):** South Portland, Maine
**Purpose/Project Description:** The Smart Valve based Autonomic Fire Suppression System (AFSS) is one of the seven key new technologies being deployed on the Navy's DDG-1000 destroyer program. The DDG Modernization Program is for the purpose of upgrading the Hull, Machinery, & Electrical systems, among other systems, to ensure that the ships fulfill their 30-plus year life. The objective of this request is to transition the DDG-1000 AFSS Smart Valve technology to the DDG-51 class under the DDG modernization program.

**Item Name:** F-119 Engine Spares for the F-22
**Request:** $160,000,000
**Account:** Aircraft procurement, Air Force
**Line:** 3
**Suggested Recipient:** Pratt&Whitney
**Suggested Location of Performance (major portion of the work):** North Berwick, ME
**Purpose/Project Description:** The current USAF F119 acquisition plan calls for 65 F119 spare engines, well short of the full USAF Propulsion Requirement System (PRS) computation. However, the FY11 President's budget does not include funding for additional F119 engines. Without additional orders, F119 production will conclude in FY11/2$^{nd}$ quarter, capping spares at just 65 engines, well short of the full requirement.

**Item Name:** F-16 Block 42 Engine Upgrades
**Request:** $33,800,000
**Account:** Aircraft procurement, Air Force
**Line:** 30
**Suggested Recipient:** Pratt&Whitney
**Suggested Location of Performance (major portion of the work):** North Berwick, ME
**Purpose/Project Description:** This funding would procure 6 more engines, completing the programmed buy of 53 installed and spare engines and fully equipping both ANG fighter wings. The engine upgrade provides the F-16 Block 42 with a 20% improvement in thrust along with

significantly improved durability, reliability and survivability. The direct impact on the warfighter is better payload, range, and lower life cycle cost.

**Item Name:** Deepwater Offshore Windpower System Demonstration
**Request:** $5,000,000
**Account:** Research and development, Navy
**Line:** 58
**PE:** 0603725N
**Suggested Recipient:** Principle Power
**Suggested Location of Performance (major portion of the work):** Portsmouth Naval Shipyard
**Purpose/Project Description:** The U.S. Navy has a priority mission to acquire technologies and systems that reduce both its carbon footprint and its reliance upon fossil-fueled power generation, both at sea and on shore, and the Navy is actively seeking renewable energy generation resources to supply power to its shore facilities. Principle Power seeks to demonstrate a prototype deepwater wind power facility near Portsmouth Naval Shipyard (PNS), chiefly to demonstrate the appropriateness of such facilities to serve the Navy's shore power needs, but also to provide electric power, generated by the unit during its demonstration period (and possibly after), to meet the Navy's mandate of 50% renewable energy for that base by 2020.

**Item Name:** Critical underwater infrastructure and asset protection system
**Request:** $1,710,000
**Account:** Research and Development, Navy
**Line:** 64
**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 goal of this request is to enhance the system capabilities by reducing the size, weight, and cost and to advance its capabilities by examining new techniques to distribute bandwidth for use in multi-statics, a method of obtaining multiple views of one target as opposed to a single view, thus reducing false alert rates which plague most every legacy system.

**Item Name:** Warfighter Interoperability Technologies
**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:** There are currently situational and marine navigation systems aboard small Navy Expeditionary ships which have facilitated situational awareness and enhanced operator capabilities by providing a common operational picture. The purpose of this project is to extend the capability to provide common operating picture to new domains including dismounted personnel and new platforms and systems.

**Item Name:** Advanced multifunctional materials for soldier support and protection
**Request:** $5,000,000
**Account:** Research and development, Army
**PE:** 0602786A
**Suggested Recipient:** University of Maine
**Suggested Location of Performance (major portion of the work):** Orono, Maine
**Purpose/Project Description:** The purpose of the project is to build on the Modular Ballistic Protection System (MBPS) to develop lighter weight overhead ballistic protection systems with integral solar photovoltaic capabilities as well as stand-alone ballistic and blast barriers that can be erected around any shelter in remote locations.

**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:** The purpose of the project is to 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 development of low-cost, high-performance cellulose nanocomposites.

**Item Name:** Woody Biomass Conversion to JP-8 Fuel
**Request:** $3,000,000
**Account:** Research and Development, Defense-Wide
**Line:** 44
**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.

**Item Name:** LGX High Temperature Acoustic Wave Sensors
**Request:** $3,000,000
**Account:** Research and Development, Air Force
**Line:** 4
**PE:** 0602102F
**Suggested Recipient:** University of Maine
**Suggested Location of Performance (major portion of the work):** Orono, Maine
**Purpose/Project Description:** The purpose of this project is to continue work begun in FY'09 investigating fundamental sensor materials and device design concepts as well as developing

functional prototypes of acoustic wave sensors to be tested under realistic high temperature operating Air Force environments. 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.

**Item Name:** **Maritime Security Initiative**
**Request:** $750,000
**Account:** Operation and Maintenance, Navy
**Line:** 3B
**Suggested Recipient:** University of Southern Maine
**Suggested Location of Performance (major portion of the work):** University of Southern Maine
**Purpose/Project Description:** The purpose of this funding is for a Maritime Security Initiative which will provide training and research in maritime security law. This program would meet a growing demand for legal training in maritime security issues among existing government personnel and additional legal professionals. It will help build maritime law capacity in the US Navy and it will aid the US Coast Guard, already tasked with maintaining the security of ocean-based commercial interests but soon to be responsible for protecting off-shore energy installations as well.

**Item Name:** Nano-cellulose for high strength, light weight composite packaging and structural materials
**Request:** $6,000,000
**Account:** Research and development, defense-wide
**Line:** 245
**PE:** 0708011S
**Suggested Recipient:** Verso Paper
**Suggested Location of Performance (major portion of the work):** Jay and Bucksport, Maine
**Purpose/Project Description:** The project would produce, test and demonstrate the effectiveness of nanocellulose as a packaging material and as an additive to form composite materials for many purposes, leading to the qualification and deployment of high-performance products. Nano-cellulose coatings and additives will make traditional corrugated tri-wall packaging and other types of paper packaging lighter and stronger while cutting both transportation costs and the carbon footprint.

**Item Name:** Mission Helmet Recordable System
**Request:** $5,376,000
**Account:** Other Procurement, Navy
**Suggested Recipient:** Wilcox Industries
**Suggested Location of Performance (major portion of the work):** Newington, NH

The purpose of this request is to provide the U.S Navy Explosive Ordnance Disposal (EOD) equipment necessary to conduct day/night combat operations to disable Improvised Explosive Devices (IED) or Un-Exploded Ordnance (UXO).