



# Sustainable Operations



U.S. Forest Service

*Creating Habits Today, Conserving Resources for Tomorrow*

**Thursday, April 2, 2009**

Our mission is to sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations. As stewards of the environment, the Forest Service is committed to efficiently using energy and reducing consumption of resources in our daily operations. This work was accelerated by the Energy Policy Act of 2005, a series of Executive Orders (EO) including EO 13423, "Strengthening Federal Environmental, Energy, and Transportation Management", and several USDA directives. There are two main goals:

- Forest Service leaders are international models for the best sustainable practices.
- Forest Service operations and business practices exceed green standards in fleet and transportation, energy, watershed, purchasing, and waste management.

**These goals already are embedded in our mission. What is necessary now is an examination of the current approaches to our work to ensure the incorporation of more sustainable business practices.**

- Forest Service leaders are international models for the best sustainable practices.
  - Model sustainable practices throughout all aspects of Forest Service program management and service delivery.
    - **Lead:** WO Ecosystems Coordination. The performance focus includes:  
**ENVIRONMENTAL MANAGEMENT SYSTEMS:** Implement EMS at all appropriate organizational levels to ensure use of EMS as the primary management approach for addressing environmental aspects of agency operations and activities. The EMS is being built to make use of existing systems and to fit within budget and organizational capacity.
      - [.https://fs.usda.gov/wps/myportal](https://fs.usda.gov/wps/myportal)
    - **Examples of EMS progress:**
      - In 2008, 20,000 employees were trained and 12 audits conducted.
      - Our EMS raised USDA from red to yellow on the OMB Environmental Stewardship score card in 2008.
      - The sustainable operations working group is coordinating with agency EMS efforts to provide inputs for energy and water consumptive operational controls in FY 09.
      - WO Business Operations is working with EPA and LMI Government Consulting to establish greenhouse gas protocols for the public sector. This creates an opportunity to influence protocols not only for the Agency, but also for the Federal sector, in addition to providing valuable insight to the EMS.

- Collectively the six National Forests in the Greater Yellowstone Area have completed the first anthropogenic greenhouse gas (GHG) emission inventory under our agency-wide EPA Climate Leaders agreement. Mobile sources (fleet) is by far the largest source of emissions, 54%, while stationary sources and electricity make up another 37%. Employee commuting and air travel are approx. 9%. In addition to greater understanding about our operational emissions this pilot has identified numerous opportunities for improvement in our data collection systems.
  - Through a partnership with the National Renewable Energy Lab (NREL), and support from the Greater Yellowstone Coordinating Committee (GYCC) the FS inventory is being compiled with inventories from the Yellowstone and Grand Teton National Parks and Red Rocks and Elk National Wildlife Refuges to create an ecosystem-wide look at greenhouse gas emissions.
- Create an informed citizenry by advancing environmental literacy.
    - **Lead:** State and Private Forestry. The performance focus includes educating and leading people, so citizens have a heightened understanding of the role the natural environment (trees, forests, and forest ecosystems) plays in their day-to-day lives and can make informed choices (lifestyle, financial, career, health, etc.).
    - **Examples of advancing environmental literacy are included in the partnership portion of this document on pages 7/8.**
- Forest Service operations and business practices exceed green standards in fleet and transportation, energy, watershed, purchasing, and waste management.
    - Achieve zero emissions in fleet and transportation by 2015.
      - **Lead:** WO Engineering. The performance focus includes:
        - **VEHICLES:** Increase purchase of alternative fuel, hybrid, and plug-in hybrid electric vehicles when commercially available.
        - **PETROLEUM CONSERVATION:** Reduce petroleum consumption in fleet vehicles by 2% annually through 2015.
        - **ALTERNATIVE FUEL USE:** Increase alternative fuel consumption at least 10% annually.
      - **Examples of Fleet and Transportation progress include:**
        - As of March 2009, 515 Videoconferencing (VTC) units have been installed, with some capacity in every Region/Station/Area. This capability is especially useful in remote locations such as those in Region 10.
        - Engineering Management has initiated a Fleet management Business Process Reengineering Study to address fleet “right-sizing, reduction, and containment.”
    - Become an energy neutral Agency by 2020; 25% by 2012; 50% by 2016; and 100% by 2020.
      - **Lead:** WO Engineering. The performance focus includes:

- **ENERGY EFFICIENCY:** Reduce energy intensity by 3 % annually through 2015 or by 30% by 2015.
  - **GREENHOUSE GASES:** By reducing energy intensity by 3% annually or 30% by 2015, reduce greenhouse gas emissions.
  - **RENEWABLE POWER:** At least 50% of current renewable energy purchases must come from new renewable sources (in service after January 1, 1999).
  - **BUILDING PERFORMANCE:** Construct or renovate buildings in accordance with sustainability strategies, including resource conservation, reduction, and use; siting; and indoor environmental quality.
  - **ELECTRONICS MANAGEMENT:** Annually, 95% of electronic products purchased must meet Electronic Product Environmental Assessment Tool standards where applicable; enable Energy Star® features on 100% of computers and monitors; and reuse, donate, sell, or recycle 100% of electronic products using environmentally sound management practices.
- **Examples of Energy conservation progress include:**
    - A BioMax®25(kW) gasifier that uses wood chips as fuel was recently unveiled on the Kisatchie National Forest, Winn District in Region 8. The fuel will operate a generator to take the place of utility supplied power to the building.
    - Region 10 continues to use six solar/wind/battery powered units for remote sites providing 835 KWh/season.
    - Financial Management is working with the National Finance Center to assist Units in tracking and displaying their use and consumption of utilities through the TUMS Reporting System.
    - The headquarters of the International Institute of Tropical Forestry in Puerto Rico is a historic building which is being restored and upgraded to achieve LEED certification.
- Become the world leader for water conservation and water source protection by 2020.
    - **Lead:** WO Watershed, Fish, Wildlife, Air, and Rare Plants. The performance focus includes:
      - **WATER CONSERVATION:** Reduce water consumption intensity by 2% annually through 2015.
      - **WATER CONSERVATION/EFFICIENCY/EVALUATIONS:** Complete water conservation/efficiency evaluations at 25% of facilities per year.
    - **Examples of Water conservation progress include:**
      - The planned Administrative Complex on the White Mountain National Forest contains several water-saving features, including a grey-water recycling system and composting toilets, which consume no water.
      - The Maroon Bells visitor station and other buildings on the White River National Forest have waterless urinals.

- All purchased goods and services and the performance of our suppliers, contractors, and partners exceed green standards in production, packaging, storage, supply chain and delivery.
  - **Lead:** WO Acquisitions Management. The performance focus includes:
    - **PROCUREMENT:** Expand purchases of environmentally-sound goods and services, including biobased products.
  - **Example of Green Purchasing includes:**
    - CIO has purchased 5,747 Energy Star computers as of 2/2009
    - CIO has purchased and will deploy an additional 7,125 Energy Star by the end of the FY09
    - The current Hyundai monitors that are purchased are also Energy Star compliant
    - Fire and Aviation Management has a review of all contracts and technical requirements under way to ensure the use of bio-based products
- Achieve 40% waste diversion by 2010 and exceed sustainable waste prevention and recycling business practices throughout all Forest Service program activities.
  - **Lead:** WO Acquisitions Management. The performance focus includes:
    - **POLLUTION PREVENTION:** Reduce use of chemicals and toxic materials and purchase lower risk chemicals and toxic materials from top priority list.
  - **Examples of Waste Management progress include:**
    - Six Rivers National Forest recycles paper, cardboard, aluminum, plastic, glass, toner cartridges, and batteries at all of its Ranger Districts and the Supervisor's office.
    - At the Smith River NRA Visitor Center, paper that has been printed on one side is cut to tablet size and the good side is used to take memos at the front desk.

## Institutionalizing Sustainable Operations

**It's not about new work, it is about doing our work differently.**

### Policy

Strategic Plan - Created a companion document for the Strategic Plan to describe the relationship between climate change, the goals and measures in the plan.

### Climate Change Framework Implementation

Sustainable Operations is one of seven Climate Change Goals.

A working group is in place assessing current and future data needs and identifying systems for tracking and reporting progress on environmental footprint reduction efforts aligned with EO 13423. Mary Wagner and Chris Risbrudt are executive leads for the team. The working group has been participating with the Climate Change Coordination Group as a standing team for sustainable operations. Under this group, the team has developed a charter, identified field advisors and consultants, and had its initial kick off meeting on Jan 27, 2009. Currently the group is reviewing past efforts and metrics that have been identified to measure environmental baselines aligned with emphasis areas identified in EO 13423. Part

of this effort is day lighting where data gaps exist to define these baselines and developing reasonable approaches to fill these gaps. In addition, they are developing a software framework that will allow reporting of these metrics using existing database and reporting systems already in place in the agency.

Programs and Budget Allocation – Guidance was provided in the initial FY 2009 PBA responding to climate change and sustainable operations.

Manual/Handbook Direction – There is a variety of policy work on-going in the areas of fleet and transportation, energy, watershed, purchasing, and waste management. Three subjects of possible interest are general, property, and asset financial management. FSM 1300 Management; a sustainable operations directive addressing Agency program management roles and responsibilities has been developed for issuance this winter. FSM 6400 Property Management; a waste prevention, recycling, acquisition and green purchasing directive has been developed for issuance this spring 2009. FSH 6509.19 Asset Financial Management; a recycling, reuse, salvage, waster reduction, pollution prevention, and energy rebate directive has been developed for issuance summer 2009.

### Accountability

Sustainable Operations Measures were included into the Agency’s performance Accountability System (PAS) for FY 2007/2008 and will continue to expand. The current performance indicators are:

Indicators	FY 2007	FY 2008	FY 2008 Final	FY 2009 Goals
Total Forest Service vehicle fuel consumption	\$11,257,427	\$10,975,443	-2.5% of 07	-2% of 2008
Miles driven by passenger carrying vehicles	Not Tracked	83,681,569		TBD
Dollars cost of electricity	\$17,495,739	\$17,326,505	-1.0% of 07	-3% of 2008
Dollars cost of fuel oil	\$828,907	\$1,065,214	+28.5% of 07	TBD
Dollars cost of natural gas	\$2,612,801	\$2,809,009	+7.5% of 07	TBD
Number of facilities that hold LEED certification	Not Tracked	3	100% of 07	12
EMS Audits completed	Not Tracked	(Planned) 12	9	12

Special recognition to Forest Products Lab, the PNW Research Station and Region 10 for their efforts in examining their operations for ways to become more efficient and reduce costs. There were notable achievements by a few other locations; however these three Units achieved the greatest improvements.

There has been some concern expressed about using cost information as a progress indicator. A suite of indicators to determine status, progress and necessary actions to achieve goals is the ideal; however organizational costs will continue to be included among the indicators. As the Agency’s EMS becomes more robust, it will serve as the primary management tool to establish and examine baselines, data standards and sources, and performance or service indicators. The EMS can provide line officers with a predictable structure for managing, assessing, and continuously improving program delivery effectiveness and efficiency. It builds in periodic review and emphasizes continuous improvement instead of crisis management. The EMS can reduce support costs and improve operating efficiency while advancing sustainable practices and environmental performance.

For most of these measures, data are available at the national, R/S/A, and individual unit level. The reports show data for both FY 2007 and 2008 for all except the miles driven, LEED, and EMS Audits measure in the Sustainable Operations report, where only FY 2008 data are displayed. These reports are updated on a quarterly basis through the Agency's Performance Accountability System (PAS), with data for the full fiscal year available in early November. You can access PAS (through E-Authentication) [Performance Accountability System \(PAS\)](#). A number of other financial and information management systems will be modified to capture, assess, report and display data associated with each of the focus areas as EMS is implemented.

Sustainable Operations Measures in 2009 will be expanded to include facility energy audits completed; ESPCs in place; number of alternate fuel vehicles; alternative fuel use; number of hybrids; number of plug-in hybrid vehicles; waste management costs; recycling revenue; EPEAT standards for all information technology (computers, monitors, servers, phones and cells, and radios); greenhouse gas inventories completed; energy, fuels, natural gas consumption and costs; % biobased products purchased; % green meetings, conferences, and events standards met, and water conservation/efficiency evaluations completed; and, water consumption and costs indicators.

A Sustainable Operations performance standard was implemented for all supervisory and managerial position performance plans in FY 2008. An audit of measures to determine effectiveness will be completed during FY 2009 with results provided to the Executive Leadership Team.

The FY 2008 Executive Priorities for SES Performance included climate change and sustainable operations goals - February 25, 2008. The Associate Chief has taken the lead in developing metrics for FY 2009.

Scorecards for EMS, Energy Management and Transportation management are in place and integrated into the Agency's performance accountability system.

## **Recognition**

The Agency's national recognition program includes Sustainable Operations awards in 3 categories:

Closing the Circle Award - The Office of the Federal Environmental Executive (OFEE) is part of the White House Council on Environmental Quality and the sponsor of the Closing the Circle (CTC) Awards. Recognitions focus on innovative, cost-effective contributions in increasing the purchase of recycled content, biobased, and environmentally preferable products and services; reducing the generation of wastes; incorporating energy and environmental considerations into building design; establishing highly effective environmental management systems at Federal facilities; using alternative fuel vehicles and reducing the fleet fuel consumption; and promoting Federal electronics stewardship efforts. Beginning in FY 2009, the Forest Service will participate in this award program and seek Agency nominations.

Two national recognitions were awarded in 2008 to **Region 9, Northeastern Area, Northern Research Station and FPL** for their work on the Sustainable Operations Summit; and the **Chippewa NF** for the Extreme Ranger District makeover effort. Both nominations have also been forwarded to the White House Council on Environmental Quality for *Closing the Circle* award recognition. Units will receive cash awards and Big Belly Solar Trash Compactors.

Federal Energy Management Program Awards - The Federal Energy Management Program at the Department of Energy recognizes individuals, organizations, and agencies for their energy savings contributions. Beginning in FY 2009, the Forest Service will participate in this award program and seek Agency nominations for the Presidential Awards for Leadership in Federal Energy Management. This

award honors Federal employees for their support, leadership, and efforts in promoting and improving Federal energy management.

Reducing the Environmental Footprint Award - This award recognizes Forest Service individuals, work units or groups that have demonstrated innovative and creative approaches to planning and successful implementation of projects or programs that enhance or create adaptation, mitigation, bio-energy, and sustainable operations opportunities on National Forest System lands and programs. This Award includes monetary recognition and has four levels: Individual (\$5000), Group (\$7500), Unit (\$20,000), and Cooperator (\$10,000).

## **Employee Training and Development**

- Ag-Learn
  - EMS (Spring 2008)
  - Climate Change (Summer 2009)
  - Sustainable Operations (Summer 2009)
- Senior Leaders Program Component
  - Annual sponsorship of a climate change/sustainable operations work team
- Management Policy Seminar Module
- New Employee Orientation Component
- National Leadership Council Agendas
- Sustainable Operations Quarterly Webinar Series
- Conferences and Symposiums 2009:
  - Office of the Federal Environmental Executive (OFEE) Symposiums (East and West) presentations on Green House Gas Inventories, Measures, Partnerships and EMS
  - Attendance to the Climate Leaders Conference in Rhode Island

## **Communications and Engagement Opportunities**

The official Sustainable Operations internet website can be found here:

<http://www.fs.fed.us/sustainableoperations/> Program manager and employee information and engagement opportunities include Open Mic; Webinar Series; FS Today; People, Places, and Things; National Environmental Footprint Report, National Energy Report, Sustainable Ops Highlights (newsletter), Sustainable Ops Fact Sheet. On-going input for the “Big Screen Monitors” in the Yates Building.

## **Green Technologies Initiative**

This Initiative advances the practice of sustainability through the use of “green” technologies, products, and solutions.

- Solar powered trash compactors with integrated recycling units for WO Headquarters; ASC B&F and HCM, Talladega NF, Kisatchie NF, Munford Elementary School, Bailey’s Elementary School, District of Columbia Parks and Recreation, and Southern A&M University; and USDA Headquarters.
- Battery Recycling Partnership with Rechargeable Battery Recycling Corporation (RBRC) for all recyclable batteries.
- Energy Misers for vending equipment.
- Watt Stopper or Eco-Cords are motion sensor electrical cords that automatically reduce the draw of vampire or phantom electricity for facility use.
- Non-petroleum bio-based water bottles for employees encouraging pollution prevention and sustainable practices.

## **Partnerships/Outreach to Create an Informed Citizenry/Advance Environmental Literacy**

**Adopt-A-School Program** - Creating a more environmentally literate society through an Adopt-A-School Program, working with Bailey's Elementary School in Fairfax County, VA and Munford Elementary, Middle and High Schools in Talladega, AL, the Forest Service is fostering life-long learning and understanding of natural processes through specific activities that connect kids, parents and teachers to the natural environment.

Expansion of the Adopt-A-School program includes a newly formed partnership with Rio Rancho Public Schools in Albuquerque NM. Cleveland High School, a LEED certified school focused on natural resource education will become a sustainable operations partner, offering students hands on experiences, and classroom enrichment opportunities through Forest Service speakers, curriculum and support. Working with **International Programs**, educational programs on monarch butterfly conservation will be expanded to the adopted schools. Activities will expand and enhance indoor and outdoor classroom curriculum and hands on experiments using pollinators.

**Sister Schools** - Creating a more environmentally literate society by linking our Adopt-A-School participants with each other to share resources, information, educational experiences, and encourage the use of technologies. (Talladega and Fairfax County School Districts)

**Educator Exchange Program (Teachers/Principals)** is an effort to provide teachers and principals with exposure to Federal sector agency mission and programs in order to more effectively partner in advancing natural resource education and stewardship. It provides the Agency with a heightened awareness about the dynamics of 21<sup>st</sup> century learning and teaching concepts in K-12 educational systems in order to influence curriculum development and engagement activities. (Talladega, Fairfax, Albuquerque, Rio Rancho, and the District of Columbia School Districts)

**Green Campus Initiative** works to empower students to lead initiatives on their campuses focused on sustainability issues, pollution prevention and recycling. (National Urban League and Southern University pilot in Region 8.)

**USDA Daycare partnership – Green Tots** - in the WO, Sustainable Operations is working with building management offices (internal and GSA), and Conservation Education and the USDA daycare center to develop environmental learning opportunities at the daycare center. The vision for the completed project is to provide an outdoor environmental education classroom in the existing playground space; generally upgrade playground features to improve drainage, site security and landscaping. USDA will also support teachers in learning environmental education best practices.

Additional support will go toward improving indoor air quality in the daycare center, by promoting the use of green materials and paints for new finishes; and supporting upgrades to the air-handling system and other systems as planned by building management staff.

**Green Jobs** is a partnership with Student Conservation Association and the District of Columbia to ensure green technologies are integrated into the program curriculum; provide trainee opportunities while addressing Agency energy efficiency and sustainable facility and infrastructure goals; and, to contribute to the trained workforce for emerging green industries in the private sector.

**Kids in the Woods** is an Agency-wide leveraging program aimed at connecting people, especially youth to the outdoors. The goal of "Kids in the Woods" is to create an enduring impact on young people's values and attitudes towards nature and their understanding and appreciation for their role in conserving natural resources. The Forest Service has supported and expanded efforts that engage urban, rural and



a diversity of communities in experiential, outdoor learning opportunities, better informing past and present generations of their impacts on the health and sustainability of natural resources as well as the benefits of their conservation habits.

**National Get Outdoors Day** is an annual multiple-agency event to encourage first time visitors, especially children under the age of 14, to enjoy and explore public lands. The first national Get Outdoors Day was held on June 14, 2008 when over 50 official sites across the nation welcomed thousands of new people to their public lands. National Get Outdoors Day is co-sponsored by the American Recreation Coalition and a number of national nongovernmental groups to encourage opportunities for citizens who have been less involved or unaware of outdoor recreation, especially Hispanic, African, and Asian Americans, and many urban dwellers.

**Environmental Sciences Summer Intern Program** focuses on employment opportunities for students pursuing Environmental Science/Management; Biology/Ecology; Outdoor Education/Recreation; Environmental Policy/Political Science; Conservation/History; and/or other fields that promote the value of natural resources and sustainability.

Six students, from diverse backgrounds participated in Sustainable Operations efforts across the nation in 2008 – implementing partnerships, providing content to the websites, and advancing all aspects of sustainability.

In 2009 Sustainable Operations student interns will be working in Region 2, 6, 8 and the Washington Office for the second consecutive year. Their efforts enhance and expand agency sustainable operations programs and communications.

## **SUMMARY:**

### **Every program has roles and responsibilities...**

- Acquisition Management – Green Contracting, Granting, Leasing, and Purchasing, Recycling, Transportation Subsidy and Worker Protection, Safety and Health, Property Management, Collection and Disposal, Packaging
- Budget and Program Analysis – Funding Strategy, Incentives, and ROI Evaluation
- Chief Information Office – Energy, Green Equipment Purchasing, E-cycling (computers, servers, phones, cells, radio, batteries), Data Centers, and Disposal
- Civil Rights – Representation and Environmental Education
- Ecosystem Management Coordination – EMS Implementation, Monitoring and Reporting
- Engineering Management – Energy, Facilities, Fleet and Fuels, Hazardous Materials, Recycling and Disposal, Landfills, and Property Management
- External Affairs – Internal and External Communications, Alliances and Partnerships
- Finance – Travel, Lodging Facilities, Meetings, Conferences and Events Management, Energy, Water, and Waste Management Cost and Usage
- Fire and Aviation Management – Fleet, Fuels, Green Purchasing, Leasing and Contracting, Emergency Response, Disposal and Recycling
- Human Capital Management – Employee Education, Work Environment Assessment
- International Programs – Technology Transfer
- Lands Management – Sustainable Natural Resource Management, Land Acquisition and Exchanges, Special Use Permit Programs
- Minerals and Geology Management – Energy, Mine Sites
- Office of Communications – Community Relations and Local Relevancy
- Policy and Analysis – Legislation and Policy Analysis

- Range Management – Sustainable Natural Resource Management
- Recreation and Heritage Programs – Concession Programs, Tourism and Volunteerism Programs
- Research and Development – Global Climate Change, Sustainable Natural Resource Management, Social, Bioenergy, and Biomass Research
- Safety and Health – Hazardous Materials and Toxic Chemicals, Employee Health and Wellness, Voluntary Protection Programs, Employee Training Programs
- State and Private Forestry – Sustainable Natural Resource Management in Community, Cooperative, and Urban Forestry, Conservation Education
- Strategic Planning and Performance Accountability – Performance Indicators, Monitoring, Reporting (OMB Scorecard and PART), and Evaluation
- Watershed, Fish, Wildlife, Air and Rare Plants – Water Conservation, Wetlands Restoration and Protection

Incentives abound for the Agency. Our primary goal as public servants is to ensure the best value for the American tax payer; and to create an environment where employees are challenged to look critically at our resource consumption habits and create change. As a conservation leader sustaining the health, diversity, and productivity of the Nation's forest and grasslands to meet the needs of present and future generations, it is necessary for us to model and demonstrate behaviors that we are advocating for others. We can not talk the walk if we are not walking the talk. Regardless of national or local perspective, resources are limited and every effort to ensure that the most funding is available for mission critical work on the ground versus administrative (electricity, water, trash, etc.) costs is imperative.

There are relatively few policy barriers standing in the way of the Forest Service achievements in all of these areas and executive leadership is expecting the existing organizational hierarchy to integrate, review and adjust programs of work to achieve results in these focus areas. Again, it is not about more or new work, it is about doing our work, all of our work, differently.

### **Sustainable Operations website: [www.fs.fed.us/sustainableoperations](http://www.fs.fed.us/sustainableoperations)**

Jacqueline Myers, Executive Sponsor for Sustainable Operations, [jmyers01@fs.fed.us](mailto:jmyers01@fs.fed.us) - (202) 205-1690

Mary Wagner, PNW Regional Forester, [mwagner@fs.fed.us](mailto:mwagner@fs.fed.us) (503) 808-2200

Chris Risbrudt, Forest Products Lab, [crisbrudt@fs.fed.us](mailto:crisbrudt@fs.fed.us) (608) 231-9318

Jacqueline Emanuel, Program and Management Specialist for Sustainable Operations,  
[jemanuel@fs.fed.us](mailto:jemanuel@fs.fed.us) – (202) 205-0860