# DEPARTMENT OF HOMELAND SECURITY
# 2013 STRATEGIC SUSTAINABILITY
# PERFORMANCE PLAN



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## STRATEGIC SUSTAINABILITY PERFORMANCE PLAN POLICY STATEMENT

The Department of Homeland Security (DHS) is committed to becoming a leader in sustainability. DHS continues to ensure that its operations and actions are carried out in an environmentally, economically, and fiscally sound manner. Incorporating sustainable practices into the DHS mission conserves energy and natural resources, reduces pollution and contamination releases, enhances the workplace through less exposure to hazardous materials and chemicals, and strengthens national security by encouraging energy independence. Employees at all levels must be responsible and accountable for integrating environmental stewardship into their day-to-day activities in order to reduce the environmental impact of their activities and to protect natural resources. These precepts are integral aspects of all Departmental activities. Incorporating sustainability into day-to-day business processes and decision-making is an important step in enhancing mission performance and demonstrating our commitment to compliance with environmental and energy statutes, regulations, and Executive Orders (EOs) and to protecting the nation's natural resources.

To this end, sustainability has emerged as a central, organizing concept for DHS. This common conceptual thread ties together diverse mission-related operations, projects, stakeholders, and issues. This concept also addresses the need for responsible expenditure of taxpayers' dollars and the need to proactively evaluate sustainable alternatives for all Department activities and initiatives. Sustainability is embraced by DHS leadership and is incorporated into mission operations, supporting projects and business processes related to contracting, acquisition, financial planning, information technology, and project and program execution.

At DHS, the approach to sustainability balances cost, schedule, operations, maintenance, safety requirements, and employee morale with creating and maintaining conditions that fulfill the economic, environmental, social, and security needs of the American people.

EO 13514, *Federal Leadership in Environmental, Energy, and Economic Performance,* offers the opportunity to develop successful initiatives to strengthen the Department's sustainability and efficiency goals while helping to further secure the nation. To ensure that the Department's sustainability efforts are well coordinated across the functional lines of business within DHS, the Secretary has tasked the Management Directorate with developing the sustainability program. Secretary Napolitano appointed me, as the Department's Deputy Under Secretary of Management, to serve as the Senior Sustainability Officer for the Department.
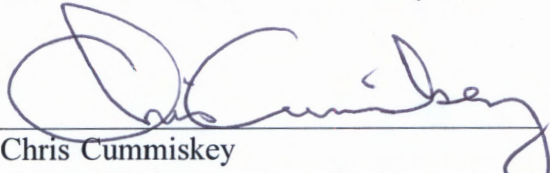
To lead our sustainability initiatives, the Secretary established the DHS Sustainability Management Council to lead the sustainability initiatives within the Department. Council membership includes the Department Senior Sustainability Officer, Chief Readiness Support Officer, Chief Financial Officer, Chief Human Capital Officer, Chief Information Officer, Chief Procurement Officer, Chief Security Officer, and a Senior Accountable Officer from each operational component. The Department's 2013 Strategic Sustainability Performance Plan includes strategies at the agency and component levels.

Each operational Component has developed an Operational Sustainability Performance Plan that sets forth the Component's strategy for integrating sustainability into its mission and how the Component will support the DHS Sustainability Plan. Each Component designated a Senior Accountable Officer for Sustainability and formed a council, committee, or work group to guide its efforts. Information from the Component Operational Sustainability Performance Plans was incorporated into the DHS Sustainability Plan.
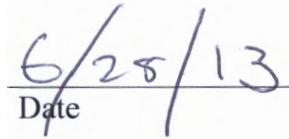
DHS is developing systems to assist in measuring and reporting our progress, and will initiate course corrections to achieve our goals. In support of these goals, the Department will comply with all environmental and energy laws, regulations, and EOs.

To increase success in this endeavor, awareness training is available to every Department employee, and employees are empowered to contribute to the success of the Sustainability Plan. The Department's Sustainable Practices Awards Program provides recognition to individuals and groups that make significant contributions towards achieving sustainability goals. DHS also will inform the public of our efforts and provide for public involvement in meeting sustainability goals.

The Department of Homeland Security is committed to pursuing and achieving the strategies and goals established in the DHS Sustainability Plan.

Chris Cummiskey
Deputy Under Secretary for Management
Senior Sustainability Officer

6/28/13
Date

**Executive Summary**

**1. Vision**

The DHS Strategic Sustainability Performance Plan (SSPP) reflects the Department's strategic vision for doing business in a more efficient and sustainable way. Components develop and deploy tactical implementation plans in accordance with their mission objectives. Those plans are called Operational Sustainability Performance Plans (OSPPs), and they support the Department's sustainability efforts by helping to drive sustainability at the component level. The latest versions of OSPPs were incorporated into this year's DHS Sustainability Plan. The OSPPs adhere to a template developed by DHS Headquarters (HQ). The template clearly established how the Components will implement their sustainability programs to fully support the Department's efforts to meet the goals of EO 13514.

**2. Leadership**

Secretary Napolitano established the Department's strategic sustainability goals in alignment with her priorities for homeland security. The SSPP includes goals and establishes responsibility and accountability to achieve those goals. The Department leadership and accountability roles for the Sustainability Plan are as follows:

The **Deputy Under Secretary for Management** (DUSM) was designated by the Secretary to serve as Senior Sustainability Officer (SSO) for the Department and is accountable for DHS conformance with EO 13514. The following key functions, referred to as the CXOs, report to the DUSM and are responsible for implementing the Sustainability Plan:

- o Chief Readiness Support Officer (CRSO) with responsibility for fleet, energy, real estate, operations support, sustainability and environmental management;
- o Chief Financial Officer (CFO);
- o Chief Human Capital Officer (CHCO);
- o Chief Information Officer (CIO);
- o Chief Procurement Officer (CPO); and
- o Chief Security Officer (CSO).

The **Sustainability Council** consists of the CXOs and Component Management Officials. The Council guides EO 13514 implementation efforts.

The **OCRSO** provides coordination and management for the SSO on the Sustainability Plan and performs the following functions:

- o Maintains the Sustainability Plan and coordinates inputs from the Sustainability Council, Sustainability and Environmental Committee, CXOs, and Components**;**
- o Reports progress on the Sustainability Plan to the SSO, Sustainability Council, Sustainability and Environmental Committee, and others as required;
- o Monitors and reports on EO 13514 compliance; and
- o Prepares required reports and metrics for submittal to OMB and the Council on Environmental Quality.

The Sustainability and Environmental Committee was chartered in March 2013 in accordance with the Readiness Support Council within the CRSO. It is an advisory body that operates under the authority of the CRSO and the SSO to formulate policy, assess effectiveness and efficiencies, develop metrics and track performance, establish strategic plans, integrate program planning, and provide guidance on the CRSO's program. Members of the Committee represent the Operational Components and are appointed by their respective Chief Administrative Officers. The CXOs are non-appointed members that serve in an advisory role. The Operational Components are responsible for maintaining an OSPP that implements the goals, targets, and objectives of the Sustainability Plan. Components will provide updates and metrics to the CRSO as requested. The following Components included in the committee:

| | |
|---|---|
| Customs and Border Protection (CBP) | Science and Technology Directorate (S&T) |
| DHS Headquarters (HQ) | Transportation Security Administration (TSA) |
| Federal Law Enforcement Training Center (FLETC) | US Coast Guard (USCG) |
| Federal Emergency Management Agency (FEMA) | US Citizenship and Immigration Services (USCIS) |
| Immigration and Customs Enforcement (ICE) | US Secret Service (USSS) |
| National Protection and Programs Directorate (NPPD) | |

**3. Performance Review –** Performance reviews are conducted a number of ways within DHS. The Component OSPPs are submitted to and reviewed by the Sustainability and Environmental Programs Office. The goals, objectives, and plans from the SSPPs are reviewed and discussed during a program management review process. Efforts are then aligned to achieve the Departmental goals as established in the Sustainability Plan, EO 13423 and EO 13514, and the metrics established in the OMB Sustainability/Energy Scorecards.

a) **Integration** - The Secretary issued a Sustainability Policy Memorandum on February 7, 2011. The SSO updated the Sustainability Plan Policy in June 2011. Components have the option to issue a separate policy letter. The DHS policy letter establishes and promotes sustainable practices and creates a culture for achieving sustainability goals at all levels of the organization.

The Department is taking iterative steps to transform its business methodology to ensure that sustainable practices are incorporated at the outset and prioritized in the decision-making process. To achieve this goal, sustainability must be fully integrated into the budget process. The tasks described in the following paragraphs have been identified to facilitate the integration of sustainability into the overall budget process:

**FY 13–FY14, and Ongoing**
- The Deputy Secretary signed the FY14–FY18 Integrated Planning Guidance (IPG) on February 29, 2012 that includes the requirement to demonstrate compliance with EO 13514. EO 13514 initiatives include monitoring costs associated with petroleum products, hazardous materials use and disposal, potable water usage, power usage, non-potable water usage, diversion of construction and demolition (C&D) waste, elimination of waste through source reduction, paper products, purchases of ENERGY

STAR® products, and energy efficiency in data centers, among other items.

**Status:** (Ongoing) Identifying strategies and methodologies to integrate sustainability into budget guidance.

- The USM will ensure that Components incorporate life-cycle cost analysis into capital planning for all facilities, infrastructure organizational realignments, information technology, and energy projects by including the cost analysis requirement in the IPG process.

  **Status:** (Completed) The DHS FY 2014-2018 IPG document issued in January 2012 includes specific guidance for sustainability. Components are required to seek to increase the proportion of their investments, within the limits of existing resources, in sustainable technologies (e.g., "green" buildings) by 5 percent each year beginning in FY 2014 to encourage sustainability and to realize energy efficiency and reduced energy costs.

- The USM will ensure that Components identify alternatives to renovation that reduce deferred maintenance costs for existing assets. Include these alternatives in the formal Analysis of Alternatives developed during acquisition planning.

  **Status:** (Ongoing) Strategy being developed. Efforts are being made to ensure all new infrastructures, facilities, information technology (IT), and energy projects clearly demonstrate how sustainability has been factored into their planning efforts.

b) **Evaluation Measures -** DHS maintains internal metrics that are tracked quarterly and are consistent with the OMB metrics and EO 13514 goals. The current CAO quarterly environmental metric reporting system was overhauled by CRSO, and changes were made to the system as practicable. Under the CAO process, each Component is evaluated and rated to determine its status and progress. Metric results are reported to the SSO and Sustainability Council. CRSO also reviews Component-level OSPPs and uses the information in those plans to update the Sustainability Plan. Semi-annual metrics are collected for the OMB Sustainability/Energy scorecards.

c) **Successes** – There are a number of accomplishments throughout DHS that have made the sustainability program more successful. The Sustainability Awareness Training Curriculum was completed by the Office of the Chief Human Capital Officer (CHCO) and the CRSO, Sustainability and Environmental Programs Office and is available to all DHS employees via the Department's electronic learning management systems. In addition to the DHS Sustainability: General Awareness module that was completed in January of 2012, the following modules were made available in April 2013: Electronics Stewardship, Greenhouse Gas Reduction, Sustainable Acquisitions, Pollution Prevention, and Water Conservation. In 2012 6,528 employees completed the Sustainability Awareness training. In addition, ICE created training modules specific for ICE employees on sustainability and environmental compliance which are available through the ICE sustainability intranet website. Six DHS Sustainable Practices awards were given to teams and individuals from the USCG, FLETC, and CBP that helped to advance the Department's sustainability goals. Two of these winners, USCG and FLETC, also earned the Presidential GreenGov Award in September 2012. The efforts listed below provide the highlights of DHS's success as they are tied to specific goals listed in the 2012 Sustainability Plan.

## Goal 1 GHG Reduction Highlights

| Number | Title | Description |
|---|---|---|
| 1 | Scope 1&2 GHG Reduction Goal of 3% | Achieved: 7.3% GHG Reduction was achieved in FY 2012. |
| 2 | Scope 3 GHG Reduction Goal of 2% | Achieved: 26.9% GHG Reduction was achieved in FY 2012 |
| 3 | FEMA:<br>Renewable Energy Certificates (RECs) | FEMA considers the advantages of the REC markets, which allow federal agencies to purchase RECs when implementation of solar or renewable generation projects is not economically feasible. FEMA purchased 3,800 RECs, which equates to 3,800 megawatt hours (MWh) of electricity, or five percent of FEMA's total energy consumption. |
| 4 | FEMA:<br>Implementation of Energy Savings Projects and Performance Based Contracting for Energy Savings | FEMA established an energy usage baseline and identified Energy Conservation Measures (ECMs) at 10 sites, covering 89 buildings and over 2.9 million square feet. FEMA prioritized and implemented over 95 low and no cost ECMs and 42 capital cost ECMs. FEMA utilized advanced data tools and information systems to ensure FEMA captures accurate and current energy usage and ECM data. |
| 5 | Immigration and Customs Enforcement (ICE): Employee Commuting – Telework Program | ICE's Human Capital Talent Management Office has worked with the Component's program leaders to promote and market telework for ICE employees. Since FY 2011, ICE has increased the number of employee Telework Agreements from 157 to 958 (i.e., 510% increase in participation). |
| 6 | National Protection and Programs Directorate (NPPD): Alternative Work Tool Program | NPPD has developed a comprehensive policy, and instructions that facilitate the use of alternative work tools such as alternative work schedules and telework. |
| 7 | Science and Technology Directorate (S&T) Scope 1 and 2 Emission Reductions | Between FY 2010 and FY 2012, S&T realized approximately 2, 3, and 5 percent overall decreases in Scope 1 and 2 GHG emissions from the FY 2008 baseline, respectively. These decreases resulted from modest decreases in fleet vehicle fuel consumption, decreases in non-fleet and equipment fuel usage (primarily decreases in diesel fuel used by ferries at the Plum Island Animal Disease Center (PIADC)), and decreases in electricity usage at PIADC. |
| 8 | S&T: Energy Consumption Reduction | S&T reduced its energy consumption in FY 2012 by 22 percent compared with the FY 2003 base year. Initiatives are in place to reduce energy use at PIADC and other facilities including: energy audits, sustainable building design reviews, and upgrade reviews for sustainability. |
| 9 | U.S. Citizenship and Immigration Services (USCIS): Alternative Fuel Use Increase | USCIS sent notification to all fleet managers that E-85 must be used if a station is within a 15 minute drive or 5 mile radius of an office. Significantly increasing our alternative fuel use, increasing its use by 244 percent over FY11. |
| 10 | U.S. Coast Guard (USCG): Scope 1, 2, and 3 Emission Reductions | USCG reduced Scope 1 and2 GHG emissions by 19.6 percent from the FY 2008 baseline. USCG reduced Scope 3 GHG emissions by 13.8 percent from the FY 2008 baseline mainly due to reductions in official travel. |

## Goal 2 Sustainable Buildings/ESPC Highlights

| Number | Title | Description |
|---|---|---|
| 1 | Award $24M in ESPC/UESC by December 2012. | Achieved: awarded $42.7M in ESPC/UESC |
| 2 | Federal Law Enforcement Training Center (FLETC): ESPC | In December 2011, FLETC awarded a task order under the DOE ESPC for a 2 MW PV installation at the Cheltenham location. This task order was modified to include numerous ECMs at each FLETC site in June 2012. It is projected that the ESPC, when completed in FY 2014, will result in a 25 percent reduction from the energy intensity levels of the base year. The projected GHG reduction from this effort is 24 percent from the base year. |
| 3 | S&T: NBAF Design | The National Bio and Agro Defense Facility's (NBAF's) design is currently tracking LEED Silver. This would be one of the first high containment animal laboratories to achieve LEED Silver. |
| 4 | USSS: Smart Meters | USSS has achieved the goal of installing electrical and natural gas meters at 100 percent of the buildings at the James J. Rowley Training Center (RTC). Six (6) of the electrical meters are Smart Meters that will help manage and measure electrical consumption during peak times after the electrical utility fully integrates the use of Smart Meters into its infrastructure. If the Smart Meters perform as expected, the USSS will install additional Smart Meters in other buildings at the RTC. |

## Goal 3 Fleet Highlights

| Number | Title | Description |
|---|---|---|
| 1 | DHS Reclassified its Law Enforcement (LE) Vehicles into Three Tiers | As a result of a memorandum signed by the Secretary in January 2011, DHS reclassified its LE vehicles into three tiers as follows:<br><br>LE1: Exempt: Vehicles built for high-speed pursuit, off-road, or dignitary protection and used for that purpose 75 percent or more. The Secretary signed an exemption for these vehicles on January 11, 2011.<br>LE2: Vehicles used in intelligence operations, investigations, and surveillance. No exemptions sought by DHS for these vehicles.<br>LE3: Vehicles used for administrative-type law enforcement operations. No exemptions sought by DHS for these vehicles.<br><br>DHS Components will consider electric, hybrid, and AFV vehicles (in that order of preference based on President Obama's March 30, 2011, speech) for LE 2 and LE 3 classifications when vehicles are replaced (three- to five-year cycle), resulting in a new total of approximately 23,000 hybrid/AFV vehicles across DHS. Potential Fuel Savings – (FY 2012–FY 2016) for 2,000 vehicles replaced per year equals to approximately 1.5–2M gallons. |
| 2 | CBP: Alternative Fuel and Hybrid Vehicles Purchased in FY12 | Of the 2,463 vehicles purchased by CBP in FY 2012, 1,803 of them are alternative fuel vehicles and 54 of them are hybrid vehicles. 75.4 percent of the vehicles purchased by CBP in FY 2012 are alternative fuel or hybrid vehicles. |
| 3 | FEMA: Documenting Compliance with Environmental Requirements standard operating procedure (SOP) | In September 2012, FEMA Headquarters Fleet Management Program Office (HQ FMPO) issued an SOP titled *Documenting Compliance with Environmental Requirements*. This SOP 1) documented Fleet Managers' responsibility to ensure fleet-related purchases comply with environmental requirements; 2) required Card Customers and Fleet Card Managers to document purchases of environmentally-friendly products; and 3) required Fleet Card Managers to document purchases of retread tires or re-refined oil. |
| 4 | FLETC Exceeding Flex Fuel Vehicle Goals | The FLETC Fleet Management Office (FMO) spearheaded efforts to reduce petroleum consumption by obtaining 55 flex fuel vehicles, thereby exceeding the 75 percent mandated standard by 21.4 percent. |

## Goal 3 Fleet Highlights

| Number | Title | Description |
|---|---|---|
| 5 | NPPD: HEV and AFV Leasing | NPPD acquired six (6) hybrid electric vehicles and approximately 1,010 AFVs through GSA leasing during the 2010 ordering cycle. These vehicles constitute 70.7 percent of the leased fleet. |
| 6 | S&T: Vehicle Allocation Methodology (VAM) | Developed and implemented a VAM and reduced overall fleet by 26 percent in FY 2012– ahead of schedule. |
| 7 | USCIS: AFV Leasing | USCIS acquired eight (8) hybrid, 22 E-85, and 66 fuel-efficient vehicles through GSA leasing during the 2011 ordering cycle. |
| 8 | U.S. Secret Service (USSS): Flex Fuel Vehicles | USSS has integrated flex fuel vehicles into 5 percent of the fleet. In FY 2012, the USSS operated a total of 201 AFVs. |
| 9 | USSS: Strategy | Flex fuel vehicles allow USSS to perform the mission (LE2 & LE3) and use alternative fuel whenever available. |

## Goal 4 Water Highlights

| Number | Title | Description |
|---|---|---|
| 1 | Reduce Potable Water Usage by 10% | Achieved: 14.1% reduction in potable water usage in FY 2012 |
| 2 | FEMA: Water Assessment, Water Conservation Measure Installation | During FY 2012, FEMA conducted water assessments and reported water conservation project opportunities for four of its covered facilities. These facilities installed low-flow toilets, faucets and shower heads designed to reduce potable water consumption. |
| 3 | FEMA: Mt. Weather Cafeteria Refrigeration Replacement Project | During FY 2012, the Mt. Weather facility replaced its cafeteria refrigeration system with a more efficient refrigeration system and added efficient pumps and controls to its central chilled water system. The projects save approximately 15,000 gallons per day of domestic water usage and provide an annual cost avoidance of approximately $11,000 per year. |
| 4 | Federal Law Enforcement Training Center (FLETC): Deactivates Irrigation Systems | FLETC reduced potable water use intensity by deactivating irrigation systems tied to the potable water system, auditing buildings for water use and implementing recommendations for water use reduction. |
| 5 | USCG: Potable Water Use Intensity Reductions | USCG has decreased potable water intensity by over 17 percent from the 2007 baseline. This reduction outpaces the FY 2012 goal of 10 percent and is largely accomplished via the implementation of alternatively financed energy contracts. |

## Goal 5 Pollution Prevention and Waste Prevention Highlights

| Number | Title | Description |
|---|---|---|
| 1 | FLETC: Hazardous Materials Minimization Program | FLETC has implemented a Hazardous Materials Minimization program at all campuses. This program reduces the amount of hazardous products brought onto FLETC campuses and, thereby, reduces hazardous waste and enables regulatory compliance. Waste reduction is achieved through product substitution, byproduct recovery/reuse, operational changes, and the use of administrative controls and accountability for the requisitioning, receipt, distribution, storage, and disposal of hazardous material and hazardous waste. FLETC accomplishes cradle-to-grave tracking through the utilization of the Hazardous Substance Management database. |
| 2 | S&T: Chemical Inventory | Transportation Security Laboratory instituted a centralized chemical inventory using SharePoint in combination with a purchasing card (p-card) ordering system, potentially reducing redundancy and creating P2 and green acquisition opportunities. |

## Goal 5 Pollution Prevention and Waste Prevention Highlights

| Number | Title | Description |
|:---:|---|---|
| 3 | USCIS: RSAR | USCIS's Secure ID Recycling (RSAR) program promotes the proper recycling of Virtual Private Network tokens and lithium-ion batteries. |
| 4 | USCIS: ETIS | The Excess Ink and Toner Sharing (EITS) program is operated by the USCIS Green Program and allows offices to post and request unused excess ink and toner. |
| 5 | USCIS Call2Recycle® and Recycle4Charity® | USCIS utilizes the Call2Recycle program to recycle personal cell phones and rechargeable batteries.  USCIS utilizes the Recycle4Charity program to recycle ink and toner cartridges. |
| 6 | USSS Battery Recycling | USSS has established a battery recycling and collection program for all dry-cell batteries at USSS HQ and RTC.  For FY 2012, a total of 1,232 pounds of batteries have been diverted from a municipal landfill and were recycled. |

## Goal 6 Sustainable Acquisition Highlights

| Number | Title | Description |
|:---:|---|---|
| 1 | 95% Sustainable Acquisitions Goal | Achieved 95% Goal of contract actions that include green clauses for FY 2012 |
| 2 | CBP: 2012 DHS Sustainability Award for Collaboration | CBP's Green Procurement integrated project team (IPT) was awarded a DHS Sustainability Award for its collaboration efforts.  The interdisciplinary IPT met for three (3) years to develop a Sustainable Acquisition Directive, Handbook, Training, and Goals and Targets Document. |
| 3 | FLETC: Sustainable Practices Award: Lean, Clean and Green Award | FLETC's Fleet Management Office Team from Glynco, GA, developed and implemented a multi-phased alternative fuel policy as part of its 2011 VAM.  Through infrastructure improvements, right-sizing of the fleet, and the acquisition of hybrid and flex-fuel capable vehicles, the VAM will maximize alternative fuel capabilities at all four FLETC training sites and reduce operating costs.  These efforts have already resulted in a 60.6 percent increase in agency's use of bio-fuels. |
| 4 | S&T: Green Procurement Training | S&T began execution of a training program for all employees involved in purchasing processes.  The green procurement training was conducted at all seven S&T facilities for financial analysts and purchase-card staff. |
| 5 | S&T: GPP Baseline Assessments | In FY 2012, S&T's Environment, Safety, and Health (ESH) Branch developed and conducted GPP Baseline Assessments at S&T facilities (CSAC, Ft. Detrick ERS, NUSTL, TRMG, TSL, and Vermont Avenue) and an interview at PIADC.  These assessments are being used not only to evaluate current green procurement practices at individual facilities, but also to identify best practices and opportunities for improvement.  Additionally, these assessments are utilized to identify green procurement trends across the S&T Directorate. |
| 6 | TSA: Green Procurement Training | TSA has developed and implemented a Green Procurement Environmental Management Plan (EMP) as part of its EMS.  The EMP serves as the affirmative procurement plan for TSA.  It is designed to raise awareness of and encourage the purchase of environmentally preferable products whenever practicable.  To accomplish this goal, Occupational Safety, Health, and Environment (OSHE) has distributed training and guidance materials to purchase-card holders and acquisitions staff to raise awareness of these products and to ensure that they are purchased whenever practicable. |

| **Goal 6 Sustainable Acquisition Highlights** | | |
|---|---|---|
| **Number** | **Title** | **Description** |
| 7 | TSA: Green Procurement Tracking | TSA encourages field operations to track green purchasing in the field through its EMS Web Portal. A pilot was started in FY 2012 in an effort to capture more of this information. Audits and staff observations indicate that TSA's green procurement outreach efforts have been successful in encouraging the purchase of environmentally preferable products whenever practicable. For contract actions, TSA conducts quarterly reviews to ensure that eligible contracts contain applicable requirements related to sustainability. |

| **Goal 7 Electronic Stewardship Highlights** | | |
|---|---|---|
| **Number** | **Title** | **Description** |
| 1 | DHS FIRST SOUCE EPEAT Purchases | The FIRST SOURCE contract is available to all of the Components and provides an easy method to purchase and track EPEAT-Registered products. In January 2013 the vendor reporting template was modified to reflect two new EPEAT categories of Televisions and Imaging Equipment. In FY 2012, over 99 percent of the purchases were of EPEAT-Registered products (e.g., desktops, LCD monitors, and laptops). DHS purchased 26,697 EPEAT-Registered products. |
| 2 | Policy on Duplex Printing and Systems Power Management | On April 11, 2013 the DHS Chief Information Officer established a department wide policy on Duplex Printing and Systems Power Management by signing: Instruction Number: 025-01-001, Duplex Printing; and Instruction Number: 025-01-002, Systems Power Management. |
| 3 | Implemented Power Management and Duplex Printing | Implemented power management on 100% of eligible computers, laptops and monitors; and instituted duplex printing as a default on all eligible printers. |
| 4 | TSA: Outreach | TSA conducts annual outreach to promote proper electronics management practices. Outreach includes formal guidance documents, training courses on the TSA Online Learning Center, and organizing local outreach events. |
| 5 | USSS Processing Power Harnessing | USSS uses a Distributed Network Application to harness existing processing power from idle CPUs on the network. |

**d) Challenges**

- Petroleum Usage: Due to congressionally mandated increases in mission requirements and related increases in staffing, the vehicle fleet expanded considerably between 2005 and 2011 to meet the increased demand. This presented a challenge with meeting the reduction in fleet petroleum goal of 10% with a base year of 2005. DHS established a fleet management plan in FY 2012. The plan objectives are to strategically move toward achieving a properly scaled, fuel efficient, low emission, alternate fuel vehicle fleet based on a vehicle by vehicle inventory and performance metrics. Component operations have also been encouraged to deploy their vehicles to maximize mission effectiveness while improving management of the total miles driven. Individual Components have developed specific targets for each of these categories. As a result of these efforts, DHS used 4,716,765 gallons of fuel less than used in fiscal year 2011 and anticipates a 434 reduction in vehicles in FY 2013.
- Sustainable Buildings: The sustainable building goal of 7% also remains a challenge. Without a significant investment in facility construction and major renovation, this goal is difficult to meet. It is unlikely that DHS will achieve the OMB established goal in this area given the sequestration environment. However, new construction is being designed to meet sustainability requirements and the reduction in real estate footprint improves the percentage of sustainable buildings overall. Allowing a square footage metric as opposed to an individual building metric would also help to achieve the percentage.

**e) Lessons Learned**

- Alignment of the Component-level sustainability plans to the SSPP template streamlines annual updates. This effort also standardizes communication across the Department and facilitates sharing of best practices.
- The Employee Commuter Survey is being revised by the General Services Administration to take into account feedback from employees. Individual emissions will be automatically calculated and then included in the thank you email received by the employee.
- The total number of vehicles reported in Table 1: Agency Size and Scope reflects a snapshot in time. Final changes are sometimes not available when the snapshot is taken. This causes confusion from year-to-year when developing the SSPP. The CRSO database under development should help alleviate this confusion and create a final reportable number earlier.

**f) Planned Actions**

- DHS continues to utilize the recommendations from the Sustainability Efficiency Task Force (SETF), a group made up of outside professionals that was established in 2009 and met until December 2012. Recommendations are being implemented in the areas of data acquisition, energy management and fleet management.
- The Department will continue to improve the process to gather data and increase employee involvement through the SSPP/OSPP process. In doing so, the current templates will be evaluated and modified with input from the components.
- As indicated in Goals 1-9 below, planned actions will include efforts to address all nine goals in the areas of greenhouse gas emission reductions, sustainable buildings, fleet, water conservation, pollution prevention and waste prevention, sustainable acquisitions, and electronics stewardship.

4. **Progress on Administration Priorities**

      **a) Climate Change Adaptation Plan** – The Department of Homeland Security leads the federal community in climate change adaptation planning.  The Climate Change Adaptation Roadmap (appendix A) was completed in June 2012.  Based on the Secretary's FY 2011 Climate Change Implementation Guidance, actions included in the Roadmap address four strategic objectives:

- Manage climate risks for cross-cutting or other key homeland security issues.
- Protect and ensure the resilience of critical infrastructure and key resources (CIKR) to potential impacts of climate change.
- Ensure the Nation's resilience to more frequent or extreme weather events and natural disasters.
- Contribute to safety, stability, security and environmental protection in the Arctic.

      From February through April 2013 DHS accepted public comments on the DHS 2013 Climate Change Adaptation Plan.  The comments included: requests for scientific resources, information on integrating climate change to mission, recommended use of natural infrastructure for adaptation planning, need for more information sharing; and regulations toward advancing adaptation strategies.

      **b) Fleet Management Plan** – The DHS Fleet Management Plan was recently revised in conjunction with the General Services Administration and is attached as Appendix B as part of the Sustainability Plan.

      **c) Energy Savings Performance Contracts** – The Department has identified $48M in ESPC and UESC opportunities and in FY 2012 awarded $42.7M to date.  It is positioned to achieve the goal of $48M in calendar year 2013.

**Size & Scope of Agency Operations**

**Table 1: Agency Size & Scope**

| Agency Size & Scope | FY 2011 | FY 2012 |
|---|---|---|
| Total Number of Employees as Reported in the President's Budget | 237,629 | 229,425 |
| Total Acres of Land Managed | 97,961 | 88,525 |
| Total Number of Buildings Owned | 11,515 | 9,890 |
| Total Number of Buildings Leased (GSA and Non-GSA Lease) | 2,546 | 3,446 |

| Agency Size & Scope | FY 2011 | FY 2012 |
|---|---|---|
| Total Buildings Gross Square Feet (GSF) | 43,097,808 | 42,680,076 |
| Operates in Number of Locations Throughout U.S. | 1,591 | 1,591 |
| Operates in Number of Locations Outside of U.S. | 18 | 18 |
| Total Number of Fleet Vehicles Owned | 35,950 | 48,618 |
| Total Number of Fleet Vehicles Leased | 3,559 | 7,482 |
| Total Number of Exempted-Fleet Vehicles (Tactical, Law Enforcement, Emergency, Etc.) | 35,098 | 34,895 |
| Total Amount Contracts Awarded as Reported in FPDS ($Millions) | 13,564 | 12,408 |
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**Goal 1: Greenhouse Gas (GHG) Reduction**

**Agency Progress toward Scope 1 & 2 GHG Goals**

E.O. 13514 requires each agency establish a Scope 1 & 2 GHG emission reduction target to be achieved by FY 2020. The red bar represents the agency's FY 2008 baseline. The green bar represents the FY 2020 target reduction. The blue bars represent annual agency progress towards achieving this target. The percentage at the top of each bar represents the reduction or increase from the FY 2008 baseline. A negative percentage value indicates that the emissions have decreased compared to the 2008 baseline.
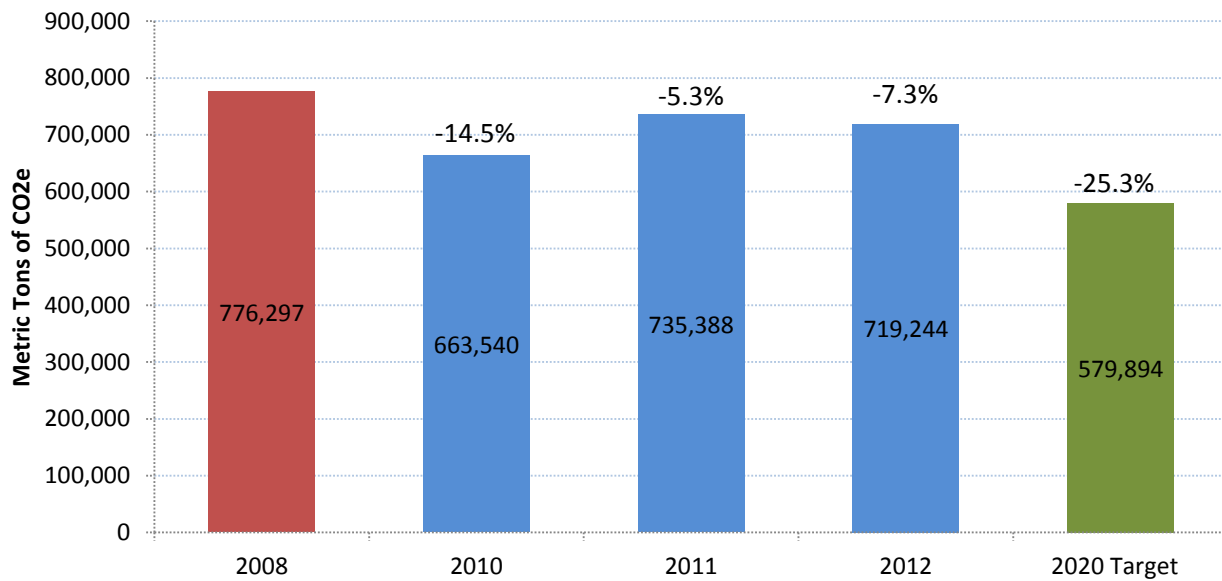
**Table 1-1: Goal 1 Strategies - Scope 1 & 2 GHG Reductions**

| (A) Will the agency implement the following strategies to achieve this goal? | (B) Top 5? Yes/No/NA | (C) Strategy Narrative | (D) Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months |
|---|---|---|---|
| Use the FEMP GHG emission report to identify/target high emission categories and implement specific actions to resolve high emission areas identified. | Yes | S&T CAO established an FY2008 baseline GHG inventory using the FEMP tool, and updates it annually. Electricity and petroleum usage and associated GHG emissions are quantified, analyzed, and available to inform future decision making. | An energy assessment is scheduled at S&T National Biodefense Analysis and Countermeasures Center (NBACC) during FY2013 to identify GHG emission reductions and lifecycle cost effective energy conservation measures. ECMs that are implemented will be tracked. |
| Ensure that all major renovations and new building designs are 30% more efficient than applicable code. | Yes | DHS is incorporating green building specification into all of its new construction and major renovation projects through revisions in its design guide. | Progress will be measured at the component level. |
| Implement in EISA 432 covered facilities all lifecycle cost effective ECMs identified. | No | Resource Limitations. ECMs will be implemented where economically feasible. | S&T conducted energy assessments at DHS's two most energy intensive facilities, PIADC and NBACC. In FY 13 an Energy Conservation Measure Plan will be developed. ECMs will be implemented where economically feasible. S&T Transportation Security Lab (TSL) ECMs will be incorporated for planned LEED certification. |
| Reduce on-site fossil-fuel consumption by installing more efficient boilers, generators, furnaces, etc. and/or use renewable fuels. | Yes | Completed on case by case basis as determined by economic practicability. S&T Plum Island Animal Disease Center (PAIDC) will research, and if feasible, implement the use of 5% biodiesel (B5) fuel for its all operations except for vehicles and water vessels. | S&T will track progress upon switching over to B5 in calendar year 2013. |
| Reduce grid-supplied electricity consumption by improv- | Yes | Completed on case by case basis as determined by economic | Electricity reduction is an integral part of the Department's strategy |

| (A) Will the agency implement the following strategies to achieve this goal? | (B) Top 5? Yes/No/NA | (C) Strategy Narrative | (D) Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months |
|---|---|---|---|
| ing/upgrading motors, boilers, HVAC, chillers, compressors, lighting, etc. | | practicability. Renewable energy systems are considered on a case-by-case basis. | to reduce facility energy an additional |
| Employ operations and management best practices for energy consuming and emission generating equipment. | Yes | Using Energy Star Portfolio Management to improve energy conservation. | The USSS is currently using ENERGY STAR® Portfolio Manager to monitor, analyze and report on various parameters for energy conservation. The reports for the upcoming year should show positive gains from the use of the campus wide Building Management system that was installed at the end of FY12. |
| Install building utility meters and benchmark performance to track energy and continuously optimize performance. | Yes | DHS Components are incorporating facility-level utility meters to track and optimize performance. Advanced meters are being incorporated on a case-by-case basis where the infrastructure will support the data collection. | Facility level meters are tracked at the component level and reported annually at the Department level. |

**Agency Progress towards Scope 3 GHG Goal**

E.O. 13514 requires each agency establish a Scope 3 GHG emission reduction target to be achieved by FY 2020. The red bar represents the agency's FY 2008 baseline. The green bar represents the FY 2020 reduction target. The blue bars represent annual agency progress on achieving this target. The percentage at the top of each bar represents the reduction or increase from the FY 2008 baseline. A negative percentage value indicates that the emissions have been decreased compared to the FY 2008 baseline.
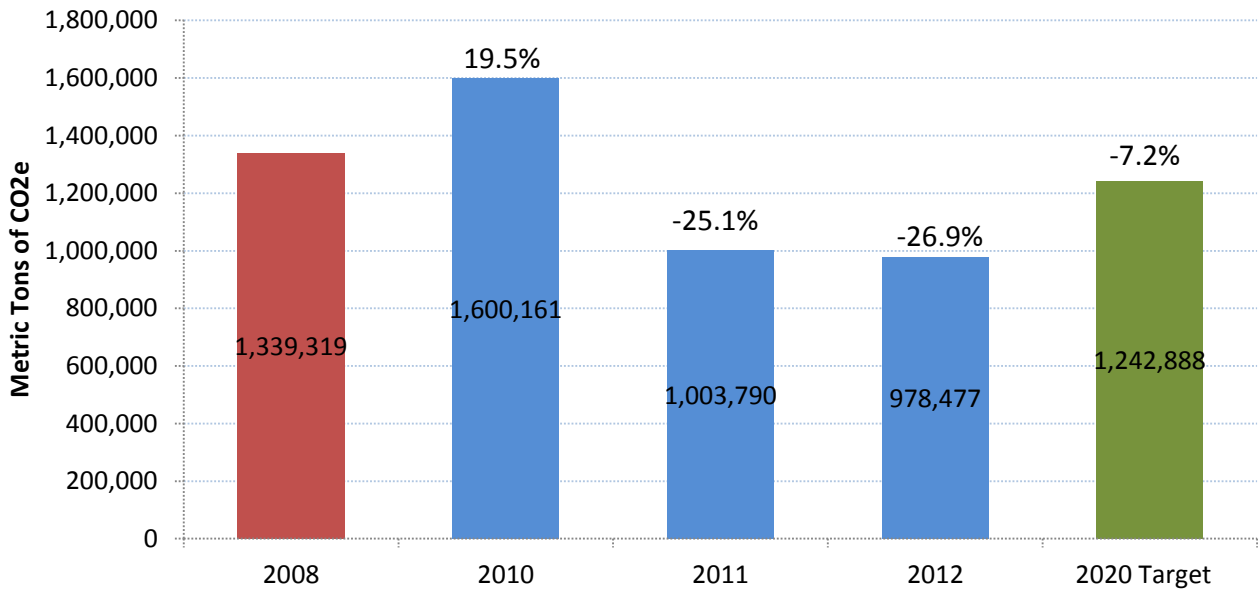
Metric Tons of CO2e

| 2008 | 2010 | 2011 | 2012 | 2020 Target |
|------|------|------|------|-------------|
| 1,339,319 | 19.5%<br>1,600,161 | -25.1%<br>1,003,790 | -26.9%<br>978,477 | -7.2%<br>1,242,888 |

**Table 1-2: Goal 1 Strategies - Scope 3 GHG Reductions**

| (A) Will the agency implement the following strategies to achieve this goal? | (B) Top 5? Yes/No/NA | (C) Strategy Narrative | (D) Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months |
|---|---|---|---|
| Reduce employee business ground travel. | Yes | DHS Headquarters will analyze efficiencies with reducing shuttle services in the Capital Metro Area. | Fuel usage will be tracked and reported as routes are shortened or eliminated. |
| Reduce employee business air travel. | Yes | Only essential travel is approved. | Tracked through GHG inventory reporting tool |
| Develop and deploy employee commuter reduction plan. | Yes | The DHS Telework Enhancement Act Task Force will develop and deploy an employee commuter reduction plan. | Plan developed by FY 14 |
| Use employee commuting survey to identify opportunities and strategies for reducing commuter emissions. | Yes | DHS teamed with the General Services Administration and conducted the commuting survey in December of 2012. | Information will be used by the DHS Telework Enhancement Act Task Force. |
| Increase number of employees eligible for telework and/or the total number of days teleworked. | Yes | The DHS Telework Enhancement Act Task Force is working to encourage greater use of telework for eligible employees throughout the Department. (OCHCO). On January 9, 2013, FEMA implemented a teleworking policy for employees. This policy, outlined in FEMA Manual 123-9-1, allows for and encourages FEMA employees to work from home on either 1) a regular and recurring basis or 2) a situational or episodic basis. CBP implemented a hoteling pilot project that reduced its real estate footprint by 40% and plans to expand program in FY 13-14. | Metrics will be developed by the DHS Telework Enhancement Act Task Force. NPPD plans to implement an Alternative Work Tool and will track progress. |
| Develop and implement bicycle commuter program. | Yes | Improve awareness on bicycling | CIS is developing a bicycle commuter forum to promote cycling and improve awareness. |
| Provide bicycle commuting infrastructure. | No | DHS does provide bike racks in new construction, although providing bi- | Metrics have not been determined. |

| (A) Will the agency implement the following strategies to achieve this goal? | (B) Top 5? Yes/No/NA | (C) Strategy Narrative | (D) Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months |
|---|---|---|---|
| | | cycle infrastructure such as roads and bike paths is a lower priority strategy. | |
| Integrate sustainability within disaster response operations. | Yes | FEMA will conduct pilot project within DR 4085 NY to integrate sustainability into disaster relief operations by using an ESMS as the performance management framework. | Rely upon GHG metrics as indicators of resource optimization. FY 13 - Fully developed ESMS framework for DR 4085 NY. FY 14 - Successful implementation of ESMS as performance management framework in DR 4085 operation. |

## Goal 2: Sustainable Buildings

**Agency Progress toward Facility Energy Intensity Reduction Goal**

E.O. 13514 Section 2 requires that agencies consider building energy intensity reductions. Further, the Energy Independence and Security Act of 2007 (EISA) requires each agency to reduce energy intensity 30 percent by FY 2015 as compared to the FY 2003 baseline. Agencies are expected to reduce energy intensity by 3 percent annually to meet the goal. The red bar represents the agency's FY 2003 baseline. The green bar represents the FY 2015 target reduction. The blue bars show annual agency progress on achieving this target. The percentage at the top of each bar represents the reduction or increase from the FY 2003 baseline. A negative percentage value indicates that the energy intensity has been decreased compared to the FY 2003 baseline.
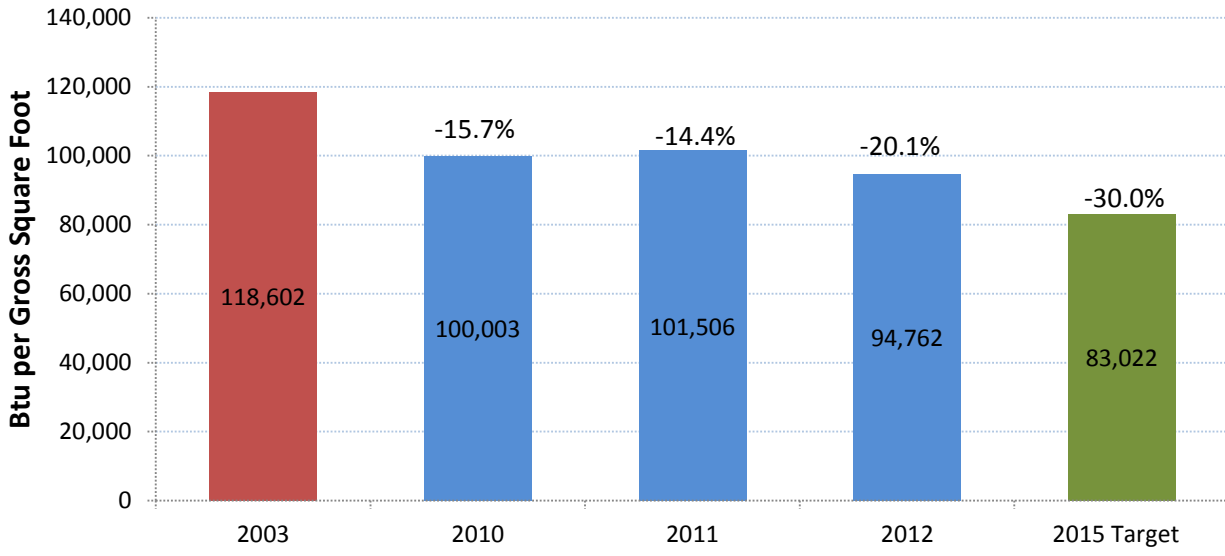
**Agency Progress toward Total Buildings Meeting the Guiding Principles**

E.O. 13514 requires that by FY 2015, 15 percent of agencies' new, existing, and leased buildings greater than 5,000 square feet meet the Guiding Principles. In order to meet the FY 2015 goal, agencies should have increased the percentage of conforming buildings by approximately 2 percent annually from their FY 2007 baseline. The green bar represents the FY 2015 target. The blue bars represent annual agency progress on achieving this target.
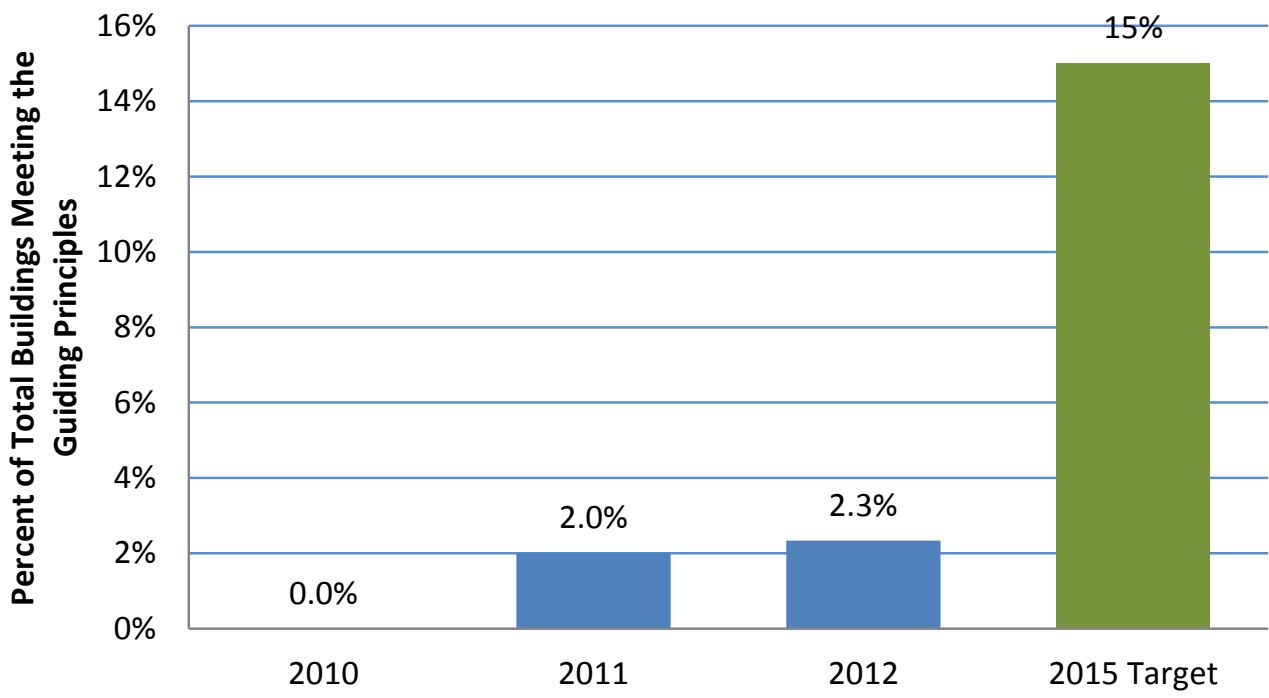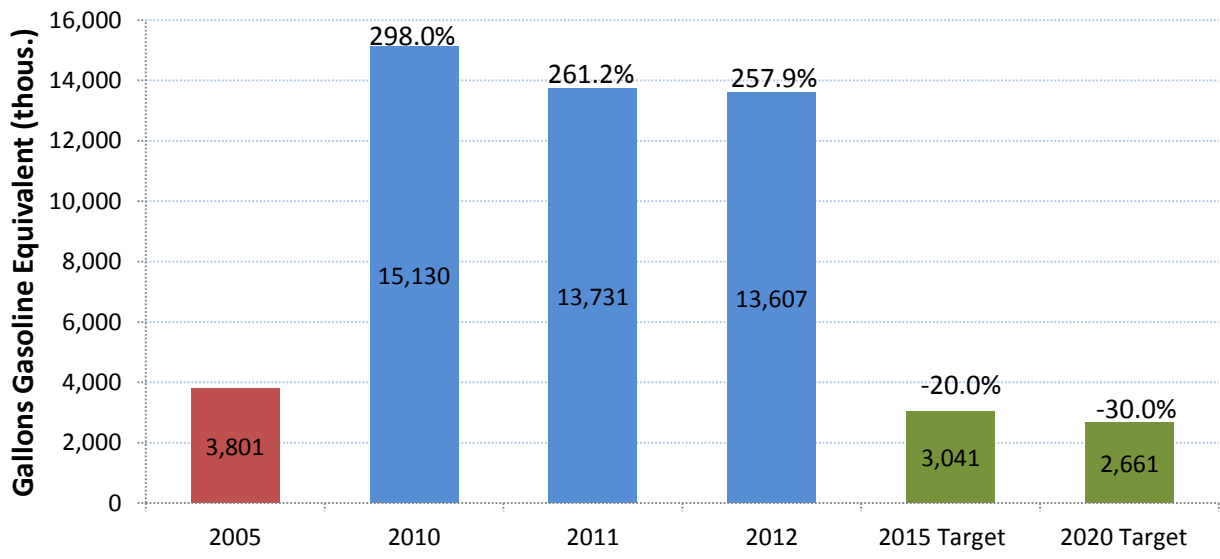
**Table 2: Goal 2 Strategies – Sustainable Buildings**

| (A) Will the agency implement the following strategies to achieve this goal? | (B) Top 5? Yes/No/NA | (C) Strategy Narrative | (D) Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months |
|---|---|---|---|
| Incorporate green building specifications into all new construction and major renovation projects. | Yes | DHS Real Property Manual 2.1. Instruction #119-02-004, DHS Design, Engineering, and Construction Guide. CBP plans to prepare the new construction and major renovation, repair, and alteration portion of the Sustainable Buildings Implementation Plan. This plan will outline a strategy for meeting the Federal goals and requirements. | Sustainability guidelines for real property (as noted in the strategy narrative column) are incorporated into the annual "Program Management Review", and "Assessment" process (pilot under development) scheduled for deployment in FY14. FEMA plans to advance 13 buildings (15 percent of FEMA's building inventory) to be LEED certified or meet the Guiding Principles by FY 2015. USCG Major Renovations to all Existing Buildings are designed and constructed to meet LEED Certified Rating (40 to 49 points). |
| Redesign or lease interior space to reduce energy use by daylighting, space optimization, sensors/control system installation, etc. | Yes | DHS Real Property Manual 2.1. Instruction #119-02-004, DHS Design, Engineering, and Construction Guide. | Sustainability guidelines for real property (as noted in the strategy narrative column) are incorporated into the annual "Program Management Review", and "Assessment" process (pilot under development) scheduled for deployment in FY14. S&T will include sustainability language in new leases in FY 13-14. |
| Deploy CEQ's Implementing Instructions - Sustainable Locations for Federal Facilities. | Yes | DHS Real Property Manual 2.1. Instruction #119-02-004, DHS Design, Engineering, and Construction Guide. | Sustainability guidelines for real property (as noted in the strategy narrative column) are incorporated into the annual "Program Management Review", and "Assessment" process (pilot under development) scheduled for deployment in FY14. |
| Include in every construction contract all applicable sustainable acquisition requirements for recycled, biobased, energy efficient, and environ- | Yes | DHS Real Property Manual 2.1. Instruction #119-02-004, DHS Design, Engineering, and Construction Guide. DHS Acquisitions Manual, Affirmative Procurement | Sustainability guidelines for real property (as noted in the strategy narrative column) are incorporated into the annual "Program Management Review", and "Assessment" process (pilot under development) scheduled for deployment in FY14. Construction |

| (A) Will the agency implement the following strategies to achieve this goal? | (B) Top 5? Yes/No/NA | (C) Strategy Narrative | (D) Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months |
|---|---|---|---|
| mentally preferable products. | | Plan Appendix Q requires sustainable acquisitions. | contracts are included in 5% review to meet the 95% sustainable acquisitions goal. |
| Develop and deploy energy and sustainability training for all facility and energy managers. | Yes | Web-based training modules are being developed with Energy Subject Matter Experts. | CRSO/SEP will complete a draft training package and post it to DHSConnect while coordinating with OCHCO for incorporating it into the Learning Management System. |
| Freeze the Footprint for the total square footage of the domestic office and warehouse inventory compared to the FY2012 baseline. | Yes | OMB Management Procedures Memorandum No. 2013-02, Implementation of OMB Memorandum M-12-12 (Freeze the Footprint). | Targets are defined within the Revised Cost Savings Innovation Plan (CSIP) and described in the Department's 3-year plan. As per the CSIP Internal Controls section, compliance with Freeze the Footprint policy guidelines is evaluated annually. USCG, Office of Civil Engineering (CG-43) has implemented a 2013 Business Plan that will develop the mechanisms by which the program will measure and meet footprint reduction initiatives; establish true baselines for corresponding data including facility inventory, facility O&M costs, and utilization (i.e. # of people). |

**Goal 3: Fleet Management**

**Agency Progress toward Fleet Petroleum Use Reduction Goal**

E.O. 13514 and the Energy Independence and Security Act of 2007 (EISA) require that by FY 2015 agencies reduce fleet petroleum use by 20 percent compared to a FY 2005 baseline. Agencies are expected to achieve at least a 2 percent annual reduction and a 30 percent reduction is required by FY 2020. The red bar represents the agency's FY 2005 baseline. The green bars represent the FY 2015 and FY 2020 target reductions. The blue bars represent annual agency progress on achieving these targets. The percentage at the top of each bar represents the reduction or increase from the FY 2005 baseline. A negative percentage indicates a decrease in fleet petroleum use.

Gallons Gasoline Equivalent (thous.)

| Year | Value | Percent |
|------|-------|---------|
| 2005 | 3,801 | |
| 2010 | 15,130 | 298.0% |
| 2011 | 13,731 | 261.2% |
| 2012 | 13,607 | 257.9% |
| 2015 Target | 3,041 | -20.0% |
| 2020 Target | 2,661 | -30.0% |

**Agency Progress toward Fleet Alternative Fuel Consumption Goal**

E.O. 13423 requires that agencies increase total alternative fuel consumption by 10 percent annually from the prior year starting in FY 2005. By FY 2015, agencies must increase alternative fuel use by 159.4 percent, relative to FY 2005. The red bar represents the agency's FY 2005 baseline. The green bar represents the FY 2015 target. The blue bars represent annual agency progress on achieving this target. The percentage at the top of each bar represents the reduction or increase from the FY 2005 baseline. A negative percentage indicates a decrease in fleet alternative fuel use.
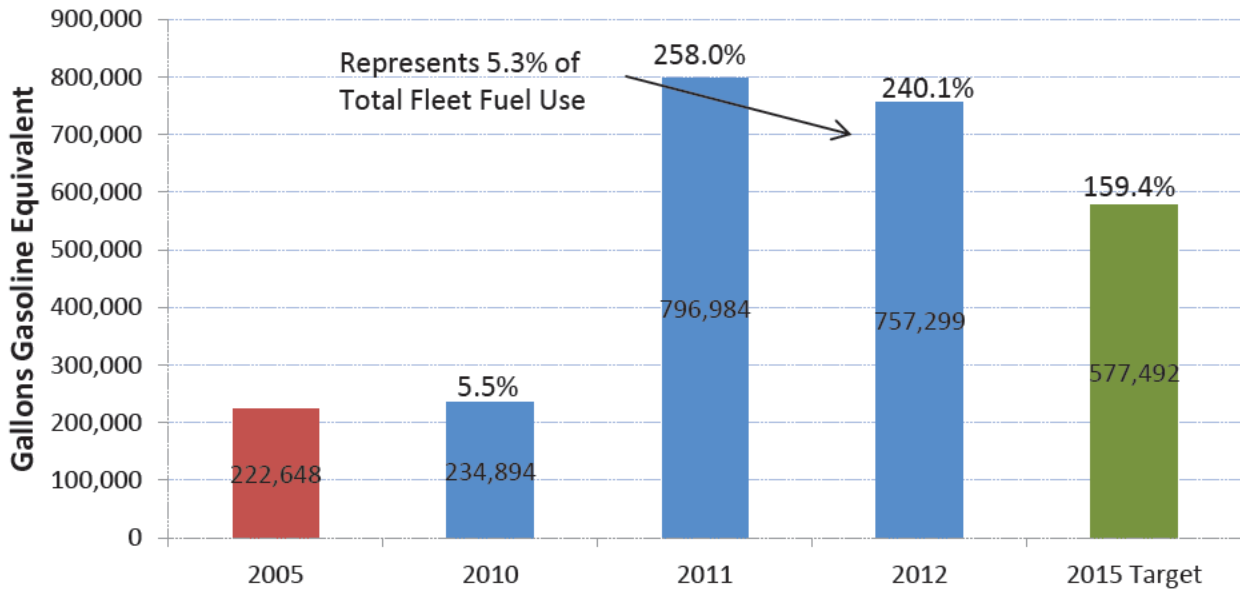
**Table 3: Goal 3 Strategies – Fleet Management**

| (A) Will the agency implement the following strategies to achieve this goal? | (B) Top 5? Yes/No/NA | (C) Strategy Narrative | (D) Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months |
|---|---|---|---|
| Optimize/Rightsize the composition of the fleet (e.g., reduce vehicle size, eliminate underutilized vehicles, acquire and locate vehicles to match local fuel infrastructure). | Yes | DHS has completed a Vehicle Allocation Methodology (VAM) study in which vehicle utilization has been studied to determine the optimal fleet size. Components have also been instructed to locate AFVs in locations where AFV infrastructure exists. FEMA Headquarters FMPO monitors and evaluates possibilities of right-sizing its petroleum-consuming vehicles into alternative fuel vehicles whenever possible. CBP is to right-size vehicles both the fleet and individual vehicles in the fleet by developing the CBP VAM as required by the Presidential Memorandum. | By 2015, DHS anticipates a 5.3% inventory reduction going from 55,379 in FY 11 baseline year to 52,440 in FY15. |
| Reduce miles traveled (e.g., share vehicles, improve routing with telematics, eliminate trips, improve scheduling, use shuttles, etc.). | Yes | Pursuant to the aforementioned VAM, once the reduction targets are realized, there will be a significant decrease in the miles traveled annually. | The assumption is that since the inventory should be reduced by 5.3% that the miles traveled will reduce at the same increment. |
| Acquire only highly fuel-efficient, low greenhouse gas-emitting vehicles and alternative fuel vehicles (AFVs). | Yes | Components have been instructed to acquire | Whenever practicable, 100% of light-duty acquisitions should be AFVs, or low GHG-emitting vehicles. |
| Increase utilization of alternative fuel in dual-fuel vehicles. | Yes | Components are instructed to go beyond the EPAct 2005, Section 701 mandated 15 minute, 5 mile radius to acquire alternative fuel, whenever possible. This will enable DHS to reduce the number Section 701 waivers requested, ensuring compliance of the mandate to reduce the number of waiver requests by 10% annually. DHS has already | The assumption is that with 100% AFV or low GHG-emitting vehicles, alternative fuel will continue to increase by 10% or more annually. |

| (A) Will the agency implement the following strategies to achieve this goal? | (B) Top 5? Yes/No/NA | (C) Strategy Narrative | (D) Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months |
|---|---|---|---|
| | | met the 2020 target for alternative fuel usage and will continue to reduce the carbon footprint for the fleet. CBP is to establish a policy and implement procedures to acquire AFVs and use alternative fuel when available nearby at reasonable costs. | |
| Use a Fleet Management Information System to track fuel consumption throughout the year for agency-owned, GSA-leased, and commercially-leased vehicles. | No | Although DHS does not have an aggregate FMIS that is utilized by the Department, we are able to track fuel usage for agency owned vehicles through an internally developed Business Intelligence Tool with data exported from the fleet card provider. Fuel consumption for GSA leased vehicles is tracked through GSA's FMIS. | There is no funding available to finance a DHS aggregate FMIS. |
| Increase GSA leased vehicles and decrease agency-owned fleet vehicles, when cost effective. | Yes | Components have been charged with comparing costs of ownership prior to making a new acquisition. As a result of internal studies, some non-law enforcement Components are working with GSA to convert a portion of their owned vehicles to GSA Leases. | A more comprehension study to determine the most cost effective acquisition method for vehicles is planned for FY14. |
| Increase sustainability awareness with fleet managers. | Yes | In September 2012, FEMA HQ FMPO issued an SOP titled Documenting Compliance with Environmental Requirements. This SOP 1) documented Fleet Managers' responsibility to ensure fleet-related purchases comply with environmental requirements; 2) required Card Customers and Fleet Card Managers to document purchases of environmentally-friendly products; and 3) required Fleet Card Managers to document purchases of retread tires or re- refined oil. | Purchases will be tracked to measure increase in sustainable products. |

| (A) Will the agency implement the following strategies to achieve this goal? | (B) Top 5? Yes/No/NA | (C) Strategy Narrative | (D) Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months |
|---|---|---|---|
| Increase availability of alternative fuel. | Yes | CBP is to establish a policy and procedure to ensure that E85 and/or biodiesel fuel tanks are installed at high use fueling centers. | Number of installations will be tracked during FY 13. |

**Goal 4: Water Use Efficiency & Management**

**Agency Progress toward Potable Water Intensity Reduction Goal**

E.O. 13514 requires agencies to reduce potable water intensity by 2 percent annually through FY 2020 compared to an FY 2007 baseline. A 16 percent reduction is required by FY 2015 and a 26 percent reduction is required by FY 2020. The red bar represents the agency's FY 2007 baseline. The green bars represent the FY 2015 and FY 2020 target reductions. The blue bars represent annual agency progress on achieving these targets. The percentage at the top of each bar represents the reduction or increase from the FY 2007 baseline. A negative percentage value indicates that portable water use intensity has decreased compared to the FY 2007 baseline.
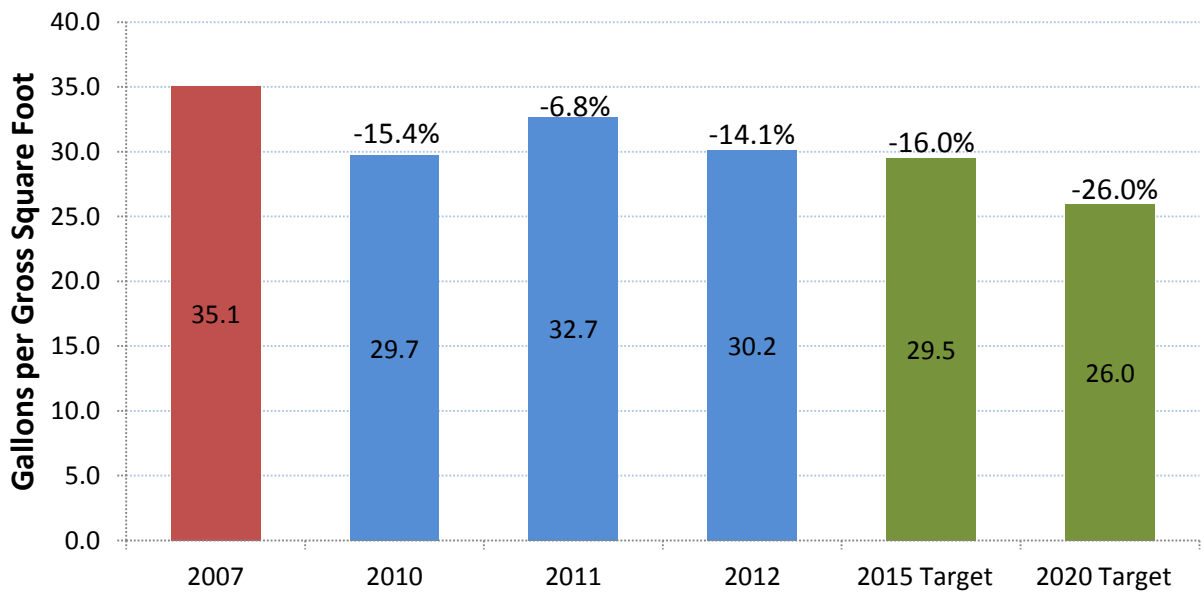
**Table 4: Goal 4 Strategies – Water Use Efficiency & Management**

| (A) Will the agency implement the following strategies to achieve this goal? | (B) Top 5? Yes/No/NA | (C) Strategy Narrative | (D) Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months |
|---|---|---|---|
| Purchase and install water efficient technologies (e.g., Waterwise, low-flow water fixtures and aeration devices). | Yes | Implemented where economically practicable. | NPPD is working with GSA to ensure use of low-flow and water-less fixtures and to conduct other water conservation activities and will measure fixtures installed in FY 13-14. |
| Develop and deploy operational controls for leak detection including a distribution system audit, leak detection, and repair programs. | Yes | Implemented where economically practicable | USSS plans to upgrade the Rowley Training Center (RTC) water and wastewater lines. Leaks will be repaired, and a meter will be installed that will more accurately measure the water usage of the RTC. |
| Design, install, and maintain landscape to reduce water use. | Yes | DHS Real Property Manual 2.1. Instruction #119-02-004, DHS Design, Engineering, and Construction Guide. | Efforts and tracking will be deployed at the facility/component level. |
| Design and deploy water closed-loop, capture, recharge, and/or reclamation systems. | Yes | DHS Real Property Manual 2.1. Instruction #119-02-004, DHS Design, Engineering, and Construction Guide. | Efforts and tracking will be deployed at the facility/component level. |
| Install meters to measure and monitor industrial, landscaping, and agricultural water use. | Yes | Implemented where economically practicable. S&T plans to complete energy water use audits with DHS SEP and NREL at PIADC and NBACC; audits will evaluate conservation measures and consider further potential use of sub-meters. FEMA's Energy Manager works to implement FEMA's aggressive metering plan, resulting in better water usage information overall. | Installation will be tracked. |

| (A) Will the agency implement the following strategies to achieve this goal? | (B) Top 5? Yes/No/NA | (C) Strategy Narrative | (D) Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months |
|---|---|---|---|
| Encourage behavioral changes to conserve water. | Yes | FEMA works with facility stakeholders to encourage and incentivize water conservation behavioral modifications. CBP will conduct a minimum of 3 web-based training sessions. | Track progress in potable water usage and industrial water usage. FEMA expects that by meeting a 26% potable water reduction, similar reductions may occur in the minimal amount of industrial, agricultural and landscaping water use. |

## Goal 5: Pollution Prevention & Waste Reduction

## Agency Progress toward Pollution Prevention & Waste Reduction

E.O. 13514 requires that Federal agencies promote pollution prevention and eliminate waste. The E.O. requires agencies to minimize the use of toxic and hazardous chemicals and pursue acceptable alternatives. It also requires agencies minimize waste generation through source reduction, increase diversion of compostable materials, and by the end of FY 2015 divert at least 50% of non-hazardous and 50% of construction and demolition debris.

**Table 5: Goal 5 Strategies – Pollution Prevention & Waste Reduction**

| (A) Will the agency implement the following strategies to achieve this goal? | (B) Top 5? Yes/No/NA | (C) Strategy Narrative | (D) Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months |
|---|---|---|---|
| Eliminate, reduce, or recover refrigerants and other fugitive emissions. | Yes | Efforts to eliminate, reduce, or recover refrigerants and other fugitive emissions are done at the facility/component level. | Efforts and tracking will be deployed at the facility/component level. |
| Reduce waste generation through elimination, source reduction, and recycling. | Yes | Implement single stream recycling. | USSS started single-stream recycling for three locations. This program will enhance recycling efforts by providing an easier way for USSS to recycle. Costs, revenue and recyclables are tracked. |

| (A) Will the agency implement the following strategies to achieve this goal? | (B) Top 5? Yes/No/NA | (C) Strategy Narrative | (D) Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months |
|---|---|---|---|
| Implement integrated pest management and improved landscape management practices to reduce and eliminate the use of toxic and hazardous chemicals/materials. | Yes | Efforts are done at the facility/component level. | Efforts and tracking will be deployed at the facility/component level. |
| Establish a tracking and reporting system for construction and demolition debris elimination. | Yes | S&T is preparing for the transfer of operations to NBAF and the closure of operations at PIADC and plans to recycle C&D debris. | C&D recycled will be tracked when move takes place. |
| Develop/revise Agency Chemicals Inventory Plans and identify and deploy chemical elimination, substitution, and/or management opportunities. | Yes | S&T's TSL's Maintenance of Hazardous Materials inventory and MSDS: all purchases must be approved by a hazardous materials specialist and alternatives used whenever possible. Inventory of materials is documented. | Maintained documentation of materials and reduction in amount of purchased hazardous materials. |
| Establish a tracking and reporting system to capture recycling totals. | Yes | DHS is considering modifying the EARS IAA to include processing of invoices for solid waste and recycling. NPPD plans to work with GSA to get sustainable terms into leases and occupancy agreements and get terms enforced. | FLETC will pilot in FY 13 through FY 14. If successful, waste diversion rates could be captured and reported. Efforts could then focus on achieving 50% diversion rate or about. If successful, pilot could expand to similar facilities. NPPD will obtain information on waste management at each facility. |
| Increase awareness training on pollution prevention and waste reduction. | Yes | DHS Sustainability: Pollution Prevention General Awareness, Web Based Training Module; will be made available to all employees in April of 2013. CBP plans to publicize the recycling program so that CBP employees are aware of recycling requirements. | Training will be tracked and revised as necessary. |

| (A) Will the agency implement the following strategies to achieve this goal? | (B) Top 5? Yes/No/NA | (C) Strategy Narrative | (D) Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months |
|---|---|---|---|
| Reduce waste generation by adopting electronic copying protocol. | Yes | Replace hard copies with electronic copies. | FEMA plans to complete assessments of records management requirements in order to develop the cost baseline for an electronic records management system. |

## Goal 6: Sustainable Acquisition

**Agency Progress toward Sustainable Acquisition Goal**

E.O. 13514 requires agencies to advance sustainable acquisition and ensure that 95 percent of applicable new contract actions meet federal mandates for acquiring products that are energy efficient, water efficient, biobased, environmentally preferable, non-ozone depleting, recycled content, or are non-toxic or less toxic alternatives, where these products meet performance requirements. To monitor performance, agencies perform quarterly reviews of at least 5 percent of applicable new contract actions to determine if sustainable acquisition requirements are included.
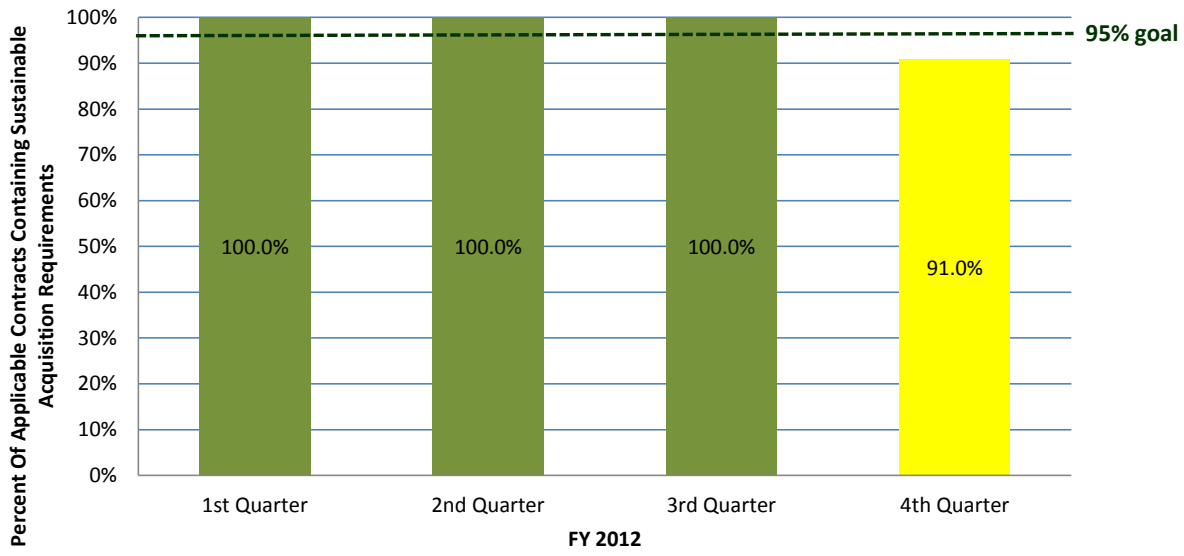
**Federal Procurement Data System Standard Reports on Biopreferred Procurement Actions**

The Federal Procurement Data System (FPDS) is used by federal agencies to record and manage contract actions. On the pie chart below, the blue area represents the total number of contract actions reported by the agency in FPDS in FY 2012 that are "applicable" to the sustainable procurement requirements. Applicable contract actions are new domestic contracts, task and delivery orders, excluding weapons systems and those actions that are unlikely to use biobased products (e.g., research and social development contracts, education and training, social services, and the lease or rental of equipment). The green area represents the total number of applicable contract actions that the agency reported in FPDS as containing biobased product requirements.

0.42% = 110
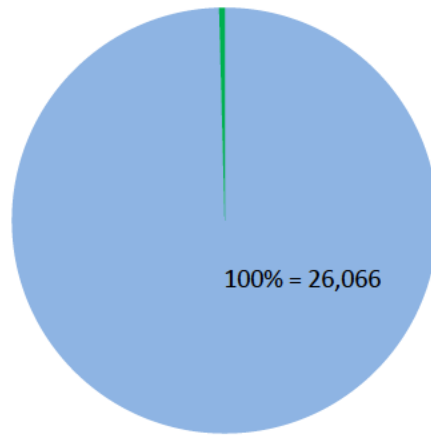
■ Total # FPDS Reported
Applicable Contract Actions

■ Total # FPDS Reported Contract
Actions that include
Biopreferred Requirements

100% = 26,066

**Table 6: Goal 6 Strategies – Sustainable Acquisition**

| (A) Will the agency implement the following strategies to achieve this goal? | (B) Top 5? Yes/No/NA | (C) Strategy Narrative | (D) Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months |
|---|---|---|---|
| Update and deploy agency procurement policies and programs to ensure that federally-mandated designated sustainable products are included in all relevant procurements and services. | Yes | Ensure that contracting staff have access to updated agency procurement policies mandating the use of designated sustainable products in all relevant procurements and services. | OCPO will continuously update the HSAM as required by changes in law and future FAR cases. Ensure that updates are accessible to 100% of contracting staff within 30 days of being issued. |
| Deploy corrective actions to address identified barriers to increasing sustainable procurements with special emphasis on biobased purchasing. | Yes | Identify areas for improvement using the standard Sustainability report in FPDS-NG. | OCPO will conduct focused quarterly reviews using the standard Sustainability report in FPDS-NG to identify areas requiring improvement or correction. |
| Include biobased and other FAR sustainability clauses in all applicable construction and other relevant service contracts. | Yes | CPO will ensure that 95% of eligible new and existing contract actions include the required environmental clauses and provisions prescribed in FAR Part 23. FLETC included biobased, recyclable and water efficiency requirements in statement of work for grounds maintenance contract. | OCPO will conduct focused quarterly reviews on construction and service contract actions to verify the appropriate clauses are included in the applicable contract actions. |
| Review and update agency specifications to include and encourage biobased and other designated green products to enable meeting sustainable acquisition goals. | No | To date, DHS has identified zero agency specifications that would include green products. | Appropriate actions will be coordinated to update specifications as necessary. |
| Use Federal Strategic Sourcing Initiatives, such as Blanket Purchase Agreements (BPAs) for office products and imaging equipment, which include | Yes | Identify new strategic sourcing opportunities which include sustainable acquisition requirements. | DHS will conduct a feasibility study in the area of hazardous waste as a strategic sourcing initiative. |

| (A) Will the agency implement the following strategies to achieve this goal? | (B) Top 5? Yes/No/NA | (C) Strategy Narrative | (D) Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months |
|---|---|---|---|
| sustainable acquisition requirements. | | | |
| Report on sustainability compliance in contractor performance reviews. | No | Inability to track in CPARS. This would be 100% manual check. | Will revisit when functionality is added to CPARS. |
| Increase user awareness of sustainable products and services | Yes | Deploy sustainable acquisition outreach campaign. | DHS will staff 3 vendor outreach sessions with the Office of Small and Disadvantaged Business Utilization and Office of the Chief Readiness Support Officer to educate potential vendors on the DHS Sustainable Acquisitions Program. |
| Improve awareness training on sustainable acquisitions | Yes | DHS Sustainability: Sustainable Acquisitions General Awareness, Web Based Training Module; will be made available to all employees in April of 2013. NPPD is developing training for purchase card holders. FLETC plans to require all COs and CORs to complete FAC 018, Green Purchasing for Civilian Acquisition. TSA Office of Acquisition will continue the online learning center requirement for all contracting specialists for FAR Part 23 training in FY13-14 | Training will be tracked and revised as necessary. |

## Goal 7: Electronic Stewardship & Data Centers

### Agency Progress toward EPEAT, Power Management & End of Life Goals

E.O. 13514 requires agencies to promote electronics stewardship by: ensuring procurement preference for EPEAT-registered products; implementing policies to enable power management, duplex printing, and other energy-efficient features; employing environmentally sound practices with respect to the disposition of electronic

products; procuring Energy Star and FEMP designated electronics; and, implementing best management practices for data center operations.

| EPEAT | Power Management | End of Life | Comments |
|---|---|---|---|
| 🟢 | 🟢 | 🟢 | |

**EPEAT:**

| | |
|---|---|
| 🟢 | 95% or more Monitors and PCs/Laptops purchased in FY2012 was EPEAT Compliant Agency-wide |
| 🟡 | 85-94% or more Monitors and PCs/Laptops purchased in FY2012 was EPEAT Compliant Agency-wide |
| 🔴 | 84% or less Monitors and PCs/Laptops purchased in FY2012 was EPEAT Compliant Agency-wide |

**Power Management:**

| | |
|---|---|
| 🟢 | 100% Power Management Enabled Computers, Laptops and Monitors Agency-wide |
| 🟡 | 90-99% Power Management Enabled Computers, Laptops and Monitors Agency-wide |
| 🔴 | 89% or less Power Management Enabled Computers, Laptops and Monitors Agency-wide |

**End-of-Life:**

| | |
|---|---|
| 🟢 | 100% of Electronics at end-of-life disposed through GSA Xcess, CFL, Unicor or Certified Recycler (R2, E-Stewards) |
| 🟡 | 100% of Electronics at end-of-life disposed through GSA Xcess, CFL, Unicor and/or non-Certified Recycler |
| 🔴 | Less than 100% of Electronics at end-of-life disposed through GSA Xcess, CFL, Unicor or non-Certified Recycler |

**Table 7: Goal 7 Strategies – Electronic Stewardship & Data Centers**

| (A) Will the agency implement the following strategies to achieve this goal? | (B) Top 5? Yes/No/NA | (C) Strategy Narrative | (D) Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months |
|---|---|---|---|
| Identify agency "Core" and "Non-Core" Data Centers. | Yes | DHS follows the Federal Data Center Consolidation Initiative (FDCCI) data center metrics and identification guidance. | DHS has identified its 3 core data centers through the FDCCI defined process – Enterprise Data Center 1 (DC1), Enterprise Data Center 2 (DC2), and USCG Operations Service Center (OSC). |
| Consolidate 40% of agency Non-Core Data Centers. | Yes | DHS yearly migration planning and implementation based on migration funding levels and Component plans/input, and facilitated by DHS HQ. | DHS previously identified 42 primary legacy data center sites for consolidation to the Enterprise Data Centers (EDC). Of these 18 have completed consolidation as of Q3 FY13. Three primary legacy sites have been exempted. Two sites are targeted for completion by the end of FY13. Five additional sites are currently targeted for completion in FY14. |
| Optimize agency Core Data Centers across total cost of ownership metrics. | NA | Strategy provided by OMB is unclear. | N/A |
| Ensure that power management, duplex printing, and other energy efficiency or environmentally preferable options and features are enabled on all eligible electronics and monitor compliance. | Yes | Directives for Duplex Printing and Systems Power Management signed April 11, 2013. | Components are to complete a Duplex Printing Implementation Plan and Systems Power Management Implementation Plan by end of FY 14 and provide biannual reports to the Executive Directive, ITSO. Audits are conducted at components using random sampling to verify configuration settings are established on eligible devices. Monthly telecons conducted to continue progress. |
| Update and deploy policies to use environmentally | Yes | The DHS Personal Property Asset Management Manual, which | Reports are provided to DHS through GSA to verify responsible |

| (A) Will the agency implement the following strategies to achieve this goal? | (B) Top 5? Yes/No/NA | (C) Strategy Narrative | (D) Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months |
|---|---|---|---|
| sound practices for disposition of all agency excess or surplus electronic products, including use of certified eSteward and/or R2 electronic recyclers, and monitor compliance. | | implements DHS Directive 119-03, specifically cites that DHS is a responsible environmental partner in the re-use and recycling of electronic equipment. Equipment that cannot be economically re- paired shall be recycled with a certified recycler, as authorized by GSA. | disposition of excess electronics. DHS anticipates that this information will be accessible by FY 14. |
| Ensure acquisition of 95% EPEAT registered and 100% of ENERGY STAR qualified and FEMP designated electronic office products. | Yes | FSSI Eagle/First Source II Contracts require EPEAT registered products only. EPEAT, Energy Star qualified and FEMP designated products are included in DHS Acquisitions Manual and the DHS Affirmative Procurement Plan, Appendix Q. | Vendors are required to provide quarterly reports to DHS on EPEAT and non EPEAT purchases. Non EPEAT purchases are reviewed and corrective actions are taken if necessary. ENERGY STAR and FEMP categories are included in contract reviews to meet the 95% Sustainable Acquisitions Goal. |
| Establish a user friendly system to reuse personal property, including electronics, between offices and components. | Yes | DHS, through an MOU with GSA, recently implemented the Agency Asset Management System, a module within and patterned after GSAXcess, to internally screen all DHS personal property. This system allows full visibility of available property to the Department for reutilization. | Reports are provided to the DHS efficiency review team on cost avoidance for utilized property within the department. |
| Improve awareness training on Electronics Stewardship. | Yes | DHS Sustainability: Electronics Stewardship General Awareness, Web Based Training Module; will be made available to all employees in April of 2013. | Training will be tracked and revised as necessary. |

**Goal 8: Renewable Energy**

**Agency Renewable Energy Percentage of Total Electricity Usage**

E.O. 13514 requires that agencies increase use of renewable energy. Further, EPACT 2005 requires agencies to increase renewable energy use such that 7.5 percent of the agency's total electricity consumption is generated by renewable energy sources for FY 2013 and beyond. For FY 2012, the required target was 5 percent of an agency's total electricity consumption.

Renewable Energy (MWh)
Total Non-RE (MWh)

68,331
7.5%

838,184
92.5%
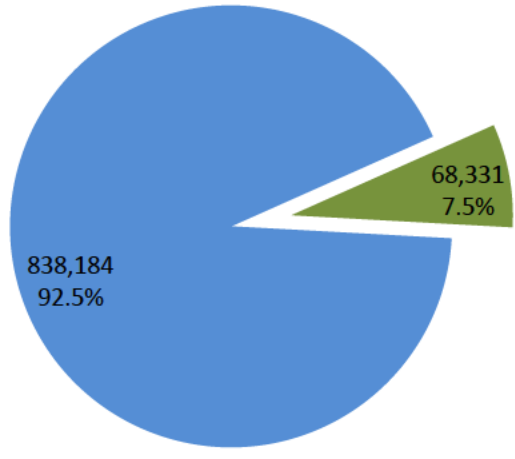
**Table 8: Goal 8 Strategies – Renewable Energy**

| (A) Will the agency implement the following strategies to achieve this goal? | (B) Top 5? Yes/No/NA | (C) Strategy Narrative | (D) Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months |
|---|---|---|---|
| Purchase renewable energy directly or through Renewable Energy Credits (RECs). | Yes | DHS purchases renewable electric energy either directly or by purchasing RECs to optimize the amount of renewable energy per dollar. | DHS measures renewable electricity purchased at the component level. DHS will purchase 7.5% of its electricity from renewable sources over the next 12 months. |
| Install onsite renewable energy on federal sites. | Yes | Onsite renewable energy is being/has been installed at USCG, CBP, and FLETC sites. These installations often enhance energy availability and result in reduced energy costs. | Renewable energy generated on federal sites will be reported by components and included in the Department's annual reporting. |
| Lease land for renewable energy infrastructure. | No | DHS is not in the position to lease land for renewable energy infrastructure. | NA |
| Develop biomass capacity for energy generation. | Yes | The US Coast Guard is studying the availability of biomass resources to meet needs in remote areas. | Progress will be tracked if implemented. Metrics to be determined. |
| Utilize performance contracting methodologies for implementing ECMs and increasing renewable energy. | Yes | DHS is on track to achieve its target of $48 million in awards of alternatively financed performance contracts in support of the Presidential Memorandum of December 2, 2011. | DHS Components report performance and milestones on a monthly basis which is entered into the OMB Max system for reporting and tracking. |
| Work with other agencies to create volume discount incentives for increased renewable energy purchases. | Yes | DHS Components partner with GSA and Defense Energy to purchase renewables and RECs. | Information is tracked and rolled up to Department. |

**Goal 9: Climate Change Resilience**

## Agency Climate Change Resilience

E.O. 13514 requires each agency to evaluate agency climate change risks and vulnerabilities to identify and manage the effects of climate change on the agency's operations and mission in both the short and long term.

**Table 9: Goal 9 Strategies – Climate Change Resilience**

| (A) Will the agency implement the following strategies to achieve this goal? | (B) Yes/No/NA | (C) Strategy Narrative | (D) Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months |
|---|---|---|---|
| Ensure climate change adaptation is integrated into both agency-wide and regional planning efforts, in coordination with other Federal agencies as well as state and local partners, Tribal governments, and private stakeholders. | Yes | DHS Climate Change Adaptation Roadmap, June 2012. | As recommended in the Roadmap, DHS will consider developing Integrated Planning Guidance. This will be briefed to the Program Review Board. In the long term, DHS aims to integrate climate change into operational and long-range planning efforts through strategy development, resource allocation and major acquisition oversight, and operational planning processes. Action 3.03 will seek to understand how climate change will impact local communities and engage them in addressing those impacts. |
| Update agency emergency response procedures and protocols to account for projected climate change, including extreme weather events. | Yes | DHS Climate Change Adaptation Roadmap, June 2012, Action 4.03: Develop, coordinate, implement, and maintain response and security plans using a "Whole of Government" approach. | High Level Risk Assessment: Climate Change Impacts, Potential DHS Vulnerabilities and Consequences will continue to be analyzed, updated and incorporated into strategic planning. The USCG will develop, coordinate, and implement area and regional operational plans to meet national defense contingency planning requirements; prevent and deter, protect, respond to and recover from terrorist attacks, criminal activities, and other hostile acts; and prevent and respond to maritime accidents and natural disasters that pose a serious risk to mariners, passengers, coastal communities, and the environment. FEMA and NPPD will support, as appropriate and within existing authorities. |
| Ensure workforce protocols and policies reflect | Yes | 2012, Action 4.11: Meet national security and | While workforce protocols are not specifically addressed in our CCA Roadmap, DHS con- |

| (A) Will the agency implement the following strategies to achieve this goal? | (B) Yes/No/NA | (C) Strategy Narrative | (D) Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months |
|---|---|---|---|
| projected human health and safety impacts of climate change. | | homeland security needs relevant to the Arctic region. | stantly reviews emerging hazards and assesses risks to the workforce, and adapts work processes and protocols in response. This includes plans for response to extreme weather events, operations in a changing arctic environment, and potential for emerging infectious diseases. USCG continues to serve as the lead maritime safety and security agency in the Arctic. The lack of infrastructure, emerging energy exploration, and anticipated increase in maritime traffic poses challenges and requires increased investment in the future to meet emerging operational requirements. |
| Update agency external programs and policies (including grants, loans, technical assistance, etc.) to incentivize planning for, and addressing the impacts of, climate change. | Yes | DHS Climate Change Adaptation Roadmap, June 2012, Action 3.06: Evaluate how climate change considerations can be incorporated into grant investment strategies with specific focus on infrastructure and evaluation methodologies or tools such as benefit/cost analysis. | DHS, especially FEMA, provides extensive funding to SLTT entities for the repair and replacement of damaged infrastructure and residential structures after a disaster. Currently, many of these investments are made without purposefully considering future climate conditions, which may reduce their level of resilience to future disasters. FEMA will lead the Department's work to proactively engage and partner with SLTT communities to better understand how climate change may affect their homeland security and emergency management activities and identify ways that the Department can support adaptation efforts through grant investment strategies. |
| Ensure agency principals demonstrate commitment to adaptation efforts through internal communications and policies. | Yes | DHS Climate Change Adaptation Roadmap, June 2012, Action 1.01: Implement a Department-wide climate change adaptation education and communication plan. | As established in EO 13514, climate change adaptation and sustainability practices are inherently linked as a joint set of activities that together help diminish the rate or severity of climate change and manage the impacts. The Management Directorate will implement a climate change adaptation education plan that will increase awareness among DHS employ- |

| (A) Will the agency implement the following strategies to achieve this goal? | (B) Yes/No/NA | (C) Strategy Narrative | (D) Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months |
|---|---|---|---|
| | | | ees about climate change issues, establish climate change adaptation as a portfolio within the Department, and link the Department's adaptation initiative to its broader sustainability efforts. |
| Identify vulnerable communities that are served by agency mission and are potentially impacted by climate change and identify measures to address those vulnerabilities where possible. | Yes | DHS Climate Change Adaptation Roadmap, June 2012, Action 3.05: Through partnerships with the climate science community, evaluate the potential impact climate change may have on existing risk data and the corresponding implications for Threat Hazard Identification Risk Assessment development and operational planning. | FEMA will continue to work with the climate science and risk analysis community to evaluate the impacts of climate change on the viability of existing risk data. This action will be coordinated with related CCA activities and will provide the Department with insight for further efforts to update risk information and standards across the Homeland Security Enterprise and a source of best practices for successful effective risk management. |
| Ensure that agency climate adaptation and resilience policies and programs reflect best available current climate change science, updated as necessary | Yes | DHS Climate Change Adaptation Roadmap, June 2012, Action 3.04: Establish partnerships with other Agencies and organizations that possess climate science expertise. | DHS and its Components do not maintain in-house climate science expertise. In order to ensure that the information needs of the Department are communicated to the scientific community, and that the Department's adaptation planning is using the best available science, FEMA, with S&T's support, will establish partnerships with scientific Agencies and organizations both within and outside the Federal government. |
| Design and construct new or modify/manage existing agency facilities and/or infrastructure to account for the potential impacts of projected climate change. | Yes | DHS Climate Change Adaptation Roadmap, June 2012, Action 3.07: Promote building standards and practices, both within DHS programs and in general, that consider the | The guidelines and standards that FEMA promotes and our State, Local, Tribal and Territorial partners utilize to guide construction are based on historical data. As the climate changes, however, future risks to new infrastructure could be higher than currently anticipated. FEMA will lead the Department |

| (A) Will the agency implement the following strategies to achieve this goal? | (B) Yes/No/NA | (C) Strategy Narrative | (D) Specific targets/metrics to measure strategy success including milestones to be achieved in next 12 months |
|---|---|---|---|
| | | future needs of climate change. | in initial efforts to encourage the incorporation of future climate considerations into programmatic guidance and standards, where applicable. |
| Incorporate climate preparedness and resilience into planning and implementation guidelines for agency-implemented projects. | Yes | DHS Climate Change Adaptation Roadmap, June 2012, Action 4.08: Analyze the results of the High Latitude Study and associated material to identify capability and support requirements for USCG mission execution in the Arctic. | USCG contracted the High Latitude Study to analyze the Arctic region and applicable authorities, capabilities, capacities, competencies, and partnerships. The results and recommendations of the study and the associated materials will be used to identify changes necessary for USCG mission execution in the Arctic. |
| Protect and ensure the resilience of the nation's critical infrastructure and key resources to potential impacts of climate change. | Yes | DHS Climate Change Adaptation Roadmap, June 2012, Action 2.04: Conduct a series of studies for adaptive integrated infrastructure risk management. | Building on the three prior DHS Critical Infrastructure and Key Resources partnership actions, NPPD/Office of Infrastructure Protection, working with other DHS Components and outside partners, will conduct a series of studies to better understand and support infrastructure risk management. These studies will be fully available to support further research by academia and industry, and DHS and partners will consolidate findings into useful tools and training materials to inform sectors and communities to incorporate climate change adaptation into their planning. |

DEPARTMENT OF HOMELAND SECURITY

# CLIMATE CHANGE
# ADAPTATION
## ROADMAP

### JUNE 2012

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I am pleased to approve and publish the Department of Homeland Security (DHS) Climate Change Adaptation (CCA) Roadmap. The DHS CCA Roadmap fulfills the requirement of Executive Order (EO) 13514, *Federal Leadership in Environmental, Energy and Economic Performance* (October 2009), for all Federal Departments and Agencies to reinforce and comply with the U.S. Government's efforts to develop a national climate change adaptation strategy. The CCA Roadmap is the Department's supporting adaptation plan and represents the culmination of the Department's Fiscal Year (FY) 2011 climate change adaptation efforts.

Just as we plan for future contingencies and risks of all kinds to homeland security, DHS is working to understand the potential impacts of climate change across all of our homeland security missions. Led by the DHS Climate Change Adaptation Executive Steering Committee, the Department has taken key steps to integrate climate change adaptation into the Department's business processes. The CCA Roadmap is the Department's initial effort in considering the potential risks of climate change to the Department and the Homeland Security Enterprise. The risks posed or exacerbated by a changing climate—such as intensifying extreme weather events and sea ice changes in the Arctic—transcend national borders, and may affect our core homeland security missions in new and complex ways. As DHS develops a better understanding of how climate change may affect our strategic landscape, we can more effectively manage risks to our Nation's security.

As a key DHS long-range planning document, the CCA Roadmap considers our posture today, spans the Future Years Homeland Security Plan through 2018, and goes beyond into the future. It also establishes a direct linkage between CCA activities and our existing environmental sustainability and efficiency efforts, as recognized in the Department's Strategic Sustainability Performance Plan, also an EO 13514 requirement.

By engaging on climate change adaptation now, the Department is better able to understand and minimize critical uncertainties, take steps to address potential vulnerabilities, and provide foundational support to the Homeland Security Enterprise in adapting to climate change now and into the future.

Thank you,

Jane Holl Lute

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# PART II
## CLIMATE CHANGE ADAPTATION ROADMAP ACTIONS

# Executive Summary

## The Department, Strategic Drivers, and Climate Change

Today's security environment is increasingly defined by borderless and unconventional threats, global challenges, and long-term trends. Informed by the National Security Strategy (2010) and the strategic framework established in the Quadrennial Homeland Security Review Report (2010) (QHSR), the Department's strategy methodology examines both current and future security environments to understand and reduce uncertainty associated with key trends and strategic drivers. These trends and drivers are enduring social, technological, economic, environmental, and political forces that can cause significant change in domains relevant to the Department and the Homeland Security Enterprise.

Climate change is one such strategic driver. Not an end unto itself, but rather a force that is likely to shape the strategic environment, it must be accounted for in Departmental policy, strategy, plans, business processes, programs, institutional practices, and operations in order to best position the Department for success over the long term, regardless of how the future unfolds. Understanding how major strategic drivers such as climate change may evolve is at the crux of effectively and decisively managing risks to the Nation's security.

Climate change represents a complex homeland security challenge with strategic implications for the Department. The risks posed or exacerbated by a changing climate—such as intensifying and more frequent extreme weather events, natural disasters, and sea ice changes in the Arctic—may either directly or indirectly affect core homeland security missions. As with any risk to homeland security, the Department must consider the likelihood and consequences associated with climate change in order to proactively manage risk in an informed way. To that end, the Department of Homeland Security (DHS) Climate Change Adaptation (CCA) Roadmap represents the Department's long-range planning effort to frame, analyze, and adapt to the potential



Courtesy of FEMA

impacts of climate change across its homeland security missions.

## Alignment with Executive Order 13514 and Roadmap Scope

The DHS CCA Roadmap fulfills the Executive Order (EO) 13514, *Federal Leadership in Environmental, Energy and Economic Performance* (October 2009) requirement for all Federal Agencies to reinforce and comply with the U.S. Government's efforts to develop a national climate change adaptation strategy and, as such, is the Department's supporting adaptation plan.

This Roadmap represents a first step for the Department to develop a more proactive posture to manage climate change risks and adapt to potential impacts of climate change. Based on the Secretary's guidance, the initial focus areas of the Roadmap include Departmental cross-cutting adaptation activities, resilient critical infrastructure and key resources, resilience to disasters, and the Arctic. It is not intended to encompass the full spectrum of potential adaptation efforts for DHS. As U.S. policy, strategy and the study of climate science matures, the focus areas for climate change adaptation may change. As such, this Roadmap is intended to be a "living document" that will be re-evaluated in concert with

the QHSR cycle. In addition, this Roadmap does not address mitigation efforts—those are included in the Department's Strategic Sustainability Performance Plan (SSPP), which establishes an integrated approach for sustainability activities; however, the SSPP and the CCA Roadmap are nested and synchronized.

The 42 actions contained in the CCA Roadmap are not requirements for implementation; rather, they are analytically informed policy, planning, and decision support activities the Department should consider and execute as resources allow. The Roadmap provides validation for these CCA activities, allowing them to compete for attention, prioritization, and resourcing within the Department's established business processes. Where appropriate, they are intended to integrate within existing programs, assessments, performance metrics and other business functions.

## Overview of the DHS CCA Roadmap

The 42 actions identified in the CCA Roadmap are the result of deliberate study and analysis by select DHS headquarters elements and operational Components. As with all homeland security activities, these actions seek to ensure security, resilience, and customs and exchange with the world across all core mission areas. By

engaging on climate change-related issues now, the Department will be able to define and minimize uncertainties, take steps to address current and medium-term vulnerabilities, and provide foundational support to the Homeland Security Enterprise to address climate change into the future.

Based on the Secretary's FY 2011 CCA Implementation Guidance, actions included in the Roadmap address four strategic objectives:

1.  Manage climate risks for cross-cutting or other key homeland security issues.

2.  Protect and ensure the resilience of critical infrastructure and key resources (CIKR) to potential impacts of climate change.

3.  Ensure the Nation's resilience to more frequent or extreme weather events and natural disasters.

4.  Contribute to safety, stability, security and environmental protection in the Arctic.

The CCA Executive Steering Committee, the governing body established to oversee DHS's climate change adaptation effort, is charged with developing and maintaining the CCA Roadmap.



Courtesy of USGCRP

# Summary of Actions

The following actions will guide the Department's adaptation efforts in the near, medium, and long term. The desired end-state resulting from these actions and continued DHS adaptation efforts is:

*DHS and its partners across the homeland security enterprise are postured to manage climate risks and will adapt to the impacts of climate change to ensure security, resilience, and customs and exchange for the Nation.*

## 1. Cross-Cutting, Departmental Activities

These 17 actions aim to address risks associated with climate change for cross-cutting, Department-wide issues or issues that require intra-Departmental coordination. These actions enhance climate change adaptation communication with stakeholders, identify key Department-wide analytic gaps requiring further analysis and decision support, integrate climate change adaptation into the Department's interagency activities, and enhance internal Departmental maturing and strengthening activities, as identified in the QHSR and in the Bottom-Up Review Report (2010).

## 2. Resilient Critical Infrastructure and Key Resources

These five actions aim to ensure the resilience of CIKR to the potential impacts of climate change. DHS must partner with CIKR owners and operators to determine climate change risks and identify potential adaptation measures. The National Infrastructure Protection Plan partnership framework provides an existing vehicle for integrating climate change adaptation activities into ongoing resilience and reporting activities. These efforts will promote earlier, less costly, and non-duplicative adaptation activities, and will enhance resilience planning and resourcing, in both the government and private sectors.

## 3. Resilience to Disasters

These eight actions seek to ensure the Nation's resilience to more frequent or extreme weather events and natural disasters. Changes to patterns of natural disasters may impact the Federal Emergency Management Agency's (FEMA) long-term vision of mitigating physical and economic loss—with the potential to strain response and recovery resources and limit the Department's ability to adequately prepare for a "new normal" of more frequent disasters. The most significant climate change impacts will likely affect the following core FEMA areas: policy frameworks and stakeholders; risk information and standards; grant regulations, policies, and funding; research and analytic capabilities; and operations and workforce.

## 4. Safety, Stability, Security, and Environmental Protection in the Arctic

These 12 actions support DHS equities and the national Arctic policy objectives outlined in National Security Presidential Directive-66 / Homeland Security Presidential Directive-25, "Arctic Region Policy" (2009), and are intended to serve as a foundation to prepare DHS and the Nation to address safety, stability, stewardship, and security concerns in the Arctic.



Courtesy of USCG

# PART I:

*The purpose of Part I of the CCA Roadmap is to provide the background, governance, and process of the CCA effort; outline the framing guidance; and summarize the potential climate change risks to DHS.*

# 1. Background, Governance and Process

*"The danger from climate change is real, urgent, and severe. The change wrought by a warming planet will lead to new conflicts over refugees and resources; new suffering from drought and famine; catastrophic natural disasters; and the degradation of land across the globe."*

- National Security Strategy (2010)

## A. Background

In the National Security Strategy (2010), the President identified climate change as a major challenge for the Nation and a significant threat to national security. In October 2009, the President issued Executive Order (EO) 13514, requiring Federal Agencies to support the U.S. Government's efforts to develop a national climate change adaptation strategy. This process, coordinated across the U.S. Government through the Interagency Climate Change Adaptation Task Force, will ultimately establish and implement coordinated climate change adaptation plans for all Federal Departments and Agencies.

DHS recognizes climate change as a complex homeland security challenge with strategic implications for the Department. The Quadrennial Homeland Security Review Report (2010) (QHSR) states: "Climate change is expected to increase the severity and frequency of weather-related hazards, which could, in turn, result in social and political destabilization, international conflict, or mass migrations." Climate change has also been identified as a security risk by the National Intelligence Council, the Department of Defense, and the Central Intelligence Agency.

Overall, climate change is expected to potentially affect the severity, rate, and/or frequency of extreme weather events, melting of ice sheets in the Arctic, sea-level rise, droughts, floods, and the spread of life-threatening diseases. In addition to these direct impacts, other significant impacts to the U.S. are anticipated to be *indirect*-linked to effects of climate change on other countries and their potential to affect U.S. security interests. In this way, climate change acts as a "threat multiplier," aggravating stressors, such as poverty, environmental degradation, and social tensions, which can destabilize human systems and institutions.

Variability still exists with respect to the precise magnitude or rate of change associated with climate change, and there are information gaps and limitations to what climate models can predict. Regardless, the uncertainty related to climate change must be considered in the same manner in which DHS manages any other risk to homeland security.

Understanding how major strategic drivers such as climate change may evolve is at the crux of effectively and decisively managing risks to the Nation's security. Taking proactive steps to understand and address the homeland security implications of climate change will better posture the Department to effectively lead the Homeland Security Enterprise and operate across all of its missions, as defined in the QHSR, now and in the future. To that end, the DHS CCA Roadmap represents the Department's long-range planning effort to frame, analyze, and adapt to the potential impacts of climate change across its homeland security missions.

### Alignment with Executive Order 13514

DHS climate change adaptation efforts are driven by EO 13514. The Federal Agency Climate Change Adaptation Planning Implementing Instructions for EO 13514 (2011) direct Federal Agencies to complete nine major requirements by June 2012. Publication of the DHS CCA Roadmap satisfies the requirement

to develop an Agency adaptation plan. The DHS CCA Roadmap does not address mitigation efforts—those are included in the Department's Strategic Sustainability Performance Plan (SSPP), which establishes an integrated approach for sustainability activities. However, the DHS SSPP and the DHS CCA Roadmap are nested and synchronized.

## B. CCA Executive Steering Committee Governance Structure

In Fiscal Year (FY) 2011, the Department established a governance structure for climate change adaptation planning, fulfilling a requirement from the Secretary's Implementation Guidance. The CCA Executive Steering Committee (ESC), led by the Senior Counselor to the Secretary, is chartered with achieving the following objectives:

- Initiating the integration of climate change into DHS' operational and long-term planning as a key strategic driver and incorporation of climate change into the Department's strategies, plans, business processes, and programs;

- Coordinating and overseeing the Department's activities associated with climate change adaptation;

- Serving as the primary oversight body for climate change adaptation.

Further, the CCA ESC is tasked with developing and maintaining the DHS CCA Roadmap.

The Committee is chaired by the Senior Counselor to the Secretary within the Office of the Secretary. Its initial membership is comprised of senior-level representatives from the Federal Emergency Management Agency (FEMA), the National Protection and Programs Directorate (NPPD), the U.S. Coast Guard (USCG), U.S. Citizenship and Immigration Services (USCIS), the Management Directorate (MGMT), the Science and Technology Directorate (S&T), the Office of Intelligence and Analysis (I&A), the Office of Health Affairs (OHA), the Office of Policy (PLCY), and the Office of the General

Courtesy of USGCRP

Counsel (OGC). The CCA Executive Steering Committee meets quarterly and monitors the progress of the Department's climate change adaptation efforts, submitting an update to the Secretary on a quarterly basis.

## CCA Director Group

PLCY leads the director-level (General Schedule-14/Commander or General Schedule-15/Captain-level) working group that supports the CCA ESC. The CCA Director Group is formed from the CCA ESC Components and tasked with implementing the DHS CCA requirements. This group is responsible for shaping issues for CCA ESC consideration and developing the CCA Roadmap for approval by the CCA ESC. In FY 2011, three subgroups were formed to address the Secretary's three focus areas for FY 2011: resilient critical infrastructure and key resources (led by NPPD); resilience to disasters (led by FEMA); and ensuring safety, stability, and security in the Arctic (led by USCG). The Director Group considered and developed Roadmap actions for the Departmental cross-cutting issues focus area.

Figure 1 depicts the DHS governance structure, and also provides the coordinating relationship between the DHS governance structure and the White House Council on Environmental Quality (CEQ) and the U.S. Global Change Research Program and its associated National Climate Assessment entities.

## C. Methodology: Long-Range Planning Process for Climate Change Adaptation

Assisted by the PLCY Office of Strategic Plans, the Director Group developed the DHS Climate Change Adaptation Process in order to methodically and analytically examine the challenges posed by climate change. This process is approved by the DHS CCA ESC and has been used by the Department to guide CCA activities. The analytic process is based on the DHS Strategy Development Methodology.

The climate change adaptation initiative represents the Department's first long-range planning effort focused on a strategic driver. The CCA effort enabled the Department to develop a long-range planning methodology, grounded in the overarching approach and methodology for strategy development. The CCA analytic process is informed by best practices for climate change adaptation planning from across government, academia, and the private sector. The process identifies nine consistent process elements, which have been tailored to inform and integrate with existing DHS business processes.

Figure 2 provides a summary of the analytic process.



**CCA ESC Operating Framework**
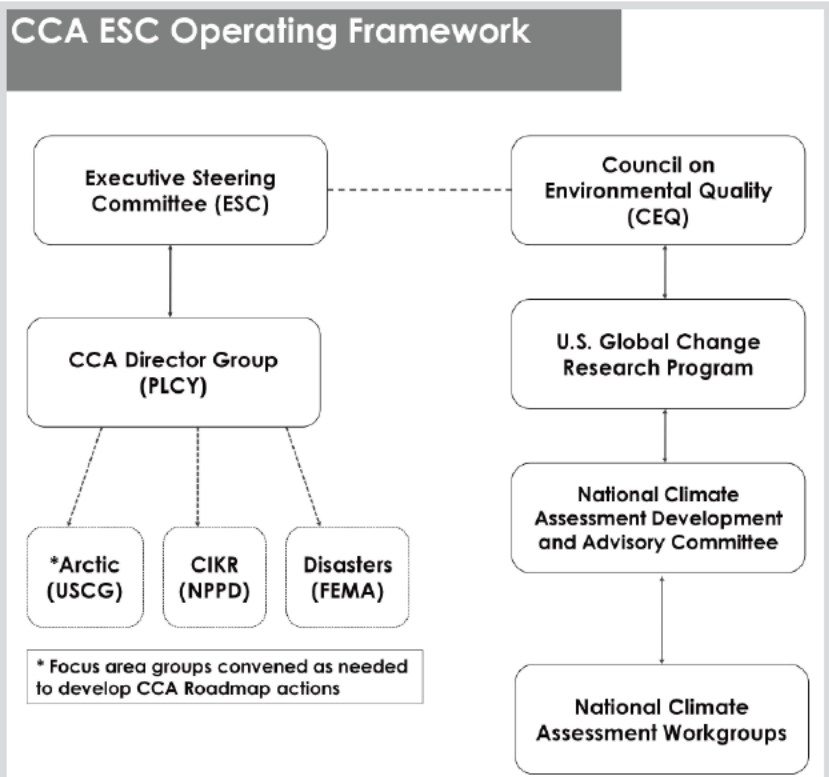
Figure 1: Climate Change Adaptation Executive Steering Committee Operating Framework



**DHS Climate Adaptation Process**

**Benchmarked from best practices**

**Nine Consistent Process Elements**

1. Evaluate existing DHS adaptation responses
2. Define desired end-state and other framing guidance
3. Identify potential DHS mission risks from climate change
4. Assess and analyze climate risk
5. Identify requirements and capability gaps
6. Develop and prioritize adaptation actions
7. Inform senior leadership decisions (enable strategic choice)
8. Implement actions
9. Evaluate and monitor progress

Figure 2: DHS Climate Adaptation Process

## Establishing a Base Case

As a fundamental element in executing step 1 of the adaptation process, the Director Group conducted a strategic inventory of existing or planned activities related to climate change adaptation. This produced a list of initiatives already in place across the Department that, directly or indirectly, support climate change adaptation. The strategic inventory informed the "Base Case," which revealed that certain Components had already identified climate change as a potential risk and begun planning efforts (e.g., FEMA and USCG).

## Key Definitions

The CCA ESC approved the following key definitions in order to synchronize the Department's sustainability (which includes climate change mitigation) and climate change adaptation activities. Note that the definition of sustainability is drawn directly from the DHS SSPP, while the definitions of mitigation and adaptation are drawn directly from the CEQ.

- **Adaptation:** Adjustment in natural or human systems to a new or changing environment that exploits beneficial opportunities or moderates negative effects.

- **Mitigation:** An intervention to reduce the causes of changes in climate, such as through reducing emissions of green house gases to the atmosphere.

- **Sustainability:** To create and maintain conditions under which humans and nature can exist in productive harmony that permit fulfilling the social, economic, and other requirements of present and future generations. At DHS, the sustainable approach balances cost, schedule, operations, maintenance, safety, and employee morale while creating and maintaining conditions that fulfill the economic, environmental, and security needs of the American people.

Courtesy of NOAA/OAR/OER

# 2. CCA Framing Guidance

Early in the planning process, the CCA ESC defined and approved critical elements of framing guidance to scope and shape the Department's efforts. The CCA end-state articulates the aspirational posture for the Department, realized as a result of successful implementation of long-range planning activities, which defines and describes the desired future state of the organization and associated attributes. Other key elements of framing guidance include determination of fundamental strategic guidance, including senior leadership intent or vision, statute, authorities, and directives; development of necessary strategic assumptions and objectives or lines of effort to guide execution; and definition of the strategic framework (i.e., parameters of the issue, including premise, scope, approach, time, space, and stakeholders).



**DHS CCA Strategic Guidance**

**National**

**2010 National Security Strategy and Executive Order 13514**

"Climate Change is a Key Global Challenge: the danger from climate change is real, urgent, and severe." **(NSS, 2010)**

Sec. 16. Agency Roles in Support of Federal Adaptation Strategy: "...the agencies shall participate actively in the interagency Climate Change Adaptation Task Force, which is already engaged in developing the domestic and international dimensions of a U.S. strategy for adaptation to climate change." **(EO 13514)**

**Homeland Security**

**2009 Quadrennial Homeland Security Review**

"Climate Change is expected to increase the severity and frequency of weather-related hazards, which could, in turn, result in social and political destabilization, international conflict, or mass migrations." (QHSR, 2009)

**DHS Pilot**

**2010 DHS Climate Change Adaptation Report**

"The projected impacts of climate change pose both direct and indirect security and resiliency risks to the Nation, core homeland security missions, and DHS infrastructure operations." (CCATF Report, 2010)

**EO 13514**
**Implementing Instructions**

**Secretary's Guidance**

DEPARTMENT OF HOMELAND SECURITY
CLIMATE CHANGE
ADAPTATION
ROADMAP
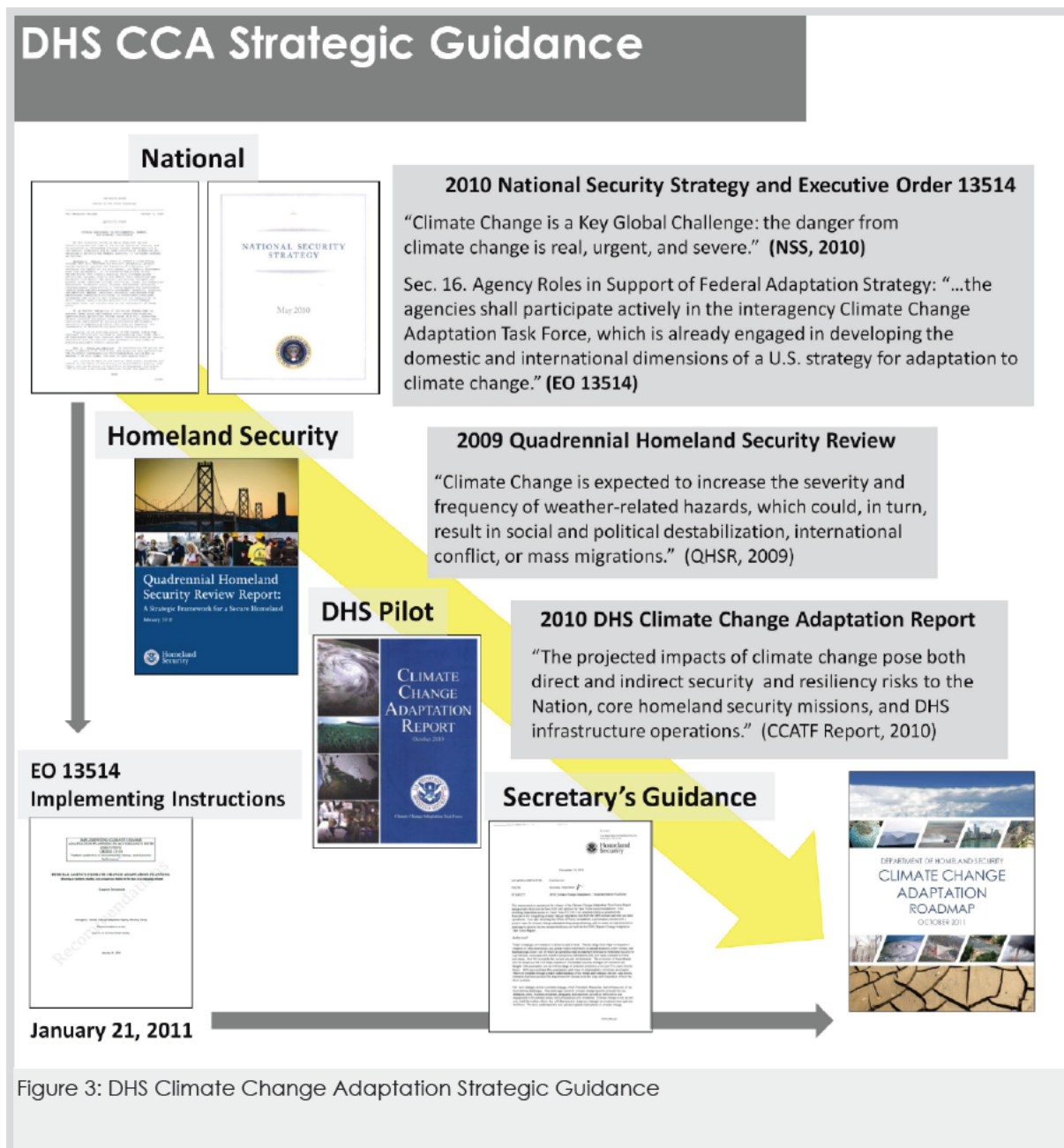OCTOBER 2011

**January 21, 2011**

Figure 3: DHS Climate Change Adaptation Strategic Guidance

## A. Strategic Guidance

In response to EO 13514, the DHS Climate Change Adaptation Task Force was established in January 2010 as a pilot effort to assess how climate change could affect DHS missions, policies, and programs. Through expert research and mission-specific analyses, the DHS Task Force's report concluded that risks of climate change are significant and have real implications for homeland security, and that DHS must begin now to plan, prepare for, and adapt to current and future changes in a way that will allow the Department to fulfill its missions.

Following this report, Secretary Napolitano issued the DHS Implementation Guidance for Climate Change Adaptation on December 10, 2010, directing the Department to establish the foundation for integrating climate change adaptation into DHS strategy, business processes, and operations. The CCA Executive Steering Committee was chartered in January 2011 to provide senior leadership, guidance, and oversight to the climate change adaptation effort.

With the Secretary's guidance, the CCA Executive Steering Committee also developed the DHS Policy on Climate Change Adaptation, fulfilling a requirement of EO 13514. This policy, signed by the Deputy Secretary on August 30, 2011, directs DHS to focus its initial climate change adaptation efforts on ensuring that climate change impacts are considered in Departmental planning to protect and ensure the resilience of critical infrastructure and key resources, ensure resilience to disasters, and contribute to safety, stability, security and environmental protection in the Arctic. Over time, the Department will expand its planning to include potential climate change implications to securing and managing our borders, enforcing and administering our immigration laws, and other homeland security missions.

Together, these documents comprise the strategic guidance for the Department's climate change adaptation activities. Figure 3 depicts the strategic guidance informing the DHS CCA long-range planning effort.

## Desired End-State

*DHS and its partners across the homeland security enterprise are postured to manage climate risks and will adapt to the impacts of climate change to ensure security, resilience, and customs and exchange for the Nation.*

## B. Strategic Assumptions

Strategic assumptions document critical uncertainties, important enduring trends that will influence strategy, and expectations about the direction of key policy issues over the timeframe of the planning effort. The ESC-approved Strategic Assumptions for the DHS CCA effort are:

1. U.S. Government policy recognizes the global climate is changing; the DHS posture regarding climate change and adaptation activities nests in established U.S. Government policy.

2. The existing body of government and academic peer-reviewed scientific research serves as the foundation for DHS adaptation activities (DHS will not engage in research on the causes of climate change).

3. DHS's primary responsibility is to focus on the Department's own adaptation activities; however, the scope of some activities may need to consider an enterprise-wide approach.

## C. Strategic Objectives

As derived from Secretarial guidance for FY 2011, the Department's climate change adaptation efforts are focused on four strategic objectives:

1. **Cross-cutting Issues** – Manage climate risks for cross-cutting or other key homeland security issues.

2. **CIKR** – Protect and ensure the resilience of our critical infrastructure and key resources to potential impacts of climate change.

3. **Disasters** – Ensure the Nation's resilience to more frequent or extreme natural disasters as the climate changes.

4. **Arctic** – Contribute to safety, stability, security, and environmental protection in the Arctic in the face of a changing climate.

# D. Climate Change Adaptation Framework

## Strategic Premise: Climate Change as a Strategic Driver

The Department's strategy methodology examines both current and future security environments to understand and reduce uncertainty associated with key trends and strategic drivers. These trends and drivers are enduring social, technological, economic, environmental, and political forces that can cause significant change in domains relevant to DHS and the Homeland Security Enterprise. Climate change is one such strategic driver. Not an end unto itself, but rather a force that is likely to shape the strategic environment. It should be infused into our strategies, plans, business processes, programs, practices, and operations in order to best position the Department for success over the long term, regardless of how the future unfolds.

## Scope: DHS-centric; Homeland Security Enterprise Informed

The scope of the Department's climate change adaptation framework is DHS-centric, but also informed by the Homeland Security Enterprise as necessary, including consideration of the equities of Federal and State, Local, Tribal and Territorial (SLTT) partners, and the private sector.

## Approach: Risk-Informed

Aligned with EO 13514, DHS uses a risk-informed approach to examine the threats, vulnerabilities, and potential consequences of climate change to the DHS mission space.
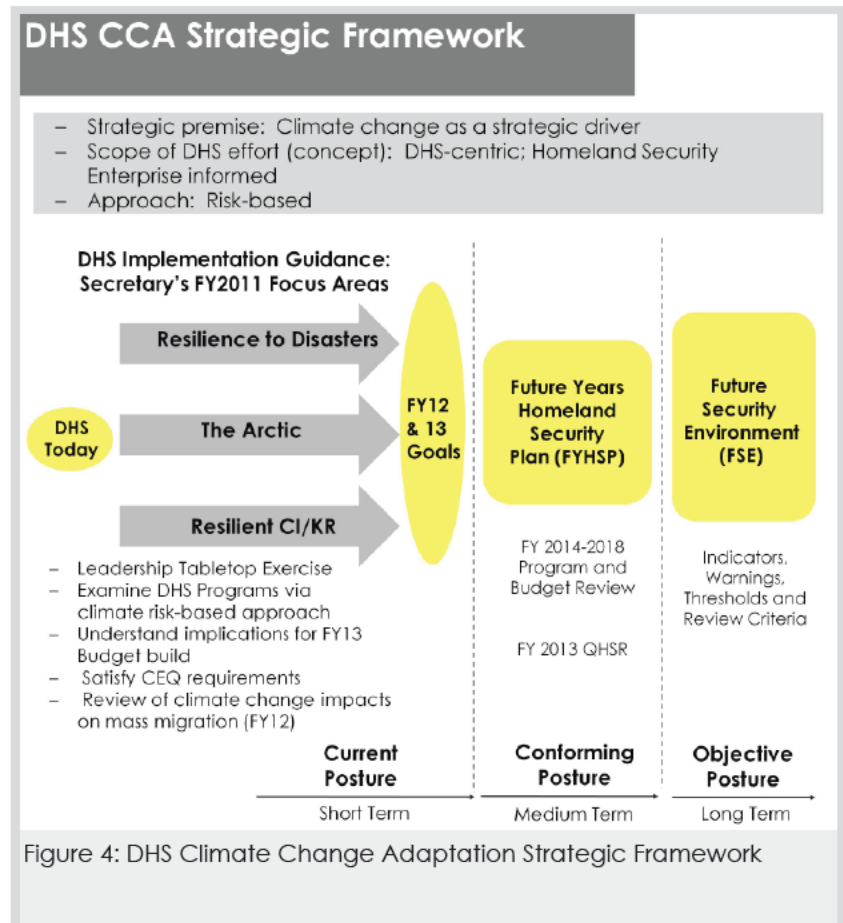
## Timeframe: Near, Medium, and Long Term

Based on the Secretary's Implementation Guidance, DHS considers climate change in the near, medium, and long term.

- **The Current Posture (near term)** is captured within the current budget execution year and in the President's Budget Submission year (in this case, FY 2012 and FY 2013, respectively). As depicted in Figure 4, DHS is currently concentrating its efforts on the Secretary's three focus areas, as well as other related tasks from the 2010 Implementation Guidance.

- **The Conforming Posture (medium term)** is the five-year window from FY 2014- FY 2018. It is the timeframe on the horizon where DHS can shape adaptation activities in its Future Years Homeland Security Plan (FYHSP). In this manner, in each budget cycle, DHS will have the opportunity to allow climate change adaptation activities to compete for resources in the budget formulation process.

- **The Objective Posture (long term)** is the timeframe outside the FYHSP beginning in FY 2019, and is what DHS defines as the Future Security Environment. In this area, DHS is concerned with understanding the indicators, warnings, and thresholds that could trigger reviews (e.g., reviews of planning assumptions) based on changes in the strategic environment. This is especially relevant to investments in real property (purchases, long-term leases, and construction) that might be vulnerable to the impacts of climate change.

Climate change adaptation is not envisioned as a discrete program for the Department, but rather a portfolio that is integrated into multiple, established Departmental programs. Near-term actions in FY 2012 are intended to serve as the catalyst to introduce adaptation recommendations into the budget process in the medium term. Initial recommendations from the Roadmap will be submitted in time to inform the development of the DHS FY 2014 Integrated

Planning Guidance, and these considerations will be briefed to the Program Review Board as part of the FY 2014 program review. In the long term, the Department aims to integrate climate change into DHS's operational and long-range planning efforts through strategy development, resource allocation and major acquisition oversight, and operational planning processes.

Figure 4 depicts this framework.



**DHS CCA Strategic Framework**

- Strategic premise: Climate change as a strategic driver
- Scope of DHS effort (concept): DHS-centric; Homeland Security Enterprise informed
- Approach: Risk-based

Figure 4: DHS Climate Change Adaptation Strategic Framework

# 3. Climate Change Risks

*"The scarcity of and potential competition for resources like water, food and space, compounded by an influx of refugees if coastal lands are lost, does not only create a humanitarian crisis but creates conditions of hopelessness that could lead to failed states and make populations vulnerable to radicalization. These challenges highlight the systemic implications and multiple-order effects inherent in energy security and climate change."*

- Admiral Mike Mullen, Chairman of the Joint Chiefs of Staff, October 2010

## A. DHS Missions and Potential Impacts of Climate Change

The vision of homeland security, as outlined in the QHSR, is to ensure a homeland that is safe, secure, and resilient against terrorism and other hazards where American interests, aspirations, and way of life can thrive. Over the coming decades, the projected impacts of climate change pose both direct and indirect risks to U.S. security and resilience, across all DHS missions and activities.

Figure 5 provides a summary of how DHS seeks to manage risks to homeland security with respect to climate change. This "lens" on climate change describes how the Department views climate change as a strategic driver, as well as other key tenets of its risk management approach.

The following narratives provide a high-level analysis of the potential impacts of climate change across the QHSR missions and activity areas of the Department. Further, the associated high-level vulnerability assessment section fulfills a requirement of EO 13514.

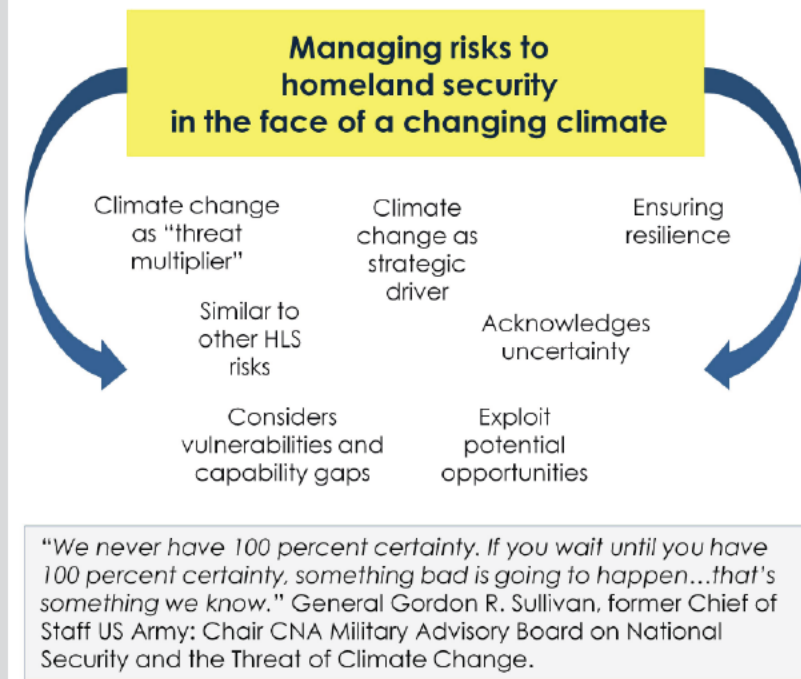## Framing Guidance: Homeland Security Lens on Climate Change

**Managing risks to homeland security in the face of a changing climate**

Climate change as "threat multiplier"

Climate change as strategic driver

Ensuring resilience

Similar to other HLS risks

Acknowledges uncertainty

Considers vulnerabilities and capability gaps

Exploit potential opportunities

"We never have 100 percent certainty. If you wait until you have 100 percent certainty, something bad is going to happen...that's something we know." General Gordon R. Sullivan, former Chief of Staff US Army: Chair CNA Military Advisory Board on National Security and the Threat of Climate Change.

Figure 5: Framing Guidance: Homeland Security Lens on Climate Change

## Mission 1: Preventing Terrorism and Enhancing Security

The impacts of climate change could directly affect the Nation's critical infrastructure. In U.S. coastal regions, rising sea levels, higher storm surge, and increased erosion could damage or destroy critical infrastructure. In Western States, higher temperatures and more frequent or severe heat waves could buckle railways, damage roads, and strain power systems. Indirectly, climate change acts as a "threat multiplier," aggravating stressors abroad such as poverty, environmental degradation, and social tensions, resulting in conditions that could enable terrorist activity, violence, and mass migration.

## Mission 2: Securing and Managing our Borders

More severe droughts and tropical storms, especially in Mexico, Central America, and the Caribbean, could increase population move-ments (both legal and illegal) across the U.S. border, leading to potential increases in drug trafficking, human smuggling, and transnational criminal organization activity. Melting sea ice in the Arctic may lead to new opportunities for shipping, tourism, and resource exploration, but the increase in human activity may require a significant increase in operational capabilities in the region in order to safeguard lawful trade and travel and to prevent exploitation of new routes for smuggling and trafficking. In addition, higher temperatures may change patterns of human, animal, and plant diseases, putting the DHS workforce at points of entry under increased strain and at higher risk of illness.

## Mission 3: Enforcing and Administering our Immigration Laws

The U.S. may need to prepare for more frequent, short-term, disaster-driven migration, such as mass migrations. DHS may also face pressure to formally recognize "environmentally-induced migrants," which could pose legal and ethical issues for the U.S. and the Department, and could result in changes to DHS legal authorities, policies, procedures, and operations.

## Mission 4: Safeguarding and Securing Cyberspace

As cyber and communications networks become an increasingly integral part of government, business, and private life, system vulnerabilities may create new opportunities for attack or disruption. Higher temperatures and more intense storms may cause damage or disruptions to telecommunications and power systems, creating challenges for telecommunications infrastructure, emergency communications, and cybersecurity. Strains to DHS facilities, national power systems, and telecommunications networks could impact the ability of the Department to carry out each

Courtesy of NOAA

of its missions.

## Mission 5: Ensuring Resilience to Disasters

More intense storms, frequent heavy precipitation, heat waves, drought, extreme flooding, and higher sea levels could significantly change the types and magnitudes of hazards impacting communities and the emergency management professionals serving them at both Federal and SLTT levels. As coastal regions become increasingly populated and developed, more frequent or severe storms will increase the requirements for emergency services and response and recovery capacity. Continuity of operations, delivery of services, and emergency response might be challenged and made increasingly complex by damages or disruptions to the interconnected energy and infrastructure networks. In addition, the reliance of mitigation programs and standards across the Department on data from historical records may not accurately project future risks as the climate changes, which may lead to inadequate preparedness for future disasters.

## Providing Essential Support to National and Economic Security

DHS leads and supports a number of activities that provide essential support to national and economic security, including: providing trained and ready forces to work with interagency partners for U.S. international security and assistance missions, conducting and supporting other law enforcement activities,

and maintaining the safety and security of the marine transportation system. If there are more severe or frequent natural disasters abroad or the indirect results of climate change fuel international conflicts, DHS could be called on to provide support to national defense or reconstruction/stabilization missions at increased rates. Increased population movements due to climate change could lead to potential increases in human smuggling, placing greater strain on DHS to prevent the exploitation of persons. In addition, a changing environment in the Arctic will challenge DHS's ability to ensure the safe operation and resilience of the marine transportation system, protect and preserve living marine resources, and safeguard the marine environment.

## Maturing and Strengthening DHS

Maturing and strengthening the Homeland Security Enterprise includes strengthening DHS's workforce, enhancing shared awareness of risks and threats, and fostering unity of effort. Changing patterns of human, animal, and plant diseases due to climate change, however, could put DHS's workforce at points of entry under increased strain and at higher risk of illness. Rising temperatures could impact information technology and telecommunications infrastructure, challenging DHS's ability to conduct information sharing as well as analyze and disseminate timely intelligence information. In addition, severe weather events, mass migration issues, pandemics, and degraded CIKR could stretch Federal resources, placing a greater burden on SLTT and private sector partners.

## B. High-Level Risk Assessment: Climate Change Impacts, Potential DHS Vulnerabilities and Consequences

| Potential Climate Change Impact | Potential DHS Vulnerabilities | Potential DHS Consequences |
|---|---|---|
| • Changes in the types, frequency, and intensity of hazards. | • Affects degree of preparedness for emergency management professionals and communities.<br><br>• Threatens resiliency, integrity, and operation of infrastructure across all 18 CIKR sectors.<br><br>• Exacerbates border control issues.<br><br>• Creates conditions for easier transmission of diseases, heightening the risk of pandemic.<br><br>• Changes patterns of human, animal, and plant diseases. | • Affects the allocation and distribution of resources and facilities.<br><br>• Makes existing flood plain management and construction standards inadequate.<br><br>• Strains Federal Disaster Relief Funding (DRF).<br><br>• Causes strains to disaster recovery operations due to inadequate supplies, facilities, and assets.<br><br>• Increases potential need for DHS to support management and care of displaced populations in disaster-response situations.<br><br>• Strains DHS's capacity to support survivors' immediate and long-term needs.<br><br>• Increases costs of National Flood Insurance Program and higher premiums increase financial tolls on businesses and homeowners.<br><br>• Contributes to potential mass migration.<br><br>• Increases pressure from the international community to formally recognize "environmentally-induced migrants."<br><br>• Increases demand for disaster-relief efforts abroad.<br><br>• Challenges enforcement, processing, and response capacities with respect to mass migration. |

| Potential Climate Change Impact | Potential DHS Vulnerabilities | Potential DHS Consequences |
|---|---|---|
| • Increased catastrophic storms.<br>• Increased flooding.<br>• Expanding riverine floodplains.<br>• Rising sea levels and storm surges. | • Affects DHS's ability to orchestrate and conduct emergency response and maritime operations.<br>• Stresses vital infrastructure such as energy and water systems.<br>• Disrupts transit and compromises the structural integrity of lines of surface transportation (e.g., highways, roads and bridges).<br>• Affects waterway and port channel depths.<br>• Affects the accuracy of mapping information used by emergency responders and decision-makers for planning, response, and resource allocation.<br>• Affects the operational availability of Coast Guard units and installations.<br>• Creates frequent public service disruptions. (i.e., access to fossil fuels, water, and electricity).<br>• Impacts structural integrity of infrastructure, increasing vulnerability to terrorist attacks.<br>• Increases vulnerability of coastal infrastructure (especially port facilities, transportation hubs, and energy production) and delivery systems. | • Affects the allocation and distribution of USCG resources and facilities.<br>• Increases dredging costs.<br>• Makes current risk data out-of-date and/or obsolete.<br>• Requires upgrades or movement of USCG facilities.<br>• Contributes to mass migrations. |

| Potential Climate Change Impact | Potential DHS Vulnerabilities | Potential DHS Consequences |
|---|---|---|
| • Droughts/loss of arable land.<br>• Rising temperatures and heat waves. | • Fluctuations in agricultural production may disrupt food supplies.<br>• Increase susceptibility to wildfires and to mudslides in areas deforested by wildfires.<br>• Threatens transportation operations, damages roads/rails, impacts aircraft performance and runway length, and increases use of energy. | • Exacerbates social instability and regional crises.<br>• Increases domestic instability abroad, resulting in potential conditions for terrorist activity or state-to-state violence, and mass sea migration.<br>• Creates conditions for intra-state migration.<br>• Closes or exacerbates delays at airports due to decreased visibility from wildfires.<br>• Creates loss in agricultural base and subsequent economic loss.<br>• Affects emergency response capabilities and DHS planning, budgeting, and operational dynamics.<br>• Increases cases of heat stress and cardiovascular failure.<br>• Affects ability to cool power plants.<br>• Challenges crop and livestock production, exacerbating U.S. economic and financial instability.<br>• Changes in the size and location of global fish stocks may produce major changes in the amount and location of USCG regulatory and law enforcement activity, or create conflicts over fishing grounds and violations of state and international agreements. |
| • Melted Arctic sea ice. | • Increases accessibility and human activity in Arctic waters.<br>• Opens up new shipping routes in the Arctic. | • Changes to the global transportation system.<br>• Coastlines retreat due to erosion, resulting in higher maintenance costs for ports.<br>• Increases potential for environmental disaster. |

| Potential Climate Change Impact | Potential DHS Vulnerabilities | Potential DHS Consequences |
|---|---|---|
| • Melted Arctic sea ice. | | • Increases potential need for safety and security responses.<br>• Increases risk of loss of life at sea due to increased maritime activity. |
| • Changing patterns of human, animal, and plant diseases.<br>• Spread of infectious diseases. | • Threatens U.S. health security.<br>• Increases vulnerability of DHS personnel at points of entry, who might be exposed to disease transmission.<br>• Affects the prevalence and virulence of diseases sensitive to temperature and rainfall like cholera, diarrheal diseases, malaria, and dengue fever.<br>• Affects the potential incidence, seasonal transmission, and geographic range of various infectious diseases.<br>• Spreads diseases to U.S. regions previously unexposed and where the population has low immunity. | • Strains or overwhelms prevention, response, and recovery operations.<br>• Increases workforce illnesses, which could degrade operational capabilities.<br>• Causes mental health care concerns, both from interrupted care, geographic displacement, and economic disruption.<br>• Overburdens SLTT governments, which may require greater Federal involvement and funding.<br>• Increases incidence of disaster-related deaths due to diarrhea, malnutrition, and urban air pollution.<br>• Contributes to mass migrations.<br>• Threatens community resilience. |
| • Infrastructure damage and collapse. | • Makes delivery of DHS services and emergency response capabilities increasingly unreliable.<br>• Makes DHS infrastructure inoperable for prolonged periods. | • Increases risks to DHS missions and operations.<br>• Causes interruptions in health care service.<br>• Causes DHS operational assets/facilities to reach saturation points more quickly or frequently due to greater "wear and tear."<br>• Causes a ripple effect across multiple sectors and may stress DHS's ability to execute multiple missions. |

# PART II:
# CCA Roadmap Actions

*The purpose of Part II of the CCA Roadmap is to present an executive-level summary of the 42 actions that will guide the Department's adaptation effort through the near, medium, and long term.*

The 42 actions contained in the CCA Roadmap are not requirements for implementation; rather, they are analytically informed policy, planning, and decision support activities the Department should consider and execute as resources allow. The Roadmap provides validation for these CCA activities, allowing them to compete for attention, prioritization, and resourcing within the Department's established business processes. Where appropriate, they are intended to integrate within existing programs, assesments, performance metrics, and other business functions.

# Overview of CCA Roadmap Actions

*"The challenges posed by climate change must be infused into our strategies, plans, business processes, programs, and practices, as well as reflected in our engagement with partners across the Homeland Security Enterprise. Climate change is not an end unto itself, but rather a force that will dramatically shape our strategic environment now and into the future."*

- DHS Secretary's Implementation Guidance for Climate Change Adaptation, 2010

## Organization of Climate Change Adaptation Actions

CCA Roadmap actions are summarized in sections 1 through 4 of Part II. The actions are organized under the four CCA strategic objectives. Within each of the four strategic objectives, the actions are further divided into three functional categories:

- **Governance, Strategy, and Planning –** Actions that establish institutional governance processes for climate change adaptation or enhance strategic guidance and planning efforts.

- **Analysis and Decision Support –** Actions that provide the knowledge and tools to make informed policy, prioritization, and investment decisions.

- **Operations –** Actions that incorporate climate change adaptation into DHS's operations, operational structures/posture and functions, workforce, and activities with implications for stakeholders to ensure the Department operates successfully.

## 1. Cross-Cutting Departmental Activities

**These actions aim to manage risks associated with climate change for cross-cutting issues that affect multiple Components or require intra-Departmental coordination.**

*"Climate change is a complex, interdisciplinary issue with the potential to affect every sector and level of government operations."*

- GAO, "Climate Change Adaptation: Strategic Federal Planning Could Help Government Officials Make More Informed Decisions," 2009

These 17 actions aim to address risks associated with climate change for cross-cutting, Department-wide issues or issues that require intra-Departmental coordination. These actions enhance climate change adaptation communication with stakeholders, identify key gaps requiring further analysis and decision support, integrate climate change adaptation into long-range planning efforts across the Department, and enhance internal Departmental maturing and strengthening activities, as identified in the QHSR and 2010 Bottom-Up Review.

## Governance, Strategy, and Planning

**Action 1.01: Implement a Department-wide climate change adaptation education and communication plan.** As established in EO 13514, climate change adaptation and sustainability practices are inherently linked as a joint set of activities that together help diminish the rate or severity of climate change and manage the impacts. The Management Directorate will implement a climate change adaptation education plan that will increase awareness among DHS employees about climate change issues, establish climate change adaptation as a portfolio within the Department, and link the Department's adaptation initiative to its broader sustainability efforts.

**Action 1.02: Establish the Department's strategic communications plan for its work on climate change adaptation for FY 2012-2013.** Implementing the CCA Roadmap actions and effectively pursuing climate change adaptation planning will require engagement with stakeholders and a forward-leaning posture to shape public communication. The Office of Public Affairs (OPA) will create a climate change adaptation strategic communications plan that will provide a framework for how the Department discusses its adaptation efforts in the public and media, and will enable consistent communication on DHS's climate change adaptation efforts.

**Action 1.03: Integrate Climate Change Adaptation into the Department's engagement agenda with SLTT partners.** As the Department's lead agent for engagement with SLTT partners, the Office of Intergovernmental Affairs will provide updates on climate change adaptation and the Department's efforts as an agenda item for discussion in FY 2012 with the Homeland Security Advisors (HSAs). This will enable collaboration between FEMA, NPPD, USCG and other key DHS Components, and SLTT partners on adaptation issues of mutual concern.

**Action 1.04: Coordinate a Departmental review of the effects of climate change on mass migration.** Changes in the climate are already causing migration and displacement throughout the world—and could lead to mass migration to the United States, as impacts of climate change become more severe. This has potential implications for customs enforcement and border protection, as well as immigration services and humanitarian protection. To better anticipate these issues, a working group will be established by USCIS—in coordination with the Department of State—to consider the possible effects of climate change on mass migration and review the adequacy of current migration related authorities and operations.

**Action 1.05: Integrate climate change adaptation considerations into international agreements (particularly for Canada, Mexico, Central America, and the Caribbean).** Similar to many other risks, the impacts of climate change do not adhere to international boundaries. PLCY/ Office of International Affairs will integrate climate change adaptation considerations into its approach in crafting international agreements and protocols, particularly for the border nations where direct and indirect consequences from climate change could affect the United States.



Courtesy of NOAA

Courtesy of USGCRP

ability to adapt to potential climate change impacts should be identified and measured by operational action owners. This will ensure that as DHS matures in the area of CCA the staff responsible for implementation will monitor performance.

## Analysis and Decision Support

**Action 1.06: Integrate climate change actions from the CCA Roadmap into the DHS FY 2014 Integrated Planning Guidance (IPG), and include climate change actions in the FY 2014 program review process.** The DHS CCA Roadmap is intended to serve as the catalyst to introduce climate change adaptation recommendations into the budget process. Initial recommendations from the CCA Roadmap will be submitted in time to inform the development of the DHS FY 2014 IPG, and these considerations will be briefed to the Program Review Board as part of the FY 2014 program review.

**Action 1.07: Review the actions in the DHS CCA Roadmap and assess what existing programs the actions should be aligned with.** Without aligning the CCA actions to existing programs, DHS will not be able to efficiently or effectively determine the lead agency/program for each action, causing potential delays or redundancies in initiating actions. MGMT will review the actions in the DHS CCA Roadmap and assess what existing programs the actions should be aligned with. MGMT and PLCY will collectively determine alternatives for the CCA Roadmap actions not aligned to an existing DHS program.

**Action 1.08: Provide high-level guidance and connect CCA Roadmap action owners to DHS Performance Community Points of Contact so action owners can develop operational performance measures to track their progress.** DHS's

**Action 1.09: Integrate climate change adaptation into complex event modeling by collaborating with regional and SLTT climate research groups for data to support more accurate forecasts of hazards affected by climate change.** Climate change may create risks that are more regional in nature and require resources from a larger community of partners, demanding joint approaches for managing them. The Science and Technology Directorate (S&T) will coordinate with NPPD, the National Oceanic and Atmospheric Administration (NOAA), and stakeholder organizations to help refine the input data used to support complex event modeling, hazard identification, and risk assessment processes to improve analytical results.

**Action 1.10: Work with interagency partners to manage collection requirements and to stay abreast of collection systems' capabilities to support Departmental intelligence and analysis efforts.** I&A will work with interagency partners to identify gaps associated with threat streams related to climate change, ensure that requirements are adequate and up-to-date, and stay abreast of potential impacts of climate change on collection systems on which we rely.

**Action 1.11: Participate in intelligence community analytic forums and conduct analysis on threat streams that may be impacted by climate change.** To date, the intelligence community has identified health security and illicit travel and migration as the intelligence analysis fields that relate most directly to climate change. I&A will work with appropriate intelligence community bodies and in conjunction with the DHS Intelligence Enterprise to analyze these and other threat streams that may relate to climate change.

**Action 1.12: Promote improved employee health and mission effectiveness through the identification and implementation of protective practices and facilitation of a multi-year**

**strategic implementation plan for employee resiliency programs.** Changes in the geographic distribution of events and disease may alter the hazards for operational personnel. OHA will develop enhanced early detection and warning systems and focus DHSTogether programs on incentives for increased participation and policy changes in support of workforce well-being.

**Action 1.13: Proactively evaluate SLTT climate change medical first responder disaster preparedness activities and ensure DHS has the capacity to provide Federal aid without compromising the Department's mission.** When SLTT partners' capacities to respond to disasters are outstripped by the magnitude or consequences of disasters, DHS and other Federal Agencies are called on to augment their resources. OHA's Medical First Responder Coordination Branch will facilitate the integration of climate change related hazards into SLTT emergency medical services disaster preparedness activities. However, understanding that catastrophic incidents will occur, and that a "new normal" of climate and weather extremes may emerge, OHA will also work with the Operational Components' medical staff to support the policies, training, and requirements they will have.

**Action 1.14: Incorporate relevant information on climate change into biosurveillance analyses and coordinate dissemination of this information to a broader Federal audience to improve**



Courtesy of USGCRP

**situational awareness.** Monitoring how climate change impacts may exacerbate conditions that influence or contribute to bio-threats is an important part of the Department's biosurveillance activities. OHA's National Biosurveillance Integration Center will seek to improve situational awareness of climate change impacts and data that affect biosurveillance activities by coordinating with key interagency partners.

**Action 1.15: Incorporate climate change adaptation into current resilience programs.** By ensuring private sector partners are prepared for the impacts of climate change and disasters, the Department can reduce the demand for DHS assistance following disasters and ensure more rapid recovery. FEMA, S&T, NPPD, the PLCY/Private Sector Office (PSO), and PLCY/Office of Resilience Policy will incorporate climate change adaptation into programs already in development, particularly the Voluntary Private Sector Preparedness Accreditation and Certification (PS-Prep) and Resilience Star.

**Action 1.16: Actively engage the private sector regarding climate change adaptation planning.** The responsibility for homeland security is shared among a wide range of partners, especially key private sector partners. PLCY/PSO will engage the Homeland Security Enterprise's private sector stakeholders in the implementation of the DHS CCA Roadmap by infusing adaptation planning into existing private sector engagement mechanisms such as the Private Sector Resources Catalog.

**Action 1.17: Formally analyze the potential evolution of homeland security strategic drivers and associated trends, including climate change, beyond the five-year budget cycle by examining the future strategic environment.** In order to avoid a reactive posture to climate change impacts, DHS must look beyond the budget horizon to examine potential changes in the strategic environment and how they may create opportunities and challenges to homeland security activities and relevant strategic priorities. In FY 2013, PLCY/Office of Strategy, Planning, Analysis, and Risk (SPAR) will produce a written report, the Future Strategic Environment, which analyzes and bounds uncertainty across all homeland security strategic drivers, including climate change. This action will examine a range of plausible futures to provide tangible insights that inform decision-making at all levels of DHS.

## 2. Resilient Critical Infrastructure and Key Resources

**These actions aim to protect and ensure the resilience of our critical infrastructure and key resources to potential impacts of climate change.**

*"Understanding how climate change may change our strategic landscape is at the heart of effectively managing risks to the Nation's security. The DHS Climate Change Adaptation Task Force notes that the projected impacts of climate change pose direct and indirect security and resiliency risks to core homeland security missions and DHS infrastructure and operations."*

- DHS Policy for Climate Change Adaptation, 2011

Protection of CIKR is essential to our Nation's prosperity, safety, and security. Climate change has the potential to impact all 18 critical infrastructure sectors identified in Homeland Security Presidential Directive 7 and associated guidance. Key potential impacts include the deterioration or failure of coastal infrastructure in the face of rising sea levels and storm surge, strains on power systems from increased population and energy use for cooling, possible dislocation of food production, and scarcity of water.

The 2010 QHSR describes the Department's responsibilities for managing risks to critical infrastructure. To achieve these goals, DHS must work closely with the private sector, which owns and operates the majority of the Nation's CIKR, as well as SLTT governments, which control much of the remaining CIKR. These owners are responsible for planning and investing in enhancement, mitigation, relocation, or replacement of infrastructure. As a result, the Department's role in protecting and ensuring the resilience of CIKR is focused on coordination and collaboration with external stakeholders.

While the risks may seem distant, the lifecycle of infrastructure spans many decades, with service lives that may extend beyond 100 years. Therefore, much of the infrastructure that will be in service 30, 50, even 100 years from now is conceived, planned, designed, and constructed today, as illustrated in Figure 6.
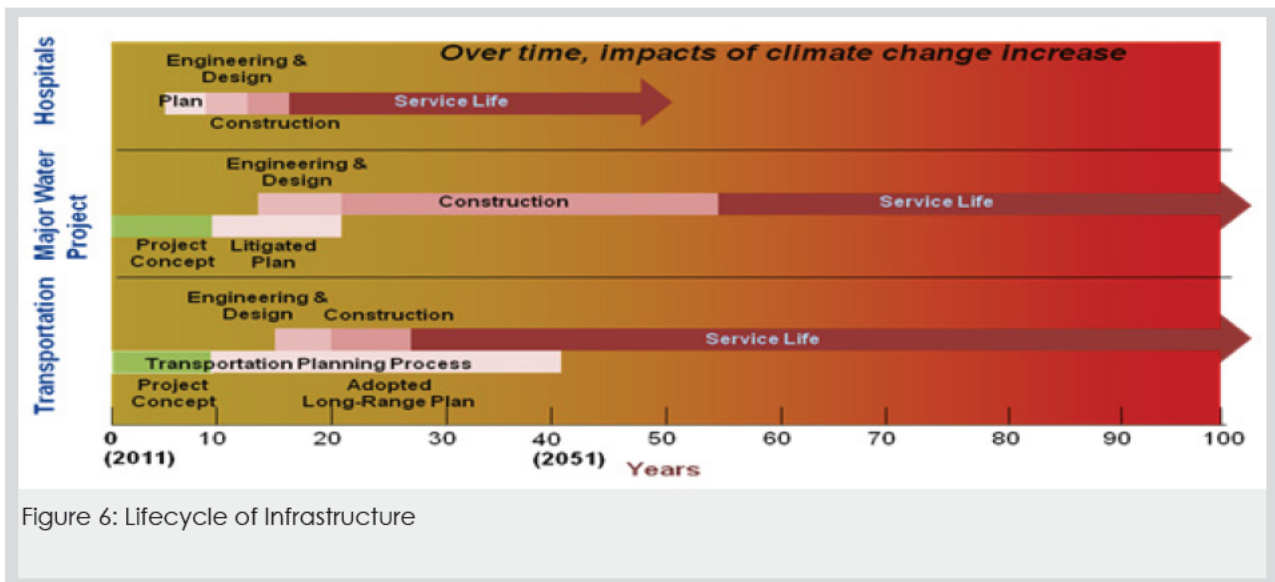


Figure 6: Lifecycle of Infrastructure

To address these concerns, the CCA Executive Steering Committee directed NPPD to establish a CIKR working group to develop actions to enhance the resilience of critical infrastructure. Given the complexity and diversity across the 18 CIKR sectors, the CIKR working group focused its analysis on how climate change could affect five key, "life-sustaining" CIKR sectors: energy, transportation, water, food, and telecommunications. The CIKR working group's high-level analysis identified several climate change implications that could impact core CIKR programs, capabilities, and operations for the Department and private sector owners. These implications are summarized below:

- **Altering the supply chain –** Whether as a result of increased competition for scarce resources or changes in transit routes, the global supply chain is expected to change as a result of climate change. Shifts in the supply chain could impact all CIKR sectors and the availability of supplies, food, people, water, and power.

- **Power availability –** The electric grid is an essential element of modern society. Climate change is expected to diminish or degrade overall service availability and capacity, with brown-outs becoming more likely as severe weather and extreme temperatures exacerbate demand pressures.

- **"Hubs of vulnerability" –** The confluence of key strategic drivers, such as urbanization, demographic shifts, and economic growth can exacerbate risks posed by climate change. This may create "hubs of vulnerability" across many CIKR sectors that may be unable to cope with power load balancing, agriculture supply disruptions, pestilence, disease, or deadlier disasters.

- **Long-term planning –** Government and businesses make various planning assumptions about the physical environment when making key resource, personnel, and investment decisions. As impacts of climate change increase over time, relying on historical data or risk analysis may not adequately account for the increased risk.

To meet its critical infrastructure protection mission, DHS must partner with CIKR owners and operators to determine the climate change risks and identify potential adaptation measures. The National Infrastructure Protection Plan (NIPP) partnership framework provides an existing vehicle for integrating climate change adaptation activities into the resilience and reporting activities already taking place. The actions in this section, aligned with NPPD's mission space, describe five key partnering activities that the Department can take to begin to address climate change risk management for critical infrastructure. These efforts will promote earlier, less expensive and non-duplicative adaptation activities, and will enhance resilience planning in both the government and private sectors.

## Governance, Strategy, and Planning

**Action 2.01: Organize the CIKR Community for Climate Change Adaptation.** The private sector owns and operates the majority of the CIKR in the nation, and the majority of the remaining assets are owned by SLTT bodies. The NPPD/Office of Infrastructure Protection (IP) will develop a strategy to engage in a systematic and coordinated public-private sector dialogue with the CIKR community in order to avoid fractured and uncoordinated efforts to adapt these resources to the impacts of a changing climate. The strategy will focus on collaboration to assess the need for any new or amended policies, procedures or processes that help reduce any adverse effects to national or economic security resulting from impacts of climate change.

## Analysis and Decision Support

**Action 2.02: Collaborate with interagency partners to establish a common analytic baseline for climate change, leveraging existing work**

**and closing any gaps necessary to support regional or sector-specific decisions related to infrastructure resilience.** The DHS climate change adaptation effort must be grounded in a consistent, shared analytic foundation that leverages the best available science and clarifies the anticipated conditions regionally and nationally. This analytic foundation must 1) provide planning scenarios that facilitate decision-making for DHS and its partners regarding adaptation to climate change; and 2) specify leading indicators and thresholds that can be used for (i) triggering planned actions for mitigating climate change impacts, (ii) determining whether the planning scenarios are unfolding as expected, and (iii) determining whether and when the planning scenarios should be updated. This action will be led by the NPPD/IP; it will align with other Departmental activities related to climate change risk analyses and serve as the foundation for further infrastructure-related risk analysis. Furthermore, this analytic baseline is a critical precursor activity for effectively assessing the state of current planning for climate change across CIKR programs.

**Action 2.03: Assess current planning for climate change connected to CIKR.** The NPPD/IP will lead a comprehensive assessment of all infrastructure-related current planning actions. This action enables DHS to understand if current planning enables reordering, reconstruction, or development of climate change adaptation planning. It also includes planning for assessment of climate change impacts to CIKR, mitigation and adaptation strategies, and an analysis of all risk assessment tools and programs that include climate change as an all-hazards assessment.

**Action 2.04: Conduct a series of studies for adaptive integrated infrastructure risk management.** A solid analytic process, based on the best science and involvement from key stakeholders, is essential to identify and assess risks linked to climate change and provide actionable results to decision-makers. Building on the three prior DHS CIKR partnership actions, NPPD/IP, working with other DHS Components and outside partners, will conduct a series of studies to better understand and support infrastructure risk management. These studies will be fully available to support further research by academia and industry, and DHS and partners will consolidate findings into useful tools

and training materials to inform sectors and communities to use in incorporating climate change adaptation into their planning.

**Action 2.05: Monitor societal and environmental trends to provide an "early warning system" to manage risks to critical infrastructure.** Risks to the Nation's CIKR can come from many sources, and decisions about how best to manage or mitigate risks are highly dependent on knowing the timeframe in which the action must occur (i.e., near-term or long-term). To use resources effectively, DHS must determine which trends are most likely to indicate changes that would negatively impact DHS missions, operations, and infrastructure; allowing DHS Components to know when the need for action is imminent and to plan well enough in advance. To provide such an "early warning system" for impacts that may affect the ability of DHS to fulfill its missions, NPPD/IP will leverage results of Action 2.02 related to the analytic baseline to identify the societal and environmental trends that should be monitored.
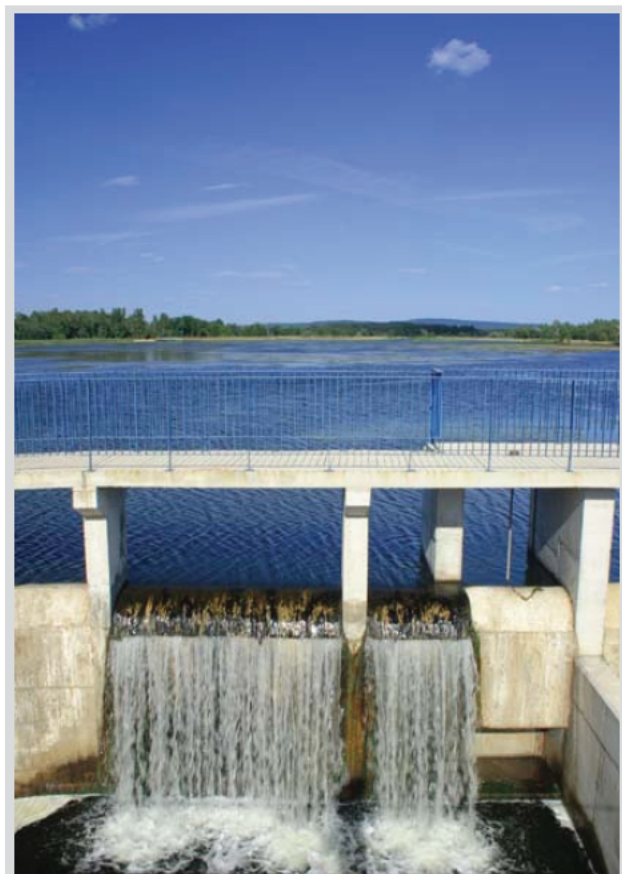


Courtesy of USGCRP

## 3. Resilience to Disasters

### Ensure the Nation's resilience to more frequent or extreme natural disasters as the climate changes.

*"Challenges posed by climate change have the potential to change significantly the types and magnitudes of hazards faced by communities and the emergency management professionals serving them. Combined with other changes to both the manmade and natural environments, especially deteriorating infrastructure, FEMA's operating environment may be significantly impacted."*

- FEMA Strategic Plan: Fiscal Years 2011-2014, 2011

The most visible impacts of climate change will likely result from an increase in the magnitude and frequency of natural disasters, which will affect the resilience of local communities and the response capabilities of emergency management professionals.

Potential climate change risks have implications for the Department's mission to ensure resilience to disasters and FEMA's long-term vision of promoting physical and economic loss reduction measures. Changes to the current patterns of natural disasters may strain response and recovery resources, and may limit the Department's ability to adequately prepare for a "new normal" of increased disasters. To address these challenges, the CCA Executive Steering Committee selected FEMA to lead a working group to develop actions that will posture the Department to ensure the Nation's resilience to disasters as the climate changes.

The FEMA Disaster Resilience Working Group conducted a high-level analysis of the most significant climate change impacts on core Agency programs, capabilities, and operations. These findings, which guided the working group's development of adaptation actions, are summarized in the categories below.

- **Policy and stakeholders –** FEMA lacks an explicit policy to guide and direct needed support mechanisms for the Agency to effectively adapt to a changing climate. Moreover, adaptation strategies implemented by external partners and stakeholders will affect how DHS/FEMA meets its mission of ensuring resilience to disasters. How and to what extent these entities can prepare for and adapt to a changing climate will determine the level of support required by the Federal government.

- **Risk information and standards –** DHS is a consumer and producer of risk data and standards that affect various types of development decisions in risk-prone areas. Changes in the climate will affect the accuracy and practice of using historical records to predict the magnitude, location, and frequency of future hazards. This will challenge the Department's ability to use historical information and data for operations, resource planning, and long-term infrastructure design.

- **Grants –** DHS, and especially FEMA, provide extensive grant funding to SLTT entities across the Nation. Currently, many Departmental grant regulations and policies may not be flexible enough to incentivize sound development and re-building decisions—such as pre- and post-disaster land use—that account for changing conditions.

- **Research capabilities** – Climate change adaptation will require coordination and partnership with the scientific community to develop and use appropriate climate change-related data.

- **Operations and workforce** – Climate change may alter both the Department's operating environment and its planning assumptions. Under these conditions, DHS may need to strategically evaluate what resources are needed, where they are needed, and how the workforce is trained, equipped, and protected to ensure the Nation's resilience to disasters.

Based on this analysis, the FEMA Disaster Resilience Working Group developed eight high-level actions to address the most significant impacts of climate change to ensure the Nation's resilience to disasters. These actions also represent the Department's first major step toward adaptation planning within this QHSR mission area. Accordingly, the actions are focused on FEMA's role in ensuring disaster resilience; as efforts advance, these actions will serve as a foundation for a more comprehensive, Department-wide effort. Lastly, these actions also align with FEMA's vision of a "Whole Community" approach to emergency management, which involves collaboration with the public, all levels of government, the private sector, non-governmental organizations, and community organizations.

## Governance, Strategy, and Planning

**Action 3.01: Develop an overarching, FEMA-wide policy for climate change adaptation.** Projected impacts of climate change may increase existing risks or create new challenges to FEMA's missions and operations. To ensure that Agency adaptation planning efforts are coordinated, mutually supportive, and effective, FEMA will develop a FEMA-wide policy for climate change as well as an organizational process to facilitate the implementation and oversight of disaster response-specific adaptation.



Courtesy of FEMA

**Action 3.02: Continue to study the impacts of climate change on the National Flood Insurance Program (NFIP) and incorporate climate change considerations in the NFIP reform effort.** An initial, two-year study concluded that climate change is likely to have significant impacts on the NFIP; Special Flood Hazard Areas are projected to increase significantly across the Nation, with impacts mounting over time (the number of policyholders is projected to double by 2100). In order to ensure the program serves the public most effectively, FEMA will continue efforts to understand the potential impacts of climate change on the NFIP and identify areas where future climate conditions can be included as part of the larger reform effort.

## Analysis and Decision Support

**Action 3.03: Seek to understand how climate change will impact local communities and engage them in addressing those impacts.** How SLTT entities are able to deal with impacts of climate change will have a direct effect on demand and delivery of emergency management and disaster resilience services. FEMA will proactively engage and partner with SLTT communities to gain a greater understanding of their climate change adaptation challenges and activities, and look for ways the Department can take action to support them in those efforts. FEMA's leadership on this action will provide the Department with insight for broader engagement across the Homeland Security

Enterprise and a source of best practices for successful collaboration.

**Action 3.04: Establish partnerships with other Agencies and organizations that possess climate science expertise.** DHS and its Components do not maintain in-house climate science expertise. In order to ensure that the information needs of the Department are communicated to the scientific community, and that the Department's adaptation planning is using the best available science, FEMA, with S&T's support, will establish partnerships with scientific Agencies and organizations both within and outside the Federal government.

**Action 3.05: Through partnerships with the climate science community, evaluate the potential impact climate change may have on existing risk data and the corresponding implications for Threat Hazard Identification Risk Assessment development and operational planning.** Changes in the climate will affect the accuracy and practice of using historical records to predict the magnitude, location, and frequency of future hazards—with significant challenges for important analytic processes and decisions. In response, FEMA will continue to work with the climate science and risk analysis community to evaluate the impacts of climate change on the viability of existing risk data. This action will be coordinated with related CCA activities and will provide the Department with insight for further efforts to update risk information and standards across the Homeland Security Enterprise and a source of best practices for successful effective risk management.

**Action 3.06: Evaluate how climate change considerations can be incorporated into grant investment strategies with specific focus on infrastructure and evaluation methodologies or tools such as benefit/cost analysis.** DHS, especially FEMA, provides extensive funding to SLTT entities for the repair and replacement of damaged infrastructure and residential structures after a disaster. Currently, many of these investments are made without purposefully considering future climate conditions, which may reduce their level of resilience to future disasters. FEMA will lead the Department's work to proactively engage and partner with SLTT communities to better understand how climate change may affect their homeland security



Courtesy of FEMA

and emergency management activities and identify ways that the Department can support adaptation efforts through grant investment strategies.

## Operations

**Action 3.07: Promote building standards and practices, both within DHS programs and in general, that consider the future needs of climate change.** The guidelines and standards that FEMA promotes and our SLTT partners utilize to guide construction are based on historical data. As the climate changes, however, future risks to new infrastructure could be higher than currently anticipated. FEMA will lead the Department in initial efforts to encourage the incorporation of future climate considerations into programmatic guidance and standards, where applicable.

**Action 3.08: FEMA will continue to pursue a flexible, scalable, well-equipped, and well-trained workforce that is educated about the potential impacts of climate change.** Changes in the frequency and magnitude of severe weather events could potentially strain DHS resources. Aligned with the Department's broader climate change adaptation education plan, FEMA will continue to assess and improve its staffing and equipment needs to create a more flexible workforce by increasing employee readiness, cross-training staff, and increasing the pool of employees who are qualified and trained to respond to disasters or other events.

## 4. Safety, Stability, Security, and Environmental Protection in the Arctic

**These actions aim to contribute to safety, stability, security, and environmental protection in the Arctic in response to climate change.**

*"As the Nation's lead Agency for ensuring maritime safety, security, and stewardship, the U.S. Coast Guard will lead our nation's maritime engagement in the Arctic, and be a leader in advancement of U.S. national interests in the Arctic maritime domain. The U.S. Coast Guard must have the capability to perform the Service's statutory missions in the demanding Arctic maritime environment to ensure the Arctic remains a safe, secure, and environmentally sustainable region."*

- The U.S. Coast Guard Arctic Strategic Approach, 2011

For the United States, focus on the changes to the Arctic region is primarily driven by maritime and maritime support adaptations. Due to changes in the physical environment, the Arctic operational and tactical environment has changed dramatically in recent years. The waters of the Arctic are gradually opening up, not only to new resource development, but also to new shipping routes that may reshape the global transport system and affect our national security interests. While these developments offer opportunities for growth, they are potential sources of competition and conflict for access and natural resources.

Greater accessibility and human activity in Arctic waters have increased the significance and national urgency associated with ensuring that the United States has the ability to preserve freedom of navigation, provide safety of life at sea, protect our living and nonliving natural resources, and preserve the natural environment. A national commitment is needed to grow international relationships and agreements, adopt new national policies and capabilities, and build supporting infrastructure in the Arctic region, in a fiscally responsible manner.

DHS will provide a "Whole of Government" approach with respect to adapting to the changing conditions within the Arctic. As the Nation's lead Agency for ensuring maritime safety, security, and stewardship, the U.S. Coast Guard (USCG) has demonstrated effective leadership for our Nation's maritime engagement in the Arctic. Using this "Whole of Government" approach, the USCG continues to work with Federal, SLTT, international, and industry partners to prioritize and prepare for increased operational demands within the Arctic region. The 12 actions outlined in this section fully support the National Arctic policy objectives outlined in National Security Presidential Directive-66 / Homeland Security Presidential Directive-25 and are designed to serve as a roadmap to prepare DHS, and the Nation, to address safety, stability, security, and environmental protection concerns in the Arctic.

## Governance, Strategy, and Planning

**Action 4.01: Support national objectives to ensure U.S. sovereignty and freedom of navigation are not infringed.** As Arctic sea ice recedes, flag and coastal states may assert greater control of Arctic waterways and resources. Such assertions may exceed the limits set by international law and impact the United States' ability to freely navigate the Arctic and access its resources. The USCG, in coordination with the Department of State, will work with international partners to preserve U.S. interests in the

Courtesy of USGCRP

Arctic.

**Action 4.02: Develop appropriate doctrine and a training program for Arctic operations in the polar environment.** For a number of years the USCG's expertise in high latitude operations has been limited to a small group of service members, but increasing demand may require more personnel and units to operate in the region without the benefit of previous experience. Pending the promulgation of policy and requirements, and identification of adequate resources, the USCG will develop appropriate doctrine and a training program for its Arctic operations in the polar environment.

**Action 4.03: Develop, coordinate, implement, and maintain response and security plans using a "Whole of Government" approach.** The increasingly accessible Arctic presents a new theater for the full spectrum of security risks. The USCG will develop, coordinate, and implement area and regional operational plans to meet national defense contingency planning requirements; prevent and deter, protect, respond to and recover from terrorist attacks, criminal activities, and other hostile acts; and prevent and respond to maritime accidents and natural disasters that pose a serious risk to mariners, passengers, coastal communities, and the environment. FEMA and NPPD will support, as appropriate and within existing authorities.

**Action 4.04: Ensure that economic development in the Arctic region is environmentally sustainable by coordinating the development of an effective Marine Transportation System.** As the Arctic waterways become increas-

ingly accessible, vessel traffic management measures will be needed to reduce transportation risk and promote efficiency. To develop these measures, the USCG will study the waterways and vessel traffic in the Arctic region and Bering Strait, and develop, coordinate, and implement plans to maximize the effectiveness of the Marine Transportation System in the Arctic region.

**Action 4.05: Strengthen institutions for cooperation among the eight Arctic Nations (the United States, Canada, Denmark, Finland, Iceland, Norway, the Russian Federation, and Sweden).** International cooperation will be key to ensuring successful adaptation to the changing Arctic. In support of strengthening international cooperation, the USCG will engage in multilateral and bilateral discussions to better promote U.S. interests in the Arctic, conduct professional exchanges and subject matter expert visits with other nations operating in the Arctic, and work with international stakeholders to leverage existing practices and to build professional relationships.

## Analysis and Decision Support

**Action 4.06: Protect the Arctic environment and conserve its biological resources. Shipping and resource extraction will be major drivers for increased activity in Arctic.** As the lead Federal Agency for maritime pollution prevention and response, USCG must ensure prevention and response capability commensurate with risk, levels of activity, and national standards. USCG will work with partners to assess the future of shipping and resource extraction within the Arctic region and verify and validate environmental models, traditional response equipment performance, and environmental response procedures for use in the Arctic environment.

**Action 4.07: Provide awareness and regular assessment of current and future threats and challenges in the Arctic to support operational missions, planning, and policy development in that area.** The Arctic has not been a region of significant conflict and thus has not been a priority for the intelligence community since the end of the Cold War, but increased traffic and interest in the region should be accompanied with increased attention from the intelligence community. USCG will build upon

previous products to provide timely, accurate, and actionable intelligence regarding trends, threats, and challenges in the Arctic.

**Action 4.08: Analyze the results of the High Latitude Study and associated material to identify capability and support requirements for USCG mission execution in the Arctic.** USCG contracted the High Latitude Study to analyze the Arctic region and applicable authorities, capabilities, capacities, competencies, and partnerships. The results and recommendations of the study and the associated materials will be used to identify changes necessary for USCG mission execution in the Arctic.

**Action 4.09: Enhance scientific monitoring and research into local, regional, and global environmental issues.** There are still many things unknown about climate change and pollution response procedures in the Arctic. Without science exploration, opportunities will be missed to expand the United States' understanding in these areas. USCG will continue to support science research in the Arctic region focusing on science missions, including surveys of the extended continental shelf and environmental research.

## Operations

**Action 4.10: Involve the Arctic's indigenous communities in decisions that affect them.**

There are over 200 federally recognized tribes in Alaska that may be impacted by a changing climate and an increased USCG presence in the region. USCG will develop annual engagement schedules and routinely meet, consult, and engage with indigenous peoples on policy and operational issues in order to enhance working relationships.

**Action 4.11: Meet national security and homeland security needs relevant to the Arctic region.** USCG continues to serve as the lead maritime safety and security agency in the Arctic. The lack of infrastructure, emerging energy exploration, and anticipated increase in maritime traffic poses challenges and requires increased investment in the future to meet emerging operational requirements. USCG will seek appropriate resources to implement and carry out missions in the Arctic region by initiating proposals to build its budget in a manner consistent with anticipated operational and support requirements.

**Action 4.12: Conduct operations, training, and familiarization activities in the Arctic region.** Identifying operational capabilities for USCG response assets and maintaining area familiarization of the Arctic waterways is vital to understanding the service's current operational limitations in the remote region. USCG will annually plan and conduct operations, training, outreach, and familiarization activities in the Arctic region.



Courtesy of USCG

# FY 2013 Fleet Management Plan,
## Including GSA's Review

## Introduction:

Developing a Fleet Management Plan is critical to an agency in defining and describing how the motor vehicle fleet serves their mission needs. A Fleet Management Plan maps out over a number of years a systematic approach to vehicle acquisition, use, maintenance, refueling, and replacement. This plan anticipates changes in mission, organization, and resulting vehicle demand. The plan must establish a strategy for achieving 100 percent compliance with mandates to acquire alternative fueled vehicles, utilize alternative fuels including bio-based fuels, acquire low greenhouse gas vehicles, and reduce petroleum. The plan must also define how vehicle selection is determined to advance sustainable acquisition, achieve maximum fuel efficiency, and limit motor vehicle body size, engine size and optional equipment to what is essential to meet the agency's mission. The plan should guide the programming of funds necessary to continue fleet operations.

## Summary of GSA's Findings:

1. The Department of Homeland Security (DHS) does not have an agency-wide vehicle management information system. Several vehicle management systems are utilized throughout the department.

2. DHS's 2013 Fleet Management Plan does not adequately justify acquiring vehicles from other than the most cost effective sources.

3. DHS's 2012 actual fleet inventory is lower than its 2011 actual inventory and is equal to its 2012 Vehicle Allocation Methodology (VAM) planned inventory. However, DHS also appears to have exempted 5,930 vehicles from its current VAM effort.

# GSA's Overview of DHS's FY 2012 Fleet Data

|  | Total Inventory | VAM Inventory Goal | AFV Inventory | VAM Exemptions |
|---|---|---|---|---|
| FY 2012 | 56,100 | 56,123 | 19,371 | 5,930 |
| FY 2011 | 56,534 | 56,655 | 17,812 | 1,276 |
|  | Reduced Inventory | Met VAM Goal | Increased AFVs | Increased Exemptions |

DHS responses to GSA's findings are highlighted in red below.

**(A)  Describes Agency, organization, and overview of the role of the fleet in serving agency missions.**

DHS was formed in early 2002 through the reassignment of components from various Federal agencies, such as the U.S. Coast Guard, U.S. Secret Service, U.S. Citizenship and Immigration Services, Federal Emergency Management Agency, Federal Law Enforcement Training Center, Immigrations and Customs Enforcement, and Customs and Border Protection.  The DHS Motor Vehicle Fleet Program is comprised of 56,100 foreign and domestic vehicles which include 48,618 Agency owned, 7,466 GSA leased and 16 commercially leased vehicles.  DHS is committed to becoming a leader in sustainability to ensure its operations and actions are carried out in an environmentally, economically, and fiscally-sound manner.  The mission of the DHS Motor Vehicle Fleet Program is to provide safe, effective, efficient and economical, state-of-the-art and environmentally friendly vehicles to employees allowing them to perform their official duties in a manner that promotes excellent stewardship over taxpayer's funds.  DHS's diverse number of mission-related operations, projects, stakeholders, and issues require an extensive motor vehicle fleet with a variety of vehicle types.  The DHS Motor Vehicle Fleet Program provides policy; guidance and support for the department's 250,000+ employees in their utilization of a wide variety of vehicles, encompassing everything from small plug-in electric and light duty flex fuel sedans to enormous mobile cargo shipment screening units. Due to the varied and diverse missions, the DHS organizational fleet management structure is decentralized.  Each Component operates, maintains, acquires, and funds its own motor vehicle program.

**(B)  Criteria for justifying and assigning vehicles (including home-to-work vehicle assignments).**

The DHS motor vehicle inventory is made up of the Department's thirteen constituent component fleets.  Those fleets are deployed in a multi-various array of mission-essential circumstances and environments; from desert border patrol and pursuit to natural disaster mitigation and relief, to executive and foreign dignitary protection, to maritime and aviation asset fueling and maintenance. Vehicles are acquired based on a determination of need and assigned based on mission requirements and for some

components, job classifications.  Vehicle acquisitions are consistent with the dictates of both the Energy Policy Acts of 1992 and 2005 (EPAct) and Executive Order 13514; requiring the acquisition of vehicles capable of operating on alternative fuels whenever feasible.  DHS remains a consistent leader among federal agencies acquiring and deploying alternative fueled vehicles nationwide.

Home-to-work (HtW) vehicles are assigned based on the following authorities:  Title 31, USC § 1344 "Passenger Carrier Use"; Title 41, CFR Part 102-5 "Home-to-Work Transportation" and the DHS Manual 112-05-001 Home-to-Work Transportation.  The aforementioned manual stipulates that HtW will only authorized if in the best interest of the government and should not be used for the sole convenience/comfort of employee.  HtW is typically authorized for the following missions:  Legislative (Secretary, Deputy Secretary, Commandant of USCG), Law Enforcement and Intelligence, Field Work and Emergency Situations.

**(C)  Explanation for reported fleet size and cost changes or not meeting agency VAM projections.**

Increases in the DHS fleet inventory continues to be driven by mission expansions, particularly in the border protection arena.  Nonetheless, DHS is fully committed to complying with sustainability mandates through continuously evaluating, identifying, and implementing strategies for reducing the consumption of petroleum based products and thereby reducing GHG emissions.  These strategies focus on the right-sizing of fleets, increasing fuel efficiency through acquiring vehicles with higher average miles per gallon (MPG), increasing the use of alternative fuel, and decreasing vehicle miles traveled (VMT)/idling time, where feasible based on mission requirements.

**GSA's Finding:**  **DHS's 2012 actual fleet inventory is lower than its 2011 actual inventory and is equal to its 2012 Vehicle Allocation Methodology (VAM) planned inventory.  However, DHS also appears to have exempted 5,930 vehicles from its current VAM effort.**

|  | VAM 2011 Baseline Fleet | | 2011 Actual Inventory | |
|---|---|---|---|---|
| Conventional Fuel Vehicles | 37,463 | 66% | 38,722 | 68% |
| Alternative Fuel Vehicles | 17,916 | 32% | 17,812 | 32% |
| Exempted Vehicles | 1,276 | 2% | - | 0% |
| **Total** | **56,655** | **100%** | **56,534** | **100%** |

|  | VAM 2012 Plan | | 2012 Actual Inventory* | |
|---|---|---|---|---|
| Conventional Fuel Vehicles | 35,770 | 64% | 32,272 | 58% |
| Alternative Fuel Vehicles | 19,077 | 34% | 17,898 | 32% |
| Exempted Vehicles | 1,276 | 2% | 5,930 | 11% |
| **Total** | **56,123** | **100%** | **56,100** | **100%** |

**\* From the 2012 Federal Fleet Report: 36,729 conventional fuel vehicles; 19,371 AFVs.**

- **Optimizing fleet size:**  With an inventory reduction of 434 vehicles, between 2011 and 2012, DHS is on track to meet its 2012 VAM planned inventory.

- **Increasing the use of alternative fuel vehicles:** DHS's AFV inventory appears on track to meet its 2012 VAM planned AFV inventory.

- **Exemptions:** DHS appears to have exempted 5,930 vehicles for the current VAM process.  However, the 2013 Fleet Management Plan also indicates that a VAM to determine the optimal fleet size has been implemented throughout the Department, and includes law enforcement vehicles.  This information seems to indicate that DHS may not have exempted any vehicles.

DHS only exempted its foreign vehicle fleet from the 2011 and 2012 VAM submissions. The discrepancy occurred because one of the components submitted its VAM after the Federal Automotive Statistical Tool closed for the 2012 reporting period.  The VAM for an additional 4,466 has been conducted thus, only leaving the foreign vehicles exempted.

**Recommendation:**  It is recommended that DHS and GSA work together to clarify the number of vehicles that DHS has actually exempted from the VAM process.  With regards to AFVs, DHS should continue its progress by working with the Department of Energy and GSA to ensure that it meets AFV acquisition mandates and places AFVs in close proximity to refueling facilities.  One recommended tool is the Department of Energy's Optimal Vehicle Acquisition Analysis service offered through the National

Renewable Energy Laboratory to help DHS's efforts to deploy mission-suitable AFVs or low greenhouse gas emitting vehicles into the fleet.

**(D) Description of efforts to control fleet size and cost.**

DHS components utilize a variety of means to control fleet size and cost with the results of those means thoroughly evaluated by Headquarters. A Vehicle Allocation Methodology (VAM) to determine the optimal fleet size has been implemented throughout the Department, and includes law enforcement vehicles which, according to GSA's VAM guidance could have been exempted. This methodology establishes a uniform acquisitions process with standardized calculations by which future acquisitions are justified.

Current "right sizing" initiatives include evaluating the size and composition of the fleet to ensure fleet sizes are appropriate to utilization and vehicles are configured to optimally support mission needs. Continued efforts in controlling fleet size and cost will include conducting surveys for VAM eligible vehicles to capture mission criticality, usage profile, alternative fuel usage, Home-to-Work (HtW) practices, and alignment between vehicle types and mission needs. Survey results will be used to identify how best to "right size" the DHS fleet.

DHS will also update the Motor Vehicle Acquisition Guide. The "Acquisition Guide" was developed to provide acquisition procedures for the DHS Motor Vehicle Fleet Program, which will assist Components in justifying, approving and acquiring additional new or replacement vehicles.

The Acquisition Guide also includes a checklist for new and replacement vehicles that must be approved by the DHS Fleet Manager and/or the DHS Acquisition Program Review Board before vehicles are acquired.

**(E) Explanation of how law enforcement vehicles are categorized within the agency (See FMR Bulletin B-33).**

In January 2011, DHS developed and implemented the law enforcement classification that were adopted by GSA and issued government-wide through Bulletin FMR B-33. Only vehicles classified as LE 1's are exempt from Federal sustainability mandates. Although they could have been exempted according to GSA's VAM guidance, DHS includes all law enforcement vehicles in the annual VAM submission to determine the optimal fleet size for the entire program, foreign vehicles are exempted.

**(F) Justification for restricted vehicles**.

All executive fleet vehicles are posted on the DHS website as required by the May 2011 Presidential Memorandum on Federal Fleet Performance. Due to the unique nature of the U.S. Secret Service missions such as dignitary protection, exemptions are granted for them to acquire larger vehicles on an as needed basis. All of the limousines in the DHS fleet are assign to the Secret Service.

**(G) Description of vehicle replacement strategy and results.**

(1) The schedule the agency will follow to achieve its optimal fleet inventory, including plans for acquiring all Alternative Fueled Vehicles (AFVs) by December 31, 2015.

For vehicles classified as LE 1's and LE 2's, the DHS Fleet Manager will work with Component Fleet Managers to ensure that all annual acquisitions of light duty vehicles are alternative fueled or low greenhouse gas emitting vehicles. DHS will also work with GSA's acquisitions and leasing offices review vehicles orders before they are finalized to ensure compliance with the May 2011 Presidential Memorandum on Federal Fleet Performance.

(2) Agency plans and schedules for locating AFVs in proximity to AFV fueling stations. What is the agency's approach in areas where alternative fuels are not available? Are AFVs that are not dependent on infrastructure, such as electric vehicles and qualifying low greenhouse gas (LGHG) vehicles, being placed in such areas?

DHS will develop a working group consisting of Component Fleet Managers to develop cost effective strategies and timelines for placing alternative fuel vehicles in proximity to AFV fueling stations. For areas where alternative fuels are not available, low greenhouse gas emitting and plug in hybrid electric vehicles will be acquired whenever practicable.

(3.) Vehicle sourcing decision(s) for purchasing/owning vehicles compared with leasing vehicles through GSA Fleet or commercially. When comparing cost of owned vehicles to leased vehicles, compare all direct and indirect costs projected for the lifecycle of owned vehicles to the total lease costs over an identical lifecycle. Include a rationale for acquiring vehicles from other than the most cost effective source.

The following information provides examples of how DHS' largest motor vehicle component determines the most cost effective methods for acquiring vehicles. With over 26,851 in its domestic fleet, Customs and Border Protection (CBP) has established best practices for determining life cycle costs for managing its vehicle program. It has been determined that owned vehicles are more cost effective for the existing fleet because of retrofitting, unusual wear and tear of vehicles used in rough terrain and other circumstances that are not practicable for GSA leases which have a short life cycle that agency owned vehicles.

CBP leased 140 vehicles from the General Services Administration (GSA) in FY12. The leasing services include: acquisition, asset management, fuel, accident management,

vehicle remarketing services, maintenance, and repair. GSA leased vehicles are managed through the GSA Drive Thru website. The following table illustrates the different vehicle types leased by CBP through GSA in FY12:

**Table 1: FY12 Vehicles Leased by CBP through GSA**

| Vehicle Type | Number of Leased Vehicles |
|---|---|
| Heavy Duty | 1 |
| Light Duty Passenger Minivan 4x2 | 10 |
| Light Duty Pickup 4x2 | 2 |
| Light Duty Pickup 4x4 | 4 |
| Light Duty SUV 4x2 | 2 |
| Light Duty SUV 4x4 | 12 |
| Light Duty Passenger Van 4x2 | 6 |
| Medium Duty Cargo Van | 2 |
| Medium Duty Passenger Van | 3 |
| Compact Sedan and Station Wagon | 66 |
| Midsize Sedan and Station Wagon | 29 |
| Subcompact Sedan and Station Wagon | 3 |
| **Total** | 140 |

CBP conducted a cost benefit analysis using data from leased and owned vehicles to make a determination on the most advantageous use of leasing. The scenario only considers a side-by-side comparison of a first time purchase versus lease initiation. Additional costs associated with pre-mature retirement of owned assets currently in the fleet inventory are not included in the tables. CBP calculated a total cost of ownership and a total cost of leasing for each vehicle type. After comparing the total costs, the cost savings for the life cycle of the vehicle was determined. CBP assumed the vehicle life cycle to be 10 years, which aligns to current black-top vehicle life cycles. Table 2 illustrates the vehicles that provide cost savings for leasing over the life cycle, the number of each vehicle type currently in the fleet, and cost savings per year if these vehicles were leased instead of purchased.

**Table 2: Leased Vehicle Cost Savings**

| Vehicle Type | Lifecycle (10 years) Lease Savings per Vehicle | Number of Vehicles in Fleet | Cost Savings per Year |
|---|---|---|---|
| Light Duty Cargo Van 4X4 | $7,521 | 1 | $752 |
| Medium Duty Cargo Van | $14,709 | 130 | $191,218 |
| Compact Sedan and Station Wagon | $6,880 | 22 | $15,135 |
| Subcompact Sedan and Station Wagon | $10,957 | 1 | $1,096 |
| | | **Total** | $208,202 |

Table 2 indicates the vehicles that are potentially beneficial to lease based upon total cost of ownership and current vehicle usage. The data illustrates that there are approximately 154 vehicles out of more than 25,000 that can result in possible cost savings if they are leased throughout the fleet (mostly Medium Duty Cargo Vans). Total savings are calculated to be approximately $208,000. However, research has shown that purchasing is the best acquisition method for the majority of CBP vehicles.

For the entire DHS fleet, as owned vehicles reach the end of their useful life, thorough analysis will be conducted to determine the most cost effective acquisition method before other vehicles are acquired.

**GSA Finding:** DHS' 2013 Fleet Management Plan does not adequately justify acquiring vehicles from other than the most cost effective sources.

### FY 2012 Vehicles by Source Comparison

| Vehicle Source | Number of Vehicles by Source |
|---|---|
| Agency Owned | 48,618 |
| GSA Fleet-Leased | 7,466 |
| Commercially Leased | 16 |

Per Section 17504(a)(2) of 40 USC 175, Federal Motor Vehicle Expenditure Control, the head of each executive agency shall include with the appropriation request the agency submits under section 1108 of title 31 for each fiscal year, a statement that justifies why the existing and any new motor vehicle acquisition, maintenance, leasing, operation, and disposal requirements of the agency cannot be met through the Interagency Fleet Management System the Administrator of General Services operates, a qualified private fleet management firm, or any other method which is less costly to the Federal Government.

***Potential annual cost savings if agency-owned vehicles were replaced with GSA Fleet vehicles:*** **$100.5M** based on Federal cost and mileage averages. DHS's actual savings may differ. Contact the GSA Office of Motor Vehicle Management for a more accurate cost savings estimate for your agency.

- DHS's The 2013 Fleet Management Plan does describe the efforts of its Customs and Border Protection (CBP) component to obtain its optimal fleet size and control costs. However, it does not describe such efforts of DHS's other component fleets. In addition, while the 2013 Fleet Management Plan makes a case for agency-ownership of CPB's vehicles, it does not do so for DHS's other fleet components.

**Recommendation:** It is recommended that DHS provide a better description of fleet cost control efforts across the entire agency in and provide a data-driven argument for acquiring vehicles from other than the most cost effective sources in next year's fleet management plan. Finally, GSA recommends that DHS make a robust effort to consider acquiring vehicles from more cost effective sources.

The estimated annual cost savings cited by GSA above does not account for the millions of dollars spent annually on retrofitting DHS's law enforcement vehicles or the removal of the equipment during the end of a vehicles life cycle.

DHS owned light duty vehicles have an average life cycle of over 8 years almost three times that of a GSA leased vehicle. In FY2013, several DHS components conducted a lease versus own analysis for their fleets and have determined that GSA was not always the most cost effective acquisition method.  Where GSA was found to be the most economical source, Components have collaborated with GSA to replace owned vehicles with GSA leases at the end of a vehicles life cycle.  A more comprehensive cost analysis is planned for the entire DHS Fleet Program FY2014, contingent on funding.

## (H)  Description of the agency-wide Vehicle Management Information System (See FMR Bulletin B-15).

DHS does not have an agency-wide vehicle management information system, instead there are several vehicle management systems utilized throughout the department.  The various components' reluctance to giving up these often entrenched and long used- as well as in some cases, very recently acquired individual solutions coupled with the department's failure to launch its planned omnibus financial and asset management system in FY11 continues to stymie efforts to overcome this impediment.  DHS Fleet (along with HQ personal and Real Property) Management is currently developing a an asset management data warehouse to be fed with-, normalize and compile fleet data and ultimately serve as the single source of record for all fleet inventory, acquisitions and operational information. One of these systems is Sunflower, DHS's automated personal property management system, to manage their fleet.  The system contains a record for each piece of personal property subject to physical inventory.  Sunflower is a commercial off-the-shelf (COTS) software program designed to manage assets within various organizational elements of DHS and to provide a wide range of functional capabilities in the lifecycle management of its assets, including vehicles.
CBP *(DHS's largest component with over 26,800 vehicles)* currently uses two Management Information Systems (MIS) to manage vehicle data: Systems Applications and Products (SAP) and Asset Works Vehicle Management Information Systems (VMIS).  SAP is not a fleet-dedicated system and all CBP offices capture vehicle information in SAP. SAP has been built to capture all required vehicle characteristics (ex. location, make, and model) and costs (ex. maintenance and fuel costs).  SAP is CBP's financial system of record and is capable of capturing all transactions and costs. All transactions made with fleet and purchase cards are automatically uploaded into SAP.  Additionally, ICE (DHS's 2nd largest component with over 13,500 vehicles) utilizes Sunflower as its automated personal property management system.  The

system contains a record for each piece of personal property subject to physical inventory.  Sunflower is a commercial off-the-shelf (COTS) software program designed to manage assets within various organizational elements of DHS and to provide a wide range of functional capabilities in the lifecycle management of its assets. The Sunflower database is the central storage point for maintaining property data, such as acquisition in accordance with Office of Management and Budget (OMB) Circular A-123, utilization, reconciliation, and disposal, throughout the life cycle of each property item. More specifically, the information system is used to track fleet maintenance, both scheduled and unscheduled. These activities include recording monthly meter readings, creating Work Orders, and running reports.

**GSA Finding: DHS does not have an agency-wide vehicle management information system.  Several vehicle management systems are utilized throughout the department.**

Federal executive agencies are required by Sections 15301 and 15302 of the Consolidated Omnibus Budget Reconciliation Act of 1986 (Pub. L. No. 99-272) (40 U.S.C. Sec. 17502 and 17503) to have a centralized system to identify, collect, and analyze motor vehicle data with respect to all costs incurred for the operation, maintenance, acquisition, and disposition of motor vehicles.

In addition, Federal Management Regulation Part 102-34.340 requires agencies to have a fleet management information system at the department or agency level that:

(a) Identifies and collects accurate inventory, cost, and use data that covers the complete lifecycle of each motor vehicle (acquisition, operation, maintenance, and disposal); and

(b) Provides the information necessary to satisfy both internal and external reporting requirements, including:

> (1) Cost per mile;

> (2) Fuel costs for each motor vehicle; and

> (3) Data required for FAST.

**Recommendation:**  DHS should press ahead to deploy an agency-wide fleet management system that complies with regulatory and statutory requirements for fleet management information systems.

In addition to acquiring its own system, DHS has two options available from GSA:

1   Agencies could lease vehicles through GSA, which provides the utility of a robust fleet management information system.

<span style="color:red">Several DHS components have conducted lease versus own analysis for their fleets and have determined that GSA was not always the most cost effective acquisition method.  A more comprehensive cost analysis is planned for FY2014, contingent on funding.</span>

2  GSA Office of Motor Vehicle Management developed and made available the Federal Fleet Management System (FedFMS - https://ffms.fas.gsa.gov) modeled after the system GSA uses to manage nearly 200,000 leased vehicles.  The system provides a basic fleet management tool that is very cost effective at less than $2.00 per vehicle annually.  Agencies that lack a vehicle management information system for their owned vehicles should find the FedFMS tool an effective and affordable solution.

<span style="color:red">GSA's FedFMS system is not currently a viable option for DHS owned vehicles as it does not have the capability of capturing fuel and maintenance data from DHS's fleet card vendor.  DHS has developed a Fleet Management Analysis and Reporting System (FMARS), a business intelligence tool used to capture data from the fleet card vendor.  Capturing fuel and maintenance data is an essential function of any FMIS, including GSA's FedFMS.</span>

**(I)  Plans to increase the use of vehicle sharing.**

Unless there is a mission requirement for a single use vehicle, such as a canine handler with a dog vehicles are not assigned to individuals.  DHS will analyze current policies to determine ways of increasing pooling, car sharing, and shuttle bus consolidation initiatives.  Most DHS vehicles are assigned to a mission and location and are therefore always shared by individuals working to accomplish a particular mission.

**(J)  Impediments to optimal fleet management**.

The key impediment to optimal fleet management continues to be the lack of centralized vehicle management information system.  Another impediment to achieving optimal fleet management processes is forecasted budget shortfalls.  Without adequate funding, DHS Components must limit the acquisition of new vehicles and the disposition of used vehicles.

**(K)  Anomalies and possible errors**.

Explain any real or apparent problems with agency data reported through the Federal Automotive Statistical Tool (FAST).  Discuss any data fields highlighted by FAST as possible errors that you chose to override rather than correct.  Examples would be extremely high annual operating costs or an abnormal change in inventory that FAST considers outside the normal range, or erroneous data in prior years causing an apparent discrepancy in the current year.  Any flagged, highlighted, or unusual-appearing data should be explained.

During the 2012 FAST data call, the DHS Components were instructed to utilize the "COV" description for all domestic vehicles reported in the VAM Exemption column. As DHS studied domestic vehicles as directed by FMR Bulletin B-30; Components were also instructed to utilize the "OS" description for all foreign vehicles. Analysis of the VAM Year-to-Year Comparison report discovered that there was a huge decrease in vehicle inventory. Further analysis determined that although some of the Components classified vehicles with the correct "VAM Exempt" designation, FAST reflected reductions consequently, a request was made to the FAST System Administrator to aggregately change all of the Domestic Vehicles to "COV" (covered under the VAM study), and all of the foreign vehicles to "OS" (foreign vehicles not covered under the VAM study). The request was denied, which resulted in the appearance of a large reduction in vehicles from the FY11 baseline year compared to FY12 data however, the actual reduction total realized was 434 from FY11 (56,534) to FY12 (56,100), because of the incidental misclassification of the NEW "VAM Exempt" column, the reductions seemed larger than they actually were.

**(L) Summary and contact information**.

## Summary of GSA's Findings:

1. The Department of Homeland Security (DHS) does not have an agency-wide vehicle management information system. Several vehicle management systems are utilized throughout the department.

2. DHS's 2013 Fleet Management Plan does not adequately justify acquiring vehicles from other than the most cost effective sources.

3. DHS's 2012 actual fleet inventory is lower than its 2011 actual inventory and is equal to its 2012 Vehicle Allocation Methodology (VAM) planned inventory. However, DHS also appears to have exempted 5,930 vehicles from its current VAM effort.

## Contact Information:

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The budget office reviewing official did not participate in this process.

## Appendix C

### Biobased Purchasing Strategy, Revised June 2013
### Responding to the President's Memorandum on Promotion of Biobased Markets

On February 21, 2012, President Obama signed a Memorandum, *Driving Innovation and Creating Jobs in Rural America through Biobased and Sustainable Product Procurement*. The memorandum requires all federal agencies to undertake a number of activities to increase their purchase of biobased products. The Department of Homeland Security (DHS) is moving aggressively to implement the Presidential Memorandum requirements.

**Accomplishments to date include:**

- Established a baseline list of Product Service Codes for use when conducting quarterly reviews.

- Including biobased clauses and requirements in all janitorial and construction contracts.

- Developed a web based training module, "DHS Sustainability: Sustainable Acquisitions Awareness Training" which includes biobased requirements and the USDA BioPreferred Program. Training is available on the DHS electronic learning system for all employees.

- Completed one vendor outreach session on March 21, 2013 to educate potential vendors on statutory and executive order green purchasing requirements, including biobased requirements.

**Baseline for Biobased Contracting:**

DHS conducts quarterly reviews on at least five percent of applicable contract actions for compliance with the statutory and executive order green purchasing requirements, and reports the results to OMB along with the Sustainability/Energy Scorecards. Biobased is one of 10 green purchasing requirements. In FY 2012 5.6% of the contracts reviewed out of the five percent contract pool of eligible contracts included biobased clauses (4 out of 72). In FY 2013 DHS will strive to increase the baseline of contracts reviewed from 5.6% to 10% of the five percent contract pool of eligible contracts.

**FY 2013 Target/Compliance Goal:**

- As a leader in sustainable acquisition strategies and compliance, DHS plans to meet a level of 95 percent for all relevant acquisitions in all four quarters of FY 2013 based on a 5 percent sample.

- DHS plans to achieve full compliance of the 95 percent sustainable acquisition goal in E.O. 13514 for biobased products no later than FY2014.

- Provide the template "Responding to the President's Memorandum on Promotion of Biobased Markets" to the DHS Components and require it as part of their Operational Sustainability Performance Plan submittal.

**Strategies for Improving Compliance:**

The DHS strategy for improving compliance--full incorporation of requirements and clauses for biobased products in relevant and appropriate contracts and follow on activities to ensure compliance is achieved--includes the following elements:

- DHS will generate and disseminate agency level reports on biobased compliance using data from newly created biobased reporting elements in the Federal Procurement Data System–Next Generation.

- DHS will utilize the USDA contract templates on the BioPreferred website as sample templates and for training purposes.

- DHS will continue to include requirements and performance standards for biobased products in 100% of newly awarded janitorial contracts.

- In its quarterly acquisition reviews, DHS will conduct a deep dive for service contracts relevant to biobased purchasing (Custodial, Janitorial Services, Facilities Operation Support, and Construction) to ensure that requirements for biobased products are met.

- In FY13, DHS will participate in Vendor Outreach sessions promoting sustainable acquisitions and biobased market opportunities.

**Required Specification Reviews (for all agencies that control specification standards):**

DHS does not control any specification standards.