

Showcases



The White House Task Force on Waste Prevention and Recycling



Preface

N APRIL OF THIS YEAR, PRESIDENT **BUSH SAID** that stewardship is the calling of government, and it is the calling of every citizen. Understanding the importance and benefits of maintaining a thriving and healthy environment is critical to the health of our economy, to our national security, and to the health and welfare of future generations. The Federal government takes its stewardship of the environment seriously and continues its efforts to make Federal facilities greener more sustainable.

In this issue of Closing the Circle News, we showcase the winners of the 2002 Closing the Circle Awards – more than 20 outstanding military and civilian programs and individuals who are making waste prevention, recycling, and procurement of recycled content and environmentally preferable products a reality at their facilities. For the second year, the Closing the Circle Award

winners also include teams and individuals implementing environmental management systems to integrate environmental considerations into the everyday operations at their facilities or in individual programs. By using teamwork and cooperation, these programs are able to achieve compliance with savings and environmental stewardship.

Integrating environmental stewardship into everyday operations is a simple concept but a complex task. Change, acceptance, and most importantly ensuring that new policies benefit both the environment and each facility take time, effort, strategic planning, and support. Only through the success of such individual programs can attitudes toward environmental policies and programs change and become the accepted norms in agencies - and communities throughout the United States. This year's Closing the Circle Award winners have made such acceptance a reality.

Every Federal employee should strive to integrate environmental considerations into their daily activities. From the procurement of recycled content products to finding substitutes for hazardous and toxic materials, from recycling a range of materials to eliminating materials and increasing reuse, from using electronic tracking systems to reduce the use of hazardous materials to designing a ship to operate with fewer environmental impacts, this year's Closing the Circle Award winners have shown that successful environmental stewardship is achievable. Next year Federal agencies will be implementing the 2002 Farm Bill which contains a new biobased products purchasing program. Next year's Closing the Circle Awards will feature a new category for biobased product purchasing. All of us working together can continue to move forward and make the Federal government a premier example of good stewardship.

John L. Howard, Jr. Federal Environmental Executive

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Affirmative Procurement

Affirmative Pr

FFIRMATIVE PROCUREMENT IS THE GOVERNMENT'S PREFERENCE PROGRAM FOR RECYCLED CONTENT PRODUCTS. It is

a component of "environmental purchasing" or "green purchasing," which gives preference to products that are energy efficient, biobased, or otherwise environmentally preferable. The affirmative procurement program is ultimately designed to use the government's purchasing power to create markets for materials recovered from waste and to stimulate involvement from private sector markets through preferential procurement of EPA-designated recycled content items.

A great example of this effort is found at the Naval Air Engineering Station (NAES) in Lakehurst, New Jersey. In the fall of 2000, NAES decided to improve its compliance by screening all purchases to verify that they conformed with the recycled content recommendations of

the EPA's Recovered Materials Advisory Notices (RMAN). The **NAES Affirmative Procurement** Manager utilized the **Requisition Automated Processing System (RAPS)** which screens and flags all purchases designated by EPA and requires that these products receive approval by the Station's Affirmative Procurement Manager. **Purchases that conformed** with the RMAN requirements were approved and processed while non-conforming purchases were sent back for revision.

In addition to screening purchases for recycled content products, the Station also initiated an Environmental Impact Checklist. The Checklist helps guide the Station in ways to preserve natural resources and protect the environment during the planning of construction projects. Before construction, project managers must receive approval from various branch representatives. The Station's new Superlab contains features that conform to this checklist,

such as gypsum wallboard, carpet, vinyl composition tile, and acoustical ceiling panels, which all contain recycled materials. The benefits of the affirmative procurement plans initiated by the Naval Air **Engineering Station have** spread beyond the confines of the station by helping to preserve our natural resources. For more information on the Naval Air Engineering Station, logon to their website at: www.lakehurst.navy.mil/ environment, or contact Mr. Lawrence Lemig at 732-323-7500, or via email at LemigLG@navair.navy.mil.

Robert Woodside of the General Services
Administration (GSA) in
New York, New York, has worked actively to make recycled content paper available to the Federal government at competitive prices. Mr. Woodside was able to obtain the best possible pricing for paper by maintaining maximum flexibility through the use of Blanket Purchase Agreements (BPA). The BPAs are negotiated

An aerial view of NAES's Superlab, or the P208 Lab building, which was designed to incorporate the use of recycled content products

ocurement

on the basis of underlying multiple award schedule contracts and permit GSA's inventory managers to place orders whenever material is required in GSA's warehouses. Each agreement can be extended for as long as three months and can be based on lowest price, a definite quantity, or fastest delivery. The successful transition to procuring copier paper from sealed bidding and negotiating delivery order procurements to blanket purchase agreements has led to more meaningful competition, lower prices, and greater participation from the paper industry in the Federal Supply Service (FSS) schedules program. In addition, the transition has contributed to GSA's wholesale distribution program and the schedules program as a method for Federal agencies to acquire high quality recycled paper. Mr. Woodside also successfully modified previous FSS contracts to supply Federal customers with copier paper that contains a minimum of 30 percent post consumer material at no change in price. If you would like to receive more information, please contact Mr. Robert Streeter at 212-742-2769, or via email at robert.streeter@gsa.gov.

Sandia National Laboratories (SNL) in Albuquerque, New Mexico, has a new approach to promoting affirmative procurement in their facilities. Because many vendors and Sandia end-users were not purchasing recycled content products, SNL began soliciting long-term contracts with suppliers based on their knowledge of and expertise in providing recycled/ remanufactured products. They sought suppliers who were willing and able to provide product lines with the maximum practical recycled content at competitive prices. Prospective suppliers were asked questions related to environmentally preferable purchasing (EPP) and evaluated based on their efforts to deliver products with such characteristics as recycled content, energy efficiency, water efficiency, and biobased content. Based on the responses, the evaluation team determined which prospective supplier could provide the best overall value to SNL.

SNL awarded contracts to the Document Solutions Incorporated to supply remanufactured toner cartridges; the Sandia Service Company to provide Products, such as
BioSoy hydraulic oil
and biobased cleaning
products, were preferred
by the Sandia National
Laboratories over other
non-organic and
chemical products.
These products are
made from any fat or
vegetable oil and can be
used alone or in
combination with other
chemical-based
products.

quality recycled content paper products; and Boise Cascade Office Products to provide a variety of environmentally preferred products. These new arrangements have allowed SNL to drastically increase its compliance without negatively impacting the revenue of their suppliers. Not only has SNL saved \$72,000 while increasing the total amount spent on recycled content products, but it has also gone beyond typical purchasing by looking for environmentally preferable suppliers to achieve a longterm solution. For more information on Sandia National Laboratories, please contact Mr. James Romero at jromero@sandia.gov or 505-844-3411.

Education and Outreach

XECUTIVE ORDER
13101 REQUIRES
THAT EDUCATION
AND OUTREACH PROGRAMS BE IMPLEMENTED

as part of a Government wide strategy to promote waste prevention and recycling. **Education and outreach** initiatives are essential to have Federal employees and the public understand the importance of recycling, waste prevention, and buying environmentally preferable, energy efficient, biobased, and recycled content products. The environmental education initiatives undertaken by the Federal agencies have been critical in making all stakeholders aware of our environmental responsibilities in the areas of waste prevention, recycling, affirmative procurement and other green practices.

Fort Campbell Army Base in Kentucky is home to almost 40,000 people. To help promote efforts to recycle, the base reached out to its residents by means of education, technology, and awareness through visits to the base's facilities and schools. The Environmental Division visited almost 900 buildings in a promotional strategy to educate soldiers on proper recycling procedures. During America Recycles Day, the Division set up display booths at various public areas with educational material on recycling. Their

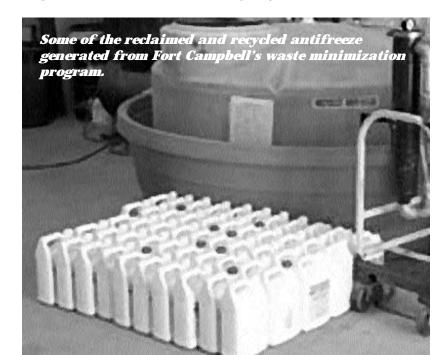
intentions were simple: to increase recycling and to make recycling appealing as well as a priority to everyone. The local elementary and and proper storage methods for hazardous materials. To make the goals of Fort Campbell accessible to everyone, the base also

Education

middle schools developed an environmentally enriched curriculum which included a "Magic of Recycling" performance. This performance encouraged children to recycle materials, such as newspapers and jars, and emphasized individual commitment to the environment.

Fort Campbell also invited its citizens to tour the base's Pollution Prevention Operation Center (PPOC). At the PPOC, commanders, students, and civilians are trained in recycling and waste minimization programs that deal with environmental issues, such as solid waste disposal, Freon reclamation,

designed an Environmental Quality Officer's Handbook, which contains an in-depth list of definitions and environmental terms and a searchable database. **Environmental forms can be** accessed from the website, which helps to provided soldiers with current environmental information. The Environmental Quality Officer's Handbook was subsequently offered in CD version which helped the base to decrease production costs by 97 percent. Through Fort Campbell's efforts to educate not only its soldiers but young civilian population, the base has increased its recycling by 34 percent this past year alone. For more





more than 50 schools in Washington and Oregon. These gifts diverted 24.1 metric tonnes from the waste stream. Paper donations to a

and Outreach

information on Fort Campbell's environmental policies, please log on to their website at: www.campbell. army.mil/envdiv/en1.html, or contact Mr. Mike Davis at 270-798-9769, or davism@ emh2.campbell.army.mil

Farther west, in the community of Richland, Washington, the Hanford Site Pollution Prevention Program planned several activities to encourage all members of its community to recycle. A recycling training program that emphasized the importance and benefits of recycling was implemented and geared towards Hanford facilities that underutilized existing recycling services. Pamphlets, featuring articles on pollution prevention, energy and water conserva-tion, and other environmental issues, were distributed to all 10,000 Hanford employees and retirees.

The Hanford Site also planned several community outreach activities. Annual events, such as Earth Day 2001, attracted more than 5,000 community

members. Environmental contests and activities for children helped to encourage all members of the community to participate. The Hanford Site also hosted an annual Health and Safety Expo, which was expanded to include issues on environmental safety, such as pollution prevention and energy and resource conservation. The biggest community outreach event was during Pollution Prevention Week. More than 3,500 children from local schools interacted with the Litter Bug and Recycle Man to learn more about the effects of littering. Brown bag lunch sessions were held to educate the children about water conservation, worm composting, and SMART (Save Money and Reduce Trash) shopping.

Hanford Site activities were not limited to community outreach events but were also in the form of gift donations. In 2001, the Site donated over \$1,388,886 in CPUs, monitors, keyboards, and other computer equipment to local college also helped the recycling effort by diverting 4.5 metric tonnes from the waste stream and helping to save over \$6,100. Other articles, such as eyeglasses, hearing aids, and wireless phones, were also donated to various charities and organizations on the local, national, and even international level. To obtain more information about the Hanford Site P2 Program, please contact Mr. Oscar Holgado at: 509-373-0598 or Oscar_M_Holgado@rl.gov.

Children and parents
gather for the media
event hosted by the
Hanford Site Pollution
Prevention Program. In
its efforts to educate all
members of the
community, the Hanford
Site was able to reach
out to even its youngest
community members
and help them to
understand the
importance of recycling.

Environmental Management Systems

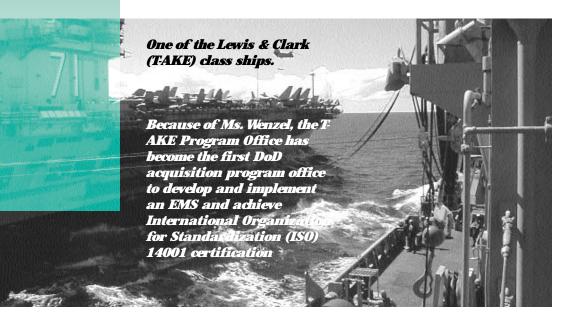
XECUTIVE ORDER
13148 ESTABLISHED
A FRAMEWORK FOR
INTEGRATING ENVIRONMENTAL CONSIDERATIONS

into each Federal agency's mission through a variety of directives and goals, including implementation of **Environmental Management** Systems (EMS) at agency facilities. An EMS is a systematic approach to ensuring that an organization's environmental priorities and interests are incorporated into that organization's operational, planning and management decisions. Federal agencies are working diligently to significantly increase the federal government's use of EMS as a planning and implementation tool to help Federal agencies better carry out their mission and to be better environmental stewards.

Ms. Mary L. Wenzel exemplifies how an EMS approach to environmental management will help to better equip agencies with the information, resources, strategy, and feedback they need to ensure they are continuously improving their performance and reducing their environmental impact. As the Environmental, Safety and Occupational Health Manager for the T-AKE Acquisition **Program Office in the Naval** Surface Warfare Center, Washington D.C., Ms. Wenzel developed and implemented efforts to minimize the numerous environmental and health risks that occur during the shipbuilding process. Ms. Wenzel developed and implemented an EMS that encompasses both environmental and

occupational health aspects. Her goal was to achieve maximum effectiveness and enable T-AKE class ships to operate worldwide unhindered by environmental restrictions. To achieve this, Ms. Wenzel created programs with measurable objectives and targets to monitor and validate shipbuilding environmental performance in the areas of environmental protection and compliance, hazardous material management, human engineering, and system safety. A Hazardous Material **Control and Management** Strategy was developed to ensure appropriate consideration was given to eliminating and reducing the use of hazardous materials.

Ms. Wenzel mandates that the ships be designed and constructed to be compliant with Annexes I-VI of the **International Convention for** the Prevention of Pollution from Ships. The shipbuilding process has been modified and 93 materials must be eliminated or used in limited quantity during ship design, construction, operation, maintenance, and disposal. When the use of hazardous materials cannot be avoided, the shipbuilder must develop and implement a plan and



procedure to minimize the use of, transport, and disposal of the material and equipment. The T-AKE also provides a monitor to approve and ensure that all T-AKE class ships achieve their projected waste stream reduction. The new T-AKE Class ships will achieve their projected waste stream

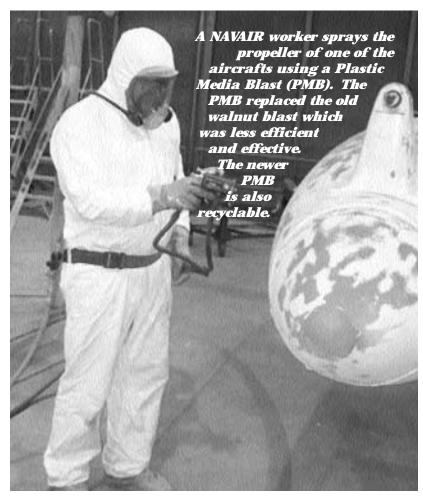
Diego, California, is a manufacturing, maintenance, and repair facility for military ships and aircrafts. To effectively address the array of environmental and industrial activity challenges while improving the environment, the command has implemented an EMS with

the EIT (Environmental Improvement Team). The EIT's primary goals have been to identify and implement P2 projects and to assist the strategic business units (shop areas) with subject matter expertise to review and screen projects for environmental improvements. The EIT identified

Environmental

reduction in sewage by 93.9 percent, graywater 44.1 percent, volatile organic compounds 100 percent, and CO2 by 65.1 percent as well as 70 percent less water consumption than the 15 existing ships. Ms. Wenzel's outstanding efforts in the shipbuilding process will help ensure that the Navy's ships will meet the **Environmentally Sound Ship** standards of the 21st Century. More information on Ms. Wenzel's environmental improvements can be obtained through Ms. Mary Jo Bieberich, bieberichmi@ nswccd.navy.mil, 301-227-4978.

The Naval Air Depot North Island (NAVAIR), in San



improvement projects by utilizing a number of criteria, such as pollutant reduction potential, funding, cost to implement, health and safety issues, productivity, and resource conservation.

Objectives and targets are also generated by individual strategic business units,

catalyst and supporting staff for the shop and shop support areas at NAVAIR North Island to produce excellent results for the environment. The EIT provides the infrastructure to successfully implement many improvements for the environment at this NAVAIR Facility. More information on energy conservation. For nutrient management, source reduction efforts include sitespecific and pinpoint placement of nutrients and pesticides placed on the fields. The storage of Extremely Hazardous Substances was reduced by at least 50 percent. Scientists have reduced chemical

Management

which include all shop and shop support areas and the environmental safety programs offices. Some of the completed objectives the EIT has achieved include the installation of 3-stage filters to reduce chrome air emissions and the replacement of walnut blasting media with a Plastic Media Blast (PMB), which is recyclable. Since implementing new policies such as these, the cost avoidance and total savings have been \$900,000. NAVAIR North Island has reduced ozone depleting substances by 55.6 percent and has increased water conservation by 33.4 percent-both in a two year period. The EIT has effectively served as the

NAVAIR can be obtained by contacting Mr. Raymond Paulson, 619-545-2907, or at PaulsonRT@navair.navy.mil.

The Beltsville Agricultural Research Center (BARC) in Maryland, has created an innovative Environmental **Management System that** combines the goals of **Executive Order 13148** with the benefits of research programs that are protective of the Chesapeake Bay watershed. Through the expansion of its Pollution Prevention Program, BARC deals with issues related to nutrient management, chemical management, sustainable agriculture, and

disposal into the waste stream and waste disposal expenditures by advertising free surplus chemicals via email before declaring the products hazardous waste.

Agricultural practices were changed to incorporate environmentally friendly methods. Heating plants on the east side of the Center were converted to natural gas to help reduce operating costs and air emissions. Fallseeded legumes replace natural mulch, which helps to provide slow-release nitrogen needed for soil. Discharged water from the BARC-West wastewater treatment plant is diverted to a recycled water tank system, where a

EMS Resources

pumping station diverts an average of 35,000 gallons a day to the central heating plant for steam production. BARC also makes an effort to reach out to the surrounding community by holding seminars conducted by scientists and facility nutrient specialists at local schools. Information about the

benefits of using biodiesel fuel and nutrient management is also made available to the public. If you would like to find out more about other environmental efforts of the Beltsville Agricultural Research Center, please contact Mr. David Prevar at prevard@ba.ars. usda.gov or at 301-504-5557.

ISO – International Organization of Standardization

http://www.iso.ch

Web site of the international standards body responsible for the development and publication of ISO 14001 and other standards.

International Environmental Systems

http://www.iso14000.net

This site has considerable information available. Some information is free; many elements, such as copies of ISO standards, require payment.

Resource on the Internet on EMS

http://www.cleanerproduction.com/ Ecolink/emspage.htm

This list of over 100 links related to ISO 14001/EMS resources including practical tools, case studies and reports.

EPA's Environmental Management Systems

http://www.epa.gov/ems/

This site links to key information about EPA's efforts to develop policies and related materials about EMSs.

National Database on Environmental Management Systems

http://www.eli.org/isopilots.htm

This site provides information on the ISO 14001 national pilot projects. The database was developed to show the range of impacts on corporate, military and municipal facilities affected by the implementation of EMSs.

International Institute for Sustainable Development

http://iisd1.iisd.ca

This site has a wealth of information on sustainable development including the report "Green Standards: ISO 14000 and Sustainable Development."

Environmental Preferability

XECUTIVE ORDER 13101 PROMOTES THE INCREASED USE OF ENVIRONMENTALLY PREFERABLE PRODUCTS.

These are products that have less impact on human health and the environment when compared to competing products that serve the same purpose. They can reduce pollution, save energy and materials, and reduce health and disposal costs. Agencies are testing a broad range of environmentally preferable products and services, with

Washington State regulatory requirements. The lab gave preference to products in returnable containers or with minimal packaging, and to products that contained minimal aquatic toxicity and little to no fragrance. After a thorough evaluation of the proposals from potential suppliers, the Pacific **Northwest National** Laboratory selected two suppliers, one to supply cleaning products and the other to supply paper and plastic products. The cleaning reduced the amount of labor time needed to load and unload carts and dispose of wasteful material. The facility has also donated \$11,000 worth of replaced towel and toilet paper dispensers to other facilities in its community. This transformation has also helped to improve worker protection by decreasing their exposure to chemical cleaners and products.

The benefits of the Pacific Northwest National

Environmenta

particular success defining and acquiring environmentally preferable cleaning products. Other facilities and individuals have realized the benefits of limiting chemical and nongreen products and have initiated the switch to green products and activities in their communities.

The Pacific Northwest
National Laboratory in
Washington State
established a process to
purchase green custodial
products for its facility.
The Laboratory adapted the
City of Santa Monica,
California's specifications for
green custodial products to fit
Pacific Northwest's situation,
needs, and goals and to
adequately address

products, composed of organic biobased ingredients, could be universally used in various dilutions to clean mirrors, sinks, and floors, as well as carpets. Disinfectant usage in the facility was limited, and paper products are required to contain a minimum of 20 percent post-consumer recycled content.

The lab is benefitting from this transformation from chemical and non-recyclable materials to organic and recyclable materials. The number of cleaning products used by the staff has been significantly reduced from 30 products to 7. Not only has the laboratory lowered its purchasing costs for these materials, but it has also

Laboratory's commitment to the environment has greatly improved the efficiency of its facility while helping to ensure it operates in harmony with the environment. For more information on Pacific Northwest Laboratory, please go to their website at: http://www.pnl.gov/esp/greenguide/, or contact Sandra Cannon at sandra.connon@pnl.gov, 509-529-1535.

The Hanscom Air Force Base in Massachusetts made tremendous improvements in the areas of waste disposal, oil usage, commuting, and recycling. In efforts to reduce hazardous waste disposal costs, the Environmental Flight office began its own toner cartridge recycling program. The program saved \$6,900 and 3,450 pounds of plastic by allowing 1,725 toner cartridges to be reused. The Environmental Flight office also reduced the amount of used oil and oil filters by purchasing oil analysis kits. These kits reduce the amount of used oil by 40% by requiring that vehicles only have their oil changed when truly needed.

The base Commuter

Management Office reduced the amount of single occupant vehicle commuting by developing its own Ride Share link off the Environmental Flight website to make it easier for members to join. In addition to the Ride Share, the program also created a Traffic Incentive Program to reimburse federal and military employees for mass-transit fees.

Lastly, Hanscom AFB began a recent initiative to replace utility poles with underground

conduits. The old wooden utility poles were donated for use either as borders for new trails, to be recycled into mulching products or for producing energy. Further information about Hanscom Air Force Base's environmental stewardship policies can be viewed by going to: http://www.hanscom.af.mil/default.asp or by contacting, Lt. Col Joyce Sohotra: joyce.sohotra@hanscom.af.mil, 781-377-3526.

Preferability



Two members of the Hanscom team test the oil to determine whether it needs changing or not. Testing the oil before changing or not. Testing the oil before changing it will reduce the waste stream of oil filters by 35 percent and disposal costs by 30 percent.

Model Facility Demonstration

MODEL FACILITY **EXEMPLIFIES THE** FEDERAL GOVERN-**MENT'S EFFORTS** to produce significant contributions to promoting affirmative procurement, raising green awareness, conducting outreach beyond the federal community, planning for a greener future, and other green accomplishments under Executive Order 13101. These facilities' commitment to environmental stewardship has gone far past compliance and blossomed into "Environmental Showcases."

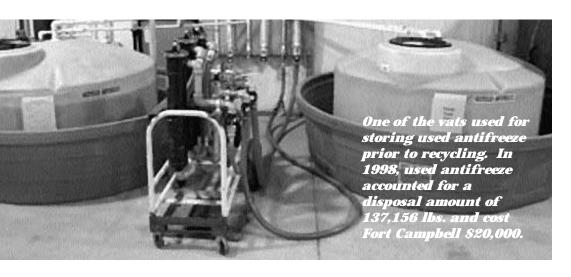
Fort Campbell's Pollution Prevention Operation Center (PPOC) in Kentucky, is one of those facilities with a proven track record of superb leadership, innovative technology application, and extremely effective environmental accomplishments which far exceed the goals of **Executive Order 13101.** The government saves an average of \$1 million yearly as a result of Fort Campbell's Pollution **Prevention Operation Center's** activities. Located on one of

the nation's largest Army bases, PPOC consists of several programs that each play an integral role in minimizing waste and ensuring environmental compliance on the base, while helping to save the base and government money. The antifreeze recycling program, for example, uses a multi-stage filtration and distillation process to recycle old antifreeze. Through this process, the annual cost related to antifreeze disposal has been reduced by \$90,000 each year. In 1997, PPOC personnel also introduced a non-toxic solvent that increases soldier and environmental safety through product substitution. To date this program has recycled an average of 20,000 gallons of solvent a year through a multistage filtration and distillation process.

Fort Campbell also uses a shelf life management program to avoid unnecessary waste disposal. By avoiding disposal and guaranteeing product reuse, this program has saved Fort Campbell more than \$1.3 million since 1999. Other

PPOC programs include a hazardous waste disposal service that will remove residents' toxic waste within 72 hours of their request and a Freon reclamation service. Freon is reclaimed from different areas of the base and sent to an EPA- approved company for quality assurance tests before it is reissued back to Fort Campbell. This process has eliminated Freon disposal and has aided the installation by providing a cost-free refrigerant to the base's units. The success of Fort Campbell's new programs has gone beyond the initial goal, which was to improve the base's previous environmental record and has instead set an example showing the benefits of recycling. More information about Fort **Campbell's Pollution Prevention** Operation Center can be accessed on their webpage at: www.campbell.army.mil/envdiv /en1.html. or by contacting Mr. Mike Davis at 270-798-9769, email davism@emh2.campbell. army.mil.

Protecting and preserving the environment while performing its mission as a Naval Station has always been a challenge for the Shore Intermediate Maintenance Activity (SIMA) in Mayport, Florida. Surrounded by a diverse



landscape of marshlands, beaches, and wetlands, as well as a wide range of marine and coastal life, SIMA chose to meet its mission by investigating methods of pollution prevention and cost reduction, while increasing production. SIMA chose to improve in the areas of reducing hazardous and non-hazardous materials, increasing material and waste recycling, and making Station operations, better, faster, and cheaper. Initially, more than \$750,000 of pollution prevention equipment was installed. SIMA Supply and Occupational Safety and Health Departments then collaborated to screen all products for potential hazards in order to



old shop rags contaminated with greases and solvents, and a full service scrap metal recycling program that has recycled more than 1,560 metric tonnes and saved the Station more than \$31,400 to date. As SIMA continues to sponsor and support waste reduction programs, it has

Information about other SIMA operations is accessible via Greg Cook at gcook@sermc.spear. navy.mil or at 904-270-5126.

When the Model Facility Demonstration Team at the Naval Undersea Warfare Center Division in Newport, Rhode Island, took on the challenge to improve

Model Facility

minimize using products containing hazardous material. Old methods of cleaning facility parts by hand brushing and extended soaking were replaced with four biodegradable water-based solution tanks. An oil-recycling program was also instituted that saved SIMA \$20,000 in disposal cost avoidance. SIMA's other recycling efforts include reusing

witnessed a savings total of \$161,200 as well as a reduction of hazardous waste from the facility of nearly 30 percent. It continues to extend its commitment to a productive and safe coexistence of both the base residences and the surrounding environment with the development of a new Model SIMA and the expansion of its current programs.

affirmative procurement, waste prevention, and recycling, it wanted to go beyond compliance and achieve levels of environmental performance that benefit the people, the communities, and the environment of Rhode Island. The Environmental Division of the Newport facility



took the initiative to tackle waste prevention by replacing old high-pressure paint guns with low-pressure and environmentally sensitive paint guns. This purchase not only decreased the amount of paint needed but also reduced the amount of time spent on painting by 40 percent. In the area of paper generation – the

than 62 percent of the Division's solid waste – is recycled. This includes aluminum, glass, and plastic beverage containers, scrap metal, transparencies, and magnetic media.

One of the most effective portions of the Division's Affirmative Procurement domestic hot water system that serves the gymnasium and a passive solar Trombe wall that serves the launcher laboratory help to conserve energy in the building by reducing energy consumption by 39 percent. More information on the Naval Undersea Warfare Center Division can be obtained through Capt. Patrick Bloomfield, bloomfieldpm @npt.nuwc.nayv.mil or 401-832-3344.

Integrated Support Command in Kodiak, Alaska, which is the Coast Guard's largest shore plant, continues to be a "Model of Environmental Excellence" through a combination of

Demonstration

Division's largest waste stream – simple informational posters were placed around offices requesting that individuals recycle paper products and minimize paper usage.

The Newport Division has an impressive recycling record. Sixteen different kinds of waste generated from office and industrial functions – or more

Program was the development of the IntraMart – a one-stop, online, shopping site. The IntraMart site, which was launched in 1997, automatically substitutes recycled content products for mandatory items purchased, thus helping to minimize the Division's intake of virgin items. Renewable energy systems were also installed. Both an active solar

recycling, pollution/waste prevention, affirmative procurement, and energy and natural resource conservation. A weekly electronic newsletter informs residents about current environmental topics and a Pollution Prevention (P2) team meets on a quarterly basis to discuss and review P2 endeavors and environmental

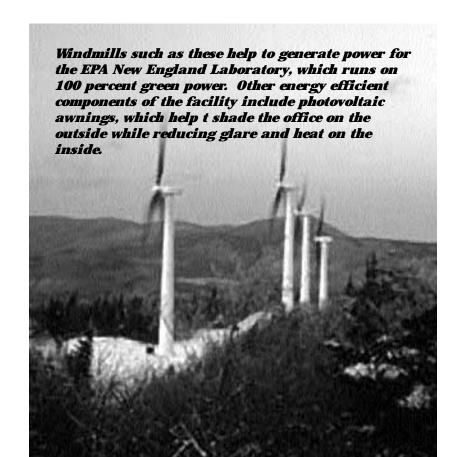
stewardship efforts. The plant has also taken many initiatives in the area of Affirmative Procurement. The ISC Kodiak purchased 26,000 pounds of postconsumer content materials last year. For example, old carpeting in the facility was replaced with carpet that was made with 100 percent recycled materials. The ISC Kodiak plant also uses a **Hazardous Materials** Minimization (HAZMIN) Center to procure and store hazardous materials. Hazardous materials must receive a certificate of essential need and be approved before they can be purchased. **HAZMIN Center supervisors** must also confirm that there is no "green product" alternative available. In conjunction with its efforts to cut back on hazardous materials, the base also began a number of practices to eliminate or minimize waste generation. A

Liquid Oily Waste System (LOWS) Facility receives and processes used oil, offspecification fuel, and other oily wastes instead of handling these substances as regular waste. LOWS facility has already refined and salvaged 44,000 gallons of used oil products. ISC Kodiak recycles batteries and light tubes; in the past year the plant has recycled 20,000 pounds of batteries and 1,800 pounds of lighting tubes. Information on their program can be obtained through Don Lachance, dlachance@cgalaska. uscg.mil, or 907-487-5320 x.252.

Over the past 12 years, the employees and community of Pictured Rocks National Lakeshore Park in Munising, Michigan, have been working together to promote sustainability and help protect the park's environment. Realizing that they could help sustain the

environment through incremental steps, the employees and supervisors at **Pictured Rocks National** Lakeshore also began engaging in a number of in-house techniques to cut back on waste disposal, environmental degradation, and pollution. First, the park cut back on mowing, allowing flowers and natural foliage to proliferate. The park then eliminated the use of road salt in snow removal operations. This eliminated salt runoffs into streams and lakes and reduced corrosion to equipment. Concurrently the park encouraged employees and supervisors to begin phasing in green cleaning products as an alternative to chemical products. Since this effort was put into effect, supervisors were required to reduce the number of toxins in their work places by 10 percent each year, a goal that has been met to date.

The President's Green Energy Parks program offered the park the opportunity to expand its photovoltaic power capability and implement a bio-fluids and lubricants program for the parks motorized equipment. A soydiesel fuel was blended in with the park's diesel fuel, resulting in cleaner burning engines with fewer emissions. To minimize energy costs and replace



inefficient power generators, the park began utilizing photovoltaics to supply energy to facilities in several of the park's remote locations. This enabled the park to power basic appliances like water and fire pumps, fans, and display lighting. Pictured Rocks **National Lakeshore Park has** proven that, with little effort and simple ideas, sustaining the environment can be achieved in even the largest of areas. More information on Pictured Rock National Lakeshore Park can be found at their website: http://www.nps.gov/piro/sustai n/ or by contacting Ms. Karen Gustin, karen_gustin@nps.gov, 906-387-2607.

The New England Regional Laboratory (NERL), in Chelmsford, Massachusetts, one of EPA's ten regional laboratories, was built with one goal in mind: to make use of the best "commercially available materials and technologies to minimize consumption of energy and resources and to maximize the use of natural, recycled, and non-toxic materials." EPA working

through the GSA achieved this goal for its new facility in North Chelmsford, Massachusetts, by applying some of the most advanced energy efficient and environmentally safe techniques to the structure's features. The first goal in the planning stages of the laboratory was to maximize the natural resources of the site such as solar power potential, natural shading, and site-specific drainage. In the actual construction of the laboratory, a major effort was made to build the facility using 'clean waste,' or leftover materials that in other construction projects that were diverted from the waste stream. A conscious effort was made to recycle all waste generated during the construction phase of the process. More than 50 percent of all solid waste was diverted from the landfill and recycled.

Ensuring that the building was completely energy efficient was another concern for the EPA and GSA contracting team. They worked with Green Mountain Power of Vermont to purchase wind-powered electricity for NERL's

consumption. They installed electronic sensors, waterless urinals, and low-flow sinks in restrooms to help reduce water wastage and to bring the building to 20 percent below the EPA standard for water consumption. As another source reduction step, furnishings for the building were taken from the former **EPA Laboratory building and** reused in the new facility. Items such as library furniture, shelving, freezers, refrigerators, and security equipment were all transferred from the old laboratory. Those pieces of furniture that could not be used in the new facility were donated to local schools and post offices. Overall the NERL was a success in that the facility was designed and constructed to enable quick, cost- and materialeffective modifications with minimal disruption to the rest of the building. For more information on the New **England Regional Laboratories** and other buildings like it, logon to the EPA's site for Labs for the 21st Century: www.epa.gov/ labs21century or contact Mr. Bob Beane at beane.bob @epa.gov, or 617-918-8350.

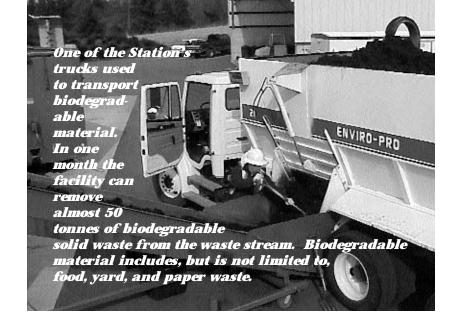
In an effort to utilize as much of the surrounding natural features as possible to generate energy and power for the facility, the staff at NERL used the onsite boulders as a natural wall and barricade for the building

Recycling

XECUTIVE ORDER
13101 STRENGTHENS AND EXPANDS
THE FEDERAL GOVERNMENT'S COMMITMENT to

recycling and waste prevention practices by setting forth stricter guidelines and greater responsibilities for the Federal agencies and promoting cost effective waste prevention and recycling of reusable materials in all of its facilities. It is the national policy to prefer pollution prevention, whenever feasible. Pollution that cannot be prevented should be recycled; pollution that cannot be prevented or recycled should be treated in an environmentally safe manner. Disposal should be employed only as a last resort.

Recycling efforts take place everyday in every federal facility across the country. One such facility is the Naval Air Station on Whidbey Island in **Washington.** The station has taken a number of initiatives to help conserve water and reduce the amount of waste entering the waste stream. When a proposal to close the air station's solid waste landfill was suggested in 1993, efforts to increase all methods of recycling went into effect. A recycling program was initiated and, since 1995, the Navy Whidbey Recycle Program has grown from incorporating a mere 4 percent of the waste stream in 1990, to 64 percent of the



waste stream in 2001. Through the use of an in-vessel composting facility that was introduced in June of 2000, the facility has composted such bio-solids as waxed cardboard boxes, shredded paper, and consumer food scraps, helping to save the base \$565,426 annually. This composting facility is expected to increase the waste diversion rate of the island by more than 75 percent.

In addition to the composting facility, the Base also began other conservation programs geared at conserving and recycling water and hazardous materials. A 10,000-gallon underwater tank helps to capture and re-utilize rainwater from rooftops, and a Superfund pump- and-treat system helps to reduce weekly water usage. Conveniences, like public drop off facilities and weekly curbside collections, help to encourage and expand the recycling effort on the island while disposing of hazardous waste properly and safely.

This all-around recycling effort has generated more than \$137,000 in annual revenue

and increased the solid waste recycled by 1,600 percent. The efforts of Whidbey Island Naval base and its commitment to exploring the multiple opportunities of recycling and conservation has helped to educate the public as well as the base members about the important impact these initiatives can have on a community. For more information on Whidbey Recycling, contact Mr. Paul F. Brewer, brewerp @naswi.navy.mil, or by phone at: 360-257-6962.

The efforts of one citizen, Mr. William R. Meinerding, of Wright Patterson Air Force Base, Ohio, have helped to alert thousands of others of the benefits of recycling, reusing, and reducing. Mr. Meinerding, the **AFB's Recycling Program** Manager, has helped the Air Force to save more than \$3 million that would have otherwise been spent on waste disposal. By establishing a number of community orientated activities and fund raisers such as "Kans for Kids," and "Recycling Old Tennies,"

Mr. Meinerding turned the act of recycling old materials into an enjoyable activity for all. Proceeds from his fundraisers went further to help both individuals in the community and the environment. Earnings from "Kans for Kids" funded resurfacing of the playgrounds at the base's childcare facilities. The new surfaces are made from 100 percent recycled materials that don't decompose, freeze, absorb water, or become hard. In Mr. Meinerding's "Recycling Old Tennies" collection event, old tennis shoes were ground up and used to make footballs, baseballs, and weight room flooring.

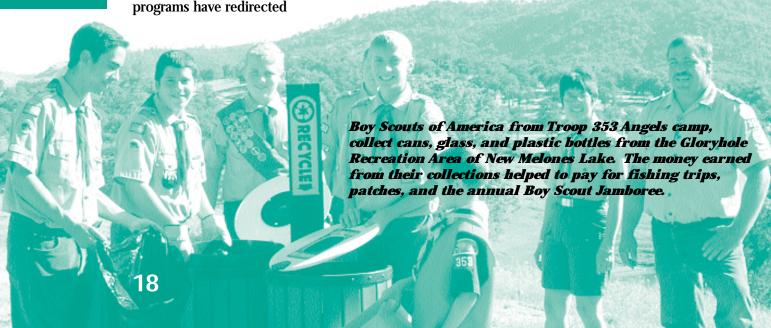
Mr. Meinerding has gone further than fundraising to ensure the AFB adheres to conserving the environment. Working hand-in-hand with the Affirmative Procurement program, he ensures that all base contracting activities include the three R's of recycling, reusing and reducing. As a result, there are more than 22,000 recycled content items in use in base opperations. To date, his programs have redirected

more than 62 million pounds. of the 200 million pounds, of solid waste destined for the landfills to use in other areas – an average diversion rate of 30 percent. Despite a decrease in the base's population, Mr. Meinerding's program continues to grow and expand the possibilities of the ongoing recycling effort. The recyclables per person has increased by approximately 23 percent. Information on Wright Patterson Air Force Base's recycling program can be obtained through Mr.Tim Clendenin, Timothy. Clendenin @wpafb.af.mil, or 937-257-2057.

At New Melones Lake in Sonora, California, the effort to minimize waste and promote the protection of natural resources was made possible through the work of Ms. Leanne Bryan. A regional and popular recreational site, the park is visited by almost 820,000 people a year. As an avid supporter of the recycling

effort at the lake, Ms. Bryan educated visitors to the park about the benefits of recycling and also proposed, initiated and coordinated the New **Melones Lake Recycling** Program in March 2000. Her leadership skills helped to organize an in-house/ employee recycling program that reduced solid waste by almost 40 percent through the collection of cardboard, aluminum, paper and plastics. Through a grant issued to New Melones Lake from the California Department of Conservation, ten pairs of recycling bins with high visibility posts were placed throughout the recreation areas, campgrounds, and the Visitor Center.

Groups such as the Boy Scout of America and the Solid Waste Division of Calaveras County, participated in recycling efforts for the park. The Boy Scouts collected 8,516 pounds of recycled aluminum cans, glass, and plastic bottles from



Ms. Bryan helps a student from the Sierra Waldorf school collect cans and bottles to recycle. When regular collection stopped in August, Ms. Bryan's determination to make recycling a year-round event continued.

the recreation area during the summers of 2000 and 2001, raising more than \$1,000 for their organization. After the Solid Waste Division of **Tuolumne County provided 20** two-barrel sets for recycling, Ms. Bryan and her co-workers mobilized students and parents at the Sierra Waldorf School to collect the contents. More than \$200 worth of recyclables were collected to be used towards the class's field trip fund. Ms. Bryan's efforts to work with individuals and groups from her community to educate them on the positive and negative effects human impact has on recreational and natural areas has helped to illustrate the importance of environmental stewardship



actinides at the Los Alamos **National Laboratory (LANL)** in New Mexico, was to process the chemicals in an evaporator and store them for eventual shipment to the **Waste Isolation Pilot Plant** (WIPP). At the Radioactive **Liquid Waste Treatment Facility** (RLWTF) the acid was neutralized and the actinides were precipitated out before being discharged into the environment. In 2001, the laboratory implemented a new distillation process that recycles acid used for

the chemical. The reconcentrated acid is removed from the bottom and reused. The benefits of this process have reduce the annual amount of acid destined for the RLWTF by 99.98 percent. This new process has also generated a 128 percent return on investment on capital costs of \$2 million. Previous methods of disposal at the WIPP cost the laboratory around \$14,500.

The NARS model work has been instrumental in promoting the pollution

prevention ethic at the

LANL Plutonium and Processing and Handling Facility. The success of the facility has prompted other organizations dealing with special nuclear materials to participate in a top-down reexamination of operations, with a view to implementing source reduction. For a detailed description of the Los Alamos **National Laboratory plutonium** and other actinides disposal methods, contact Mr. Robert Dodge, rdodge@lanl.gov or 505-665-0493.

and natural resource management. For more information on New Melones Lake Recycling Programs, please contact Ms. Michelle Prowse, mprowse@mp. usbr.gov or by phone at: 916-978-5036.

For the last 20 years, the disposal method for plutonium and other

plutonium dissolution and recovery. The Nitric Acid Recovery System (NARS) has helped to reduce plutonium contamination by 93 percent. By recycling 100 percent of radioactivity back into the system, activity-free water is generated. Used plutonium is sent to a newly installed recycle distillation unit, that recovers nitric acid by boiling

Waste Prevention

ASTE, QUITE SIMPLY, IS A **MEASURE OF INEFFICIENCY.** Every day, on average, each individual discards more than four pounds of material. These discards burden both the environment and economy. Another approach to our solid waste challenge, in addition to recycling, is to cut the creation of waste in the first place. Waste that is not created does not have to be recycled or managed later. That's why waste prevention (reducing and reusing) is the ideal solid waste solution. Waste prevention involves altering the design, manufacture, purchase, or use of products and materials to reduce the amount and toxicity of what gets thrown away. Waste prevention is sometimes called source reduction because it reduces or eliminates pollution at the source.

Efforts such as Pearl Habor's Naval Shipyard & **Intermediate Maintenance** Facility (IMF) in Hawaii, helps shift the emphasis from pollution cleanup to pollution avoidance. Pearl Harbor Naval Shipyard & **Intermediate Maintenance** Facility's primary mission is to provide regional maintenance to keep the surface ships and submarines "fit to fight." Due to the myriad of complex industrial operations performed around the sensitive ecological area

in which the Shipyard and IMF are located, the facility's greatest challenge was to integrate environmental controls into its current work practices without adversely impacting costs, productivity, and the environment. The facility formed a formal pollution prevention partnership with the EPA and state of Hawaii Department of Health Hawaii was initiated to help ensure that changes to the Shipyard and IMF would be made that would not negatively effect the environment or decrease productivity.

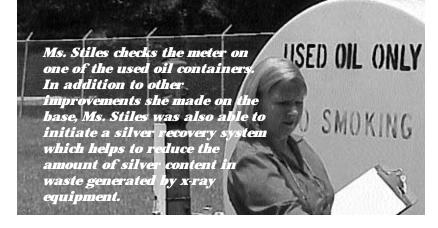
Solid waste generated by the Shipyard and IMF was significantly reduced. More than 10,114 metric tonnes of non-industrial and industrial waste were diverted from landfills and incinerators, saving the base more than \$889,357. Materials recycled

include paper, glass, plastics, books, printer cartridges, rubber tires, fluorescent light tubes, and oil. Approximately 60 metric tonnes of oil were reclaimed and resold. A junk cleanup was organized to help properly dispose of waste strewn throughout the Command. The cleanup effort was a success, generating more than 419 metric tonnes of recycled metals alone and turning in \$585,000 of material for recovery.

The Shipyard also installed various Energy-Star products to reduce energy consumption. High-bay lights helped to reduce energy consumption by 40 percent, and energy for computer monitor devices was reduced by 30 percent, thus helping to reduce greenhouse effects in the State of Hawaii significantly. If you are

Recycling old cardboard at the Pearl Harbor Naval
Shipyard has never been easier since the Station adopted
a solid waste diversion program. Everything has been
labeled recyclable by the Station from green waste to oil
to construction and demolition debris.





interested in receiving more information about Pearl Harbor's Pollution & Waste Prevention Program, contact Ms. Gail Shon, ShonGN@phnsy.navy.mil, or by telephone: 808-473-8000.

Ms. Kathleen Stiles of the **Marine Corps Recruit Depot (MCRD) on Parris** Island, South Carolina, has been committed to pollution prevention for six years. Since 1995, Ms. Stiles implemented a number of hazardous waste reduction projects to minimize the amount of hazardous materials on the Island and to reduce the effects they have on the Island's community. Her initial improvements diminished chlorine usage on the Island. By introducing a new filter system into the swimming pools and by replacing equipment needed for prechlorination with waste reducing equipment, the amount of chlorine and sulfur dioxide used was reduced by more than 60 percent. As a byproduct of her efforts to reduce chlorine emissions, the amount of air pollution, gas leaks, and risks to human health on the Depot all decreased. Ms. Stiles efforts extended to minimize and reduce other hazardous pollutants

generated by the Island's facilities. She replaced the machinery in the Island's dry cleaning facility with two new refrigerated condensers which recover and reuse their cleaning solvent, and oversaw a successful solvent tank conversion for parts cleaning operations on the Depot. Ms. Stiles also purchased bypass filters for the Motor Transportation Department, and a silver recovery system for X-Ray equipment, both of which reduced hazardous waste significantly.

By 2001, Ms. Stiles had reduced the amount of hazardous waste on the island by 75 percent. Her work with representatives of the Beaufort Naval Hospital led to the installation of medical waste treatment and eliminated off-site disposal of infectious medical waste. Another collaboration with the Depot **Photo** personnel has digitized the photo imagery system, thus eliminating the hazardous chemical waste generated during traditional film processing. Ms. Stiles' outstanding contribution to Parris Island and the

environment shows that the actions of one individual can greatly benefit the surrounding environment and community. More information about Kathleen Stiles' programs are available through Johnsie Nabors, nabrosja@mcrdpi.usmc.mil, or by telephone: 843-228-2779.

In Alabama, the United **States Postal Service** (USPS) joined the EPA WasteWise Program and committed to start recycling electronics, paper, and other materials. After a close analysis of its disposal methods, a Source Reduction Management plan was put into effect to help limit the amount of products that ended up in the waste stream. This waste and pollution prevention plan entailed recycling mixed paper, old corrugated cardboard, office supplies and furniture, scrap metal, and electronics. In order to be fully committed to this plan, the USPS of Alabama had to adopt more environmentally

preferable materials and methods. Flat tubes and trays that were previously constructed out of cardboard were replaced with plastic to Part of the Alabama District's recycling program was to make sure electronics did not end up in the waste stream. Old electronic equipment was either sold or donated to needy facilities. As for their existing electronics, instead of purchasing new equipment, they were upgraded with new software and parts.

increase reuse. Boxes were used at least five times before being recycled.

Paper reduction at the Post Office was also enforced. **Electronic communication** came to replace previous written forms, saving 153,300 pounds of paper. USPS sold older electronic equipment to the private sector or donated it to schools and the Urban League. To ensure that these donations did not end up in the waste stream, old computers were returned to the Alabama District to be recycled. The USPS of Alabama has reduced their waste disposal costs by more than \$100,000 per year; the revenue from the sales of old recycled materials has earned them more than \$316,389. Information on the Alabama District's WasteWise Program is accessible through Mr. Edward C. Abrams.



(P2) committee to reduce the amount of hazardous waste and air emissions generated by the complex. Due to the many industrial processes performed daily at the facility, the P2 committee sought alternative ideas to reduce waste and pollution on the base. The committee prepared a Pollution Prevention Opportunity Assessment (P2OA) for the base and obtained endorsements by each command. Since the adoption of the P2OA, the base implemented 33 projects and reduced hazardous waste generation to unprecedented levels. Waste was reduced from 104,313 pounds. in 1996 to just 18,685 pounds. in 2000, an 83 percent decrease in five years. Hazardous Air Pollutants on the base were also reduced by 90 percent in

materials on the facility, the HAZMART project was started. As an issuing center for hazardous materials, HAZMART provides information on hazardous materials and tracks the daily weigh-in, weigh-out of such products. HAZMART also provides information about hazardous material usage and air emissions throughout the complex.

Another initiative by the Committee promotes Executive Order 13149, which calls for greening the government through increased use of alternative fuel vehicles. The P2 committee chose to power delivery vehicles with Biodiesel which was chosen for its clean-burning, organic composition. Biodiesel helps to reduce emissions of air pollutants by releasing 50 percent less CO, 78 percent

less CO2, and 100 percent less SO2. If you would like more information on USCG Support Center Elizabeth City's Waste

Prevention efforts, contact Capt. Michael Herring at 252-335-6356.

Prevention

eabrams@email.usps.gov or at 205-521-0405.

In 1992, US Coast Guard Base Elizabeth City created the Pollution Prevention this same period.

Realizing that the base needed a central point for procurement, storage, and issuance of all hazardous or more information about Greening the Government through Waste Prevention, Recycling, and Affirmative Procurement, contact The White House Task Force on Recycling at:

> 202-564-1297 task_force@ofee.gov

Or visit our website:

www.ofee.gov

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