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NAVY REGION NORTHWEST *fosters* TRIBAL relations

SAILORS HELP LOCAL NATIVE AMERICAN TRIBES WITH CLAM SEEDING

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MCLB Albany Officials Flip Switch for Landfill Gas-to-Energy Plant

Going Green While Going Strong

DoD's Ambitious Sustainability Plan

DID YOU KNOW that the Department of Defense (DoD) has a ten-year plan for going green? Sweeping and ambitious, DoD's Strategic Sustainability Performance Plan (SSPP) aims to transform the way the Department uses and manages critical resources to create a clean, lean, efficient enterprise. It's all about the mission. DoD can do its job better if it uses resources more efficiently, reduces its dependence on finite resources like fossil fuels and fresh water, and minimizes the environmental impacts of its activities.

Going green translates into the Department achieving sustainability by operating sustainably. DoD's SSPP charts the course for the Department to achieve a significantly more sustainable military force by 2020. The Department's vision of sustainability is to maintain the ability to operate into the future without decline—either in the mission or in the natural and manufactured systems that support it. More broadly, sustainability means creating and maintaining conditions under which humans and nature can exist in productive harmony, ensuring that the social, economic, and other requirements of future generations are met.

The SSPP is a result of Executive Order (EO) 13514 issued in October 2009, which provided for an exemption of military equipment and combat support operations. The plan fills an important strategic need because sustainability and the DoD mission are inexorably linked. In the theatre of war, sustainability is a no-brainer, given the heavy burden on deployed forces to transport fuel and water to expeditionary camps. Sustainability matters to the war effort and the warfighter. DoD's fixed installations and other facilities support the war effort and warfighter, therefore sustainability matters to DoD's non-operational facilities. The SSPP is framed around four mission-oriented objectives that will make the Department more effective:

1. Ensuring the Continued Availability of Resources Critical to the DoD Mission
2. Maintaining Readiness in the Face of Climate Change
3. Ensuring the Ongoing Performance of DoD Assets by Minimizing Waste and Pollution
4. Continuously Improving the DoD Mission through Sustainability Management and Practices

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The SSPP also serves a logistical function that has become increasingly critical as the volume of federal agency requirements pertaining to sustainability have proliferated in recent years, in the form of laws, Executive Orders and other regulations. The SSPP brings these requirements—from which military operations and systems are exempt for security reasons—together under one overar-

ching, Department-wide plan that makes the Department's compliance more efficient and strategic.

Ensuring the Continued Availability of Resources Critical to the DoD Mission

Going green makes good sense for DoD installations and facilities because you cannot project power globally if the home base is starved for electricity or water. DoD has over 500 major installations that rely on the commercial electricity grid, placing the continuity of critical missions at risk due to power failures. Grid disruptions routinely occur during extreme weather events, and can also occur because of attacks to the system or simple overload of the grid on hot summer afternoons. Using energy more efficiently and ramping up the amount of renewable energy generated at DoD facilities decreases our reliance on fossil fuels. At the same time, these actions reduce emissions of the greenhouse gas (GHG) emissions that cause global climate change, while enabling DoD to better do its job.

This concept isn't new to DoD. Over the years, the Department has been installing solar panels and wind turbines on DoD properties, and investing in efficiency improvements such as electricity meters, high efficiency heating, ventilation and cooling systems, automated energy management control systems, improved lighting, and reflective roofs. However, the Department also knows it needs to do a lot more to take advantage of the fossil fuel and money saving opportunities offered by energy efficiency and renewable energy. DoD's approach to doing so is embodied in six SSPP subgoals for fiscal year (FY) 2020 to reduce the use of fossil fuels:

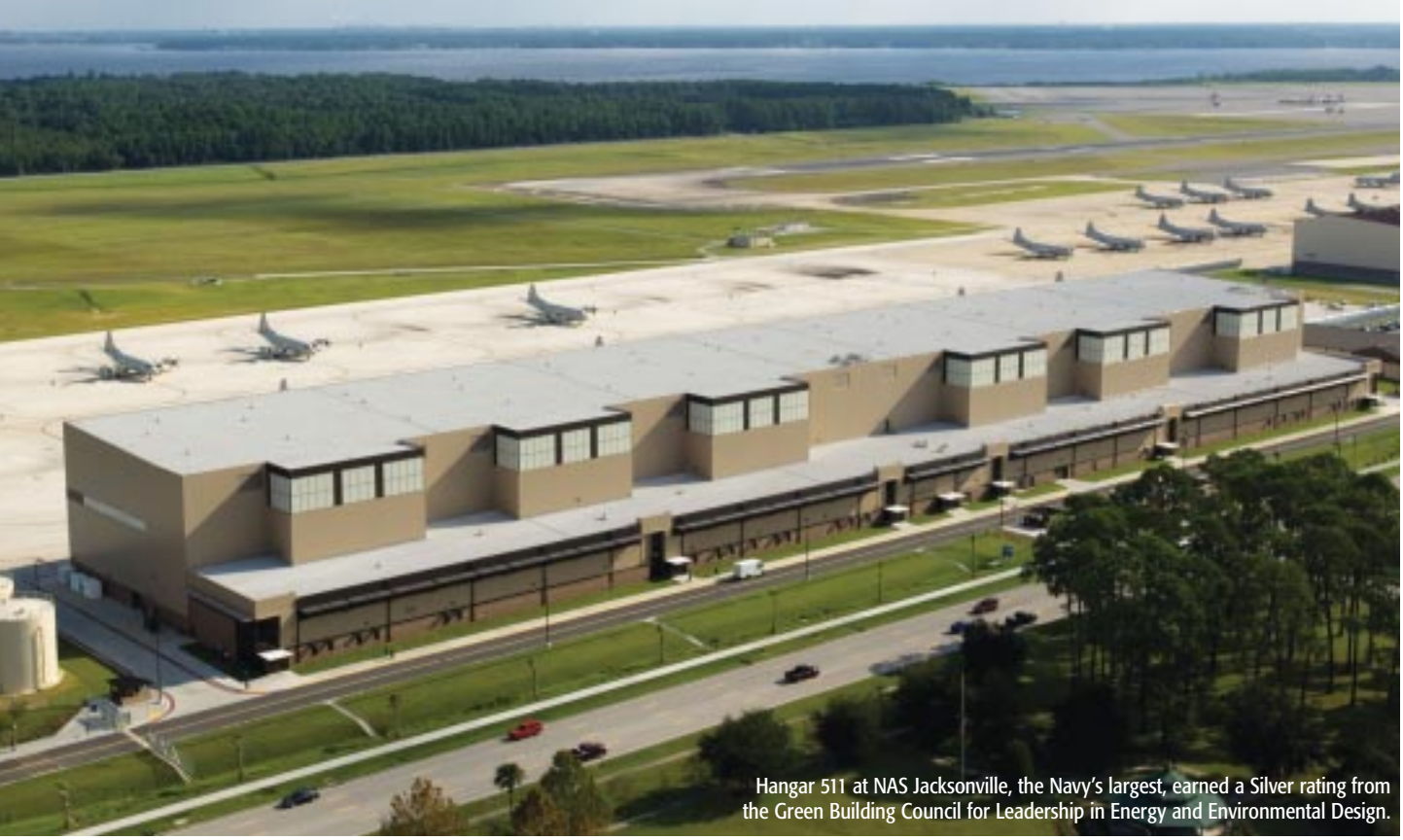
1. Reduce energy intensity (use per square foot of facility space) by 37.5 percent compared to FY 2003
2. Increase the amount of facility electricity use that comes from renewable sources to 20 percent
3. Reduce the use of petroleum products by DoD non-tactical vehicles by 30 percent from FY 2005
4. Have ten landfills or wastewater treatment facilities recovering biogas for DoD use
5. Reduce GHG emissions from employee air travel seven percent from FY 2011 levels

Secretary Mabus on Why Energy Matters to the Navy

"BY 2020 AT the latest, at least half of our energy, afloat and ashore, will come from non-fossil fuel sources. Another goal is that no later than 2020, at least half our bases will be at net zero in terms of the energy that they use. Ensuring that our new buildings are energy-efficient and ensuring that they use the latest technologies is an important part of meeting this goal. It's important to set a framework for why we established these goals: it's all about our energy security and moving toward complete energy independence. Our military and our country rely too much on fossil fuel. That dependency degrades our national security; it also harms the environment and has a negative effect on our economy."

—Secretary Ray Mabus, 10 May 2011

Capt. Mark McLaughlin, commanding officer of Naval Air Station (NAS) Kingsville, and Cmdr. Troy Hamilton examining the base's advanced electricity meter.



Hangar 511 at NAS Jacksonville, the Navy's largest, earned a Silver rating from the Green Building Council for Leadership in Energy and Environmental Design.

6. Increase the number of eligible employees teleworking at least once a week, on a regular, recurring basis, to 30 percent

Water plays a dominant role in the SSPP. It just makes good sense to squeeze the most out of every gallon of water that utilities deliver to DoD facilities. This means plugging leaks in aging pipes on installations as well as conserving water and using it more efficiently. Some installations, especially those in parts of the country where water is scarce, are leading the charge with measures like installing water-efficient showerheads and faucet aerators, reclaiming water for irrigation, using landscaping that requires little or no irrigation, and proactively managing leaks. Reducing the use (and waste) of water yields a cascade of benefits, saving not only water and money, but the energy required to treat and pump the water, which in turn reduces the GHGs that go along with that energy.

Another facet of water management is minimizing the amount of stormwater flowing off of DoD properties when it rains, or during a snow melt. Stormwater runoff carries pollutants into water bodies, which can cause compliance problems for DoD, and it makes the wastewater treatment system work harder (which then also uses more energy). The SSPP has three sub-goals to manage water resources better:

1. Reduce the potable water used per square foot of facility space 26 percent by FY 2020 from FY 2007
2. Reduce industrial and irrigation water consumption 20 percent by FY 2020 from FY 2010
3. When developing or redeveloping a site, do not increase the amount of stormwater flowing off of it, to the maximum extent technically feasible

Maintaining Readiness in the Face of Climate Change

The 2010 Quadrennial Defense Review discusses the importance of climate change to the future security environment, saying "DoD will need to adjust to the impacts of climate change on our facilities and military capabilities." For fixed installations, sea level rise can damage or destroy infrastructure, reduce the availability of land for training, and contaminate groundwater due to seawater intrusion. Heat waves may become more intense, frequent and longer; flooding and hurricane intensity might increase; and water supply could become more limited. All of these consequences can impede DoD's mission. In the near future, the Department will be addressing ways of increasing DoD's resiliency to climate change. Meanwhile, the SSPP addresses climate change through the reduction of GHG emissions, committing to two ambitious goals for FY 2020:

1. Reduce GHG emissions from Scope 1 and 2 sources by 34 percent from FY 2008 levels
2. Reduce GHG emissions from Scope 3 sources by 13.5 percent from FY 2008 levels

Scopes 1, 2 and 3 are different categories of emissions. DoD has direct

control over Scopes 1 and 2 emissions, while Scope 3 GHGs occur as a result of DoD activities, but the Department does not have direct control over them. Examples of Scopes 1 and 2 are the use of fuel in its vehicles and the use of electricity purchased from a utility, respectively. Examples of Scope 3 emissions are employee commuting and goods and services provided by vendors.

Ensuring the Ongoing Performance of DoD Assets by Minimizing Waste & Pollution

Chemicals, benign and otherwise, are essential to DoD operations. It is in the Department's interests to minimize its use of hazardous and toxic chemicals and materials for a multitude of reasons—they can result in compliance and cleanup costs, harm human health, and increase the lifecycle costs of weapon systems and facilities. The Department has been steadily finding ways to switch to safer and greener chemicals. For example, last year the Navy's Fleet Readiness Center Southeast in Jacksonville, FL decreased its annual use of toluene by 95 percent (700 gallons) by replacing it with an environmentally friendly aviation solvent. Moving forward, the Depart-

Sustainability Actions in FY 2010: Examples at the DON Level

- **Energy Efficiency**

  The Department of the Navy (DON) is out in front on metering. It is rapidly installing advanced meters in most of its buildings, with the goal of covering approximately 95 percent of consumption of building electricity, natural gas, water and steam by the end of FY 2016. DON will have 17,000 advanced meters installed by the end of FY 2011, and more than 25,000 by FY 2016. Advanced metering does not just measure consumption, it transmits data in real time from all of the meters to a central workstation, giving facility managers the data needed to optimize efficiency.

- **Renewable Energy**

  DON is completing a high-level review of the cost and benefits of solar, wind and biomass energy at all installations, and following up with on-site audits. In FY 2010, the Navy installed 10 solar photovoltaic projects, and wind turbines at Naval Base Guam. It already has 25 projects planned for the near future (FY 2011–FY 2012), spanning solar, wind, and ground source heat pumps.

- **Buildings**

  On behalf of DON, the Naval Facilities Engineering Command (NAVFAC) issued policy and guidance in December 2010 requiring that all new buildings and major renovations costing over $750,000, and all repairs and alterations to existing buildings, comply with the federal High Performance and Sustainable Buildings Guidance.

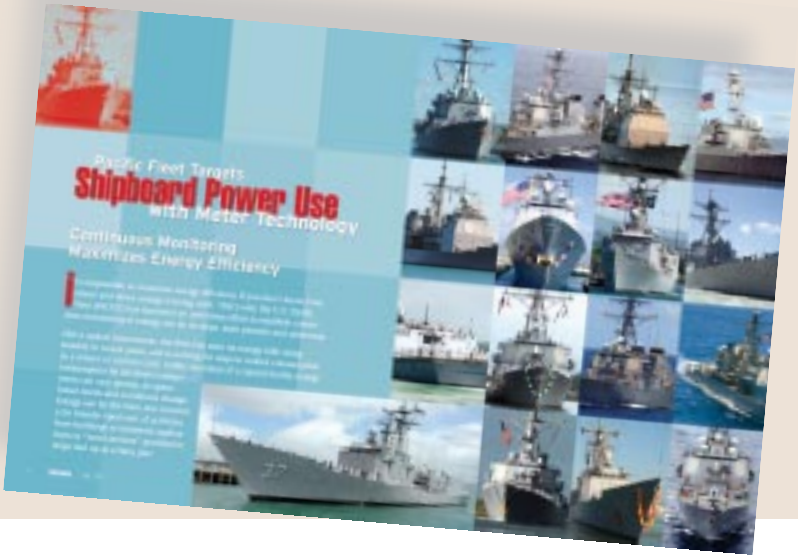
- **Stormwater Run-Off**

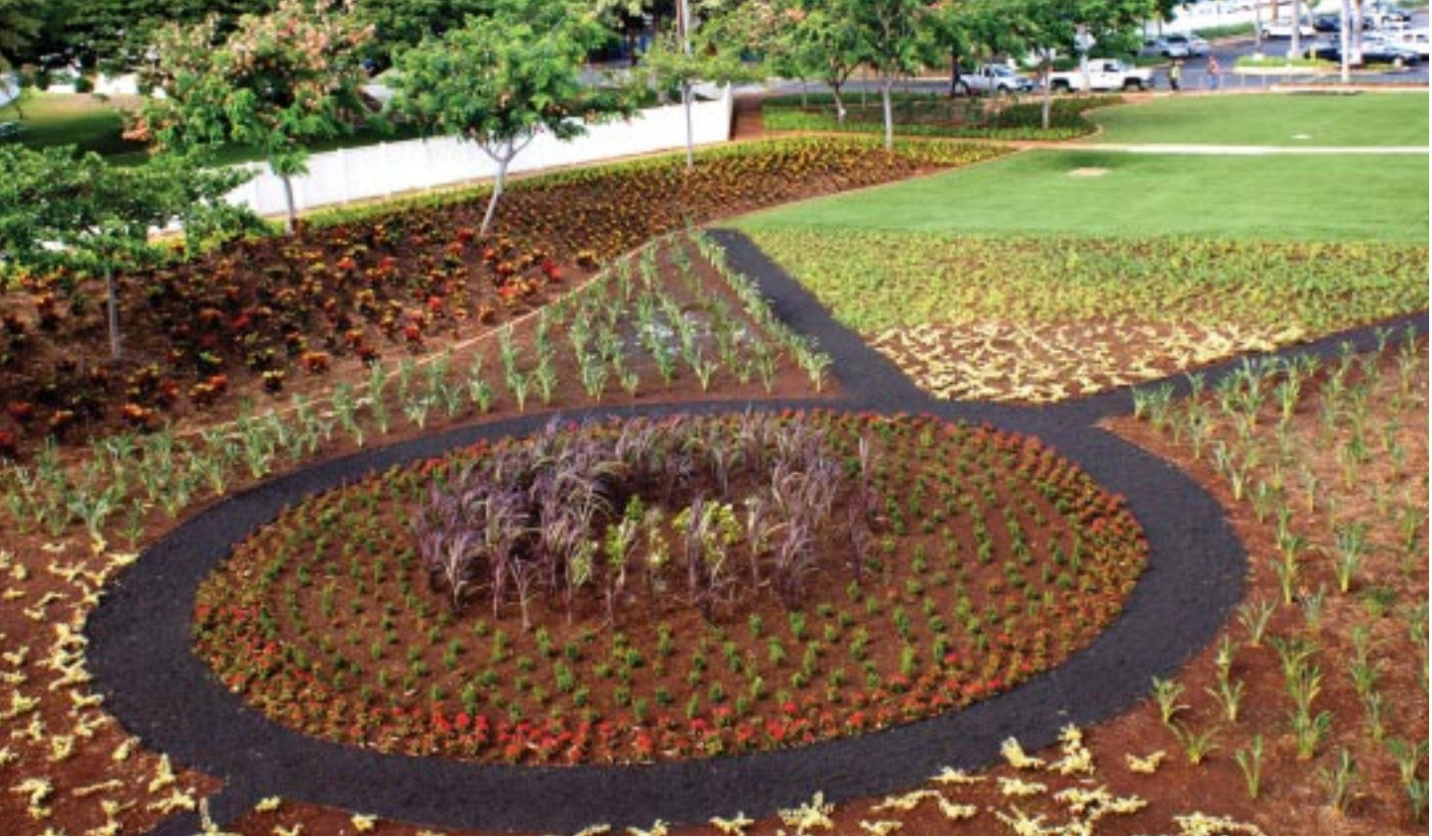
  DON developed and implemented a capability to electronically track compliance with its stormwater runoff and low-impact development requirements, using the NAVFAC project management tool called "eProjects."

- **Paper Reduction**

  DON already issued policy to help reduce the use of printing paper, and–in support of the DON policy–the Space and Naval Warfare Systems Command issued policy and guidance on duplex printing requiring all of its locations to use Energy Star duplication devices (such as printers, photocopiers, fax machines, and multifunction printers) with duplex printing capability to the maximum extent possible, and for users to print double-sided.

For more insights into the Navy's efforts to acquire and communicate electrical use data from existing power meters in port and at sea, read our article entitled "Pacific Fleet Targets Shipboard Power Use with Meter Technology: Continuous Monitoring Maximizes Energy Efficiency" in the fall 2011 issue of *Currents*. To browse back issues or subscribe to the magazine, visit the Department of the Navy's Energy, Environment and Climate Change web site–at greenfleet.dodlive.mil/currents-magazine.





Xeriscape landscaping at the Navy Exchange Mall and Commissary in Pearl Harbor, where fresh water is scarce.
Thomas Obungen

ment set four sub-goals for this decade to minimize the use and release of chemicals of environmental concern:

1. Reduce toxic chemicals (on-site releases and off-site transfers) 15 percent by FY 2020, from CY 2006 levels
2. Dispose of all excess or surplus electronic products in an environmentally sound manner
3. Properly certify all DoD personnel and contractors who apply pesticides
4. Have all installation integrated pest management plans prepared, reviewed, and updated annually by pest management professionals

The Department has long been proactively diverting solid waste from landfills and incinerators through recycling. In addition to the solid waste diversion sub-goals shown below, DoD is now also tackling our over-reliance on printed documents:

1. All 31 DoD Components implementing policies to reduce the use of printing paper by FY 2014
2. Divert half of the non-hazardous solid waste (not counting construction and demolition debris) from the waste stream by FY 2015 through reuse, recycling, and composting
3. Divert 60 percent of construction and demolition debris from the waste stream by FY 2015

Going green makes good sense for DoD installations and facilities because you cannot project power globally if the home base is starved for electricity or water.

Continuously Improving the DoD Mission through Sustainability Management & Practices

Some of the things that can be done to make DoD more green don't fit nicely in a single sector, such as energy or chemicals. They cut across sectors and address the way DoD conducts its day-to-day business. For example, making buildings sustainable requires an integrated approach spanning many sectors, including energy, water, indoor air quality, and stormwater runoff. To address these cross cutting topics, the SSPP has four sub-goals under the objective to continuously improve the mission through sustainability management and practices:

What Can One Person Do?

- **Go (Almost) Paperless**
  Re-think and reorganize the way you work to rely on electronic documents rather than printed ones. Set your duplication devices to double-sided printing for those times when you do print or copy.
- **Work from Home Sometimes**
  If you can do at least part of your job at home, arrange to telework one or more days a week.
- **Use Energy and Water Responsibly**
  Go to the "Power Options" in your computer's Control Panel to enable power saving features and extend the useful life of office electronics (DoD Policy); shut down your computer at night; turn off lights. Run the faucet sparingly, and report leaking faucets or toilets.
- **Recycle**
  Get in the habit of making full use of your facility's recycling program.
- **Properly Process Unwanted Electronics**
  Make sure your old computer equipment is processed through DLA Disposition Services (www.drms.dla.mil) or a similar program.
- **Green Your Travel**
  When you have to travel, maximize your use of walking and mass transit for local travel; go for clean cars such as hybrid electric vehicles if renting; and use non-stop flights if flying.
- **Make Green Procurement Decisions**
  Ninety-five percent of all contracts must have provisions for sustainable products. A few handy web sites to help:
  - Look for the green tree icons in DoD EMALL (www.dlis.dla.mil/emall.asp).
  - Make sure computers and other electronic equipment fulfill their relevant requirements such as Energy Star (www.energystar.gov) and the Department of Energy's Federal Energy Management Program (www1.eere.energy.gov/femp/technologies/eep_purchasingspecs.html).
  - Follow the U.S. Environmental Protection Agency's guidelines on recycled content (www.epa.gov/epawaste/conserve/tools/cpg/products/index.htm).
  - See if products you're buying are listed in U.S. Department of Agriculture's BioPreferred Catalog of biobased products (www.catalog.biopreferred.gov).

1. Conduct 95 percent of procurement actions (new contracts and modifications) sustainably
2. Have 15 percent of existing buildings conforming to a set of federal sustainability criteria by FY 2015
3. Effectively implement and maintain all Environmental Management Systems
4. Coordinate with planning relating to regional and local transportation and energy choices

What's Next?

The DoD SSPP applies to everyone in the Department, spanning all 31 DoD Components: the Military Services, the Defense Logistics Agency (DLA) and 17 other Defense Agencies, and the ten DoD Field Activities. The plan was developed through an iterative, participatory process with DoD subject matter experts, the DoD Components, and existing committees and work groups. The DoD Sustainability Implementation Working Group is charged with integrating all of these initiatives in a coordinated, cohesive strategic plan—the SSPP. It is updated annually with input and participation by these stakeholders. The SSPP is an ambitious undertaking, and translating this DoD-wide roadmap for sustainability into a green DoD by 2020 will take action and innovation on the ground. In DoD installations, depots and office buildings around the world, military and civilian, making the vision of DoD's sustainability plan a reality is everyone's business. Although exempt from EO 13514, DoD is not keeping operations exempt from its sustainability efforts—the Components are making important strides integrating sustainability concepts and initiatives into operational environment.

The SSPPs and related guidance can be found on the Defense Environmental Network and Information Exchange (DENIX) at http://www.denix.osd.mil/sustainability/PlansGuidance.cfm. ⚓

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