



Energy and Environmental Quarterly

*U.S. Department of Commerce; Office of Facilities and Environmental Quality; Office of Sustainable Energy and Environmental Programs
Volume 5, Issue 4*

Lean, Clean, and Green Presidential GreenGov Award goes to... Ted Stevens Marine Research Institute

The Ted Stevens Marine Research Institute (TSMRI), part of the National Marine Fisheries Service, Alaska Fisheries Science Center in Juneau, Alaska, won the Presidential GreenGov "Lean, Clean, and Green" award for 2013. The 66,000-square-foot facility is using seawater as a heat source to replace oil-fueled boilers and eliminate associated carbon emissions. The team developed a system to extract heat from seawater already being pumped through the Institute to support research activities. The seawater heat pump is the latest of three projects the facility has spearheaded in order to reach near-zero carbon emissions. By eliminating its total use of 120,000 gallons of fuel at the environmentally-sensitive location, the facility has reduced costs by \$360,000 annually. And, because the electricity in Juneau is generated hydro-electrically, the carbon emissions are eliminated with clean renewable energy, making this the greenest research facility in the National Oceanic and Atmospheric Administration's (NOAA) inventory.



This project was completed primarily in-house: John Cooper, the current facilities manager, oversaw project completion and commissioning with the assistance of Gordon Garcia, lead TSMRI maintenance mechanic. Tommy Abbas, another TSMRI maintenance mechanic, led construction, supported by a skilled in-house labor team of Mark Hoover, Mike Anderson, Chris Cunningham, and Jim Heckler. Congratulations to this NOAA team for reaching a new landmark for NOAA in clean energy, efficiency, and cost savings efforts.

DOC Earth Day Celebration



Save The Date.... April 24th!

In This Edition

Getting to Know...Jennifer Shaltanis	2
Stormwater and Infrastructure	2
Accurate Sustainability Data	3
DOC's New Solar Panels	3
Saving Money and Energy at Home	4
NOAA's Green Team Talks	4

Meet A DOC Sustainability Community Member: Jennifer Shaltanis



We would like to highlight a Commerce Department employee who is making a difference in our sustainability efforts. Jennifer Shaltanis oversees and manages NOAA's sustainability program. Jennifer works as NOAA's Sustainability Program Manager in their Silver Spring, Maryland office. She joined the Department three and a half years ago from U.S. Customs and Border Protection, where she served as an Environmental Management System (EMS) coordinator.

Jennifer plays a large and active role managing NOAA's alternatively-financed energy efficiency contracts, executing all Strategic Sustainability Performance Plan requirements, developing NOAA policy, managing workgroups, performing data analysis, serving on award and grant panels, and offering recommendations for agency-wide performance improvements for increased efficiency.

Of particular importance to NOAA's sustainability mission is the development and

design of a new online system of enhanced IT tools used to improve efficiency and data quality and to raise visibility of sustainability priorities. When asked if there was something special or unique that she felt she contributed to NOAA's sustainability mission, Jennifer replied, "changing the organizational culture to integrate sustainable practices and vision is fundamental to how NOAA does its mission. It is a slow and segmented process, like putting together a puzzle; eventually the pieces will fit together to make a beautiful landscape."

Jennifer lives with her husband and two daughters, and when she isn't managing or performing analysis for NOAA she spends her time running, refinishing furniture, doing projects with her children, and cooking. She holds a Ph.D. in Civil (Environmental) Engineering from Washington State University.

Stormwater Runoff and Green Infrastructure

The Environmental Protection Agency (EPA) estimates that stormwater runoff is the largest cause of poor surface water quality.

Stormwater runoff is generated when rain or snowmelt flows over land and does not soak into the ground due to soil saturation. As the runoff flows over impermeable surfaces, such as paved streets, parking lots, and building rooftops, it accumulates debris, chemicals, sediment or other pollutants that could negatively affect water quality if the runoff is not treated. The primary method to control stormwater is the use of best management practices (BMPs). The EPA requires most stormwater discharges to have a permit under the National Pollutant Discharge Elimination System (NPDES) process, a part of the Clean Water Act.

The NPDES Stormwater Program regulates discharges from three sources: municipal separate storm sewer systems (MS4s), construction activities, and industrial activities. Most stormwater discharges are considered point sources, and operators of these sources may be required to obtain a NPDES permit. This permitting mechanism is designed to prevent stormwater runoff from washing harmful pollutants into local surface waters such as streams, rivers, lakes or coastal waters.

With the exception of a few states, the U.S. territories, and most tribal lands, the EPA has delegated authority to implement the NPDES Stormwater Program and allow states to administer their own stormwater permitting programs.

A successful tool for the absorption of stormwater which reduces volumes of overland runoff and quantities of flow discharged through the point source NPDES permit program is the development of green infrastructure. Green infrastructure is a BMP used by the private and public sectors that maintains healthy waters,

provides multiple environmental benefits, and supports sustainable development by preventing stormwater from becoming runoff in the first place. Unlike single-purpose stormwater infrastructure, which uses pipes to dispose of runoff, green infrastructure uses vegetation and soil to manage rainwater where it falls, such as in green or vegetated roofs, rainwater gardens, and rainwater reuse systems. By weaving natural processes into the built environment, green infrastructure provides not only stormwater management, but also flood mitigation, air quality management, and much more. At a time when so much of America's infrastructure is in need of replacement or repair and agencies are dealing with tough budget realities, the EPA states that green infrastructure is a resilient and affordable solution that meets many objectives at once.

For more information on stormwater:

<http://cfpub.epa.gov/npdes/stormwater/swbasicinfo.cfm>

For more information on green infrastructure:

<http://water.epa.gov/infrastructure/greeninfrastructure/index.cfm>



The Significance of Accurate Sustainability Data

Many employees may believe that collecting, recording, and reporting sustainability performance data for a government building translates to an administrative burden. While it may seem that way at times, the significance lies in what that data can be used for if it is accurate. Sustainability data, if collected and tracked properly, can reflect operational effectiveness that can lead to greater efficiency and cost savings. Take for example the monthly electricity consumption of a single building. Alone it doesn't tell you much; however, combined with a portfolio of thousands of similar buildings it can give a more accurate understanding of the building's performance and relative efficiency.

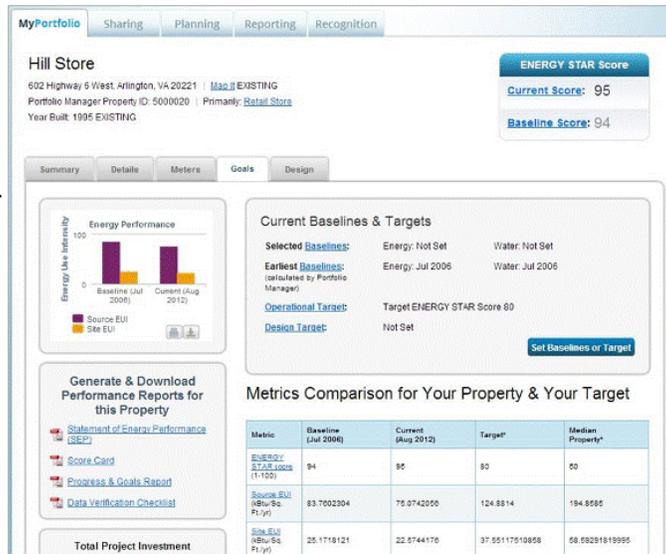
If you have ever been interested in purchasing a house, you'll likely have paid attention to the monthly electricity costs. In fact, the real estate firm trying to sell the house will often highlight this data specifically. Why? An extremely efficient air handling unit translates to low monthly utility bills and is a great selling point for a realtor and home owner. You are contemplating a major investment that doesn't end with the mortgage, but rather extends into the realm of annual operation and maintenance costs. If, on the other hand, the house has an old, poor quality air handling unit, your monthly expenses may be considerably more than you planned. A

potential buyer asking for monthly utility data is probably making a mental comparison against the only other data available: what am I paying in my current house? The same logic applies to government buildings and although many may argue that these are not personal expenses, as taxpayers, we all contribute indirectly to that utility bill, so it's in our collective best interest to pursue efficiency.

The U.S. Environmental Protection Agency's (EPA) Portfolio Manager (PM) is a web-based platform that allows all users to benchmark the performance of their building against thousands of similar buildings. Specifically, once users enter their building data into the PM, they automati-

cally get a comparison against all other similar buildings and can immediately see if their building is more or less efficient than average. A building rated as "less efficient than average" means that utility costs are much higher than average. This knowledge becomes quite valuable and may help build the case (and economic analysis) to senior management for a renovation project. At a higher level, quality data for an entire portfolio of buildings help senior management make informed decisions when confronted with limited funding, such as: Which buildings should be renovated? Which buildings should be demolished? Is leasing a more cost effective option to new construction? This ultimately leads to strategic decisions that ensure the largest return on investment for the taxpayers' dollars.

It is easy to log onto the EPA's PM and takes only a few minutes to enter monthly utility data. There is always someone within an organization who is responsible for paying the utility bill for every building, so any additional time required to also enter that data into PM is extremely limited. For questions about using the PM, contact the Office of Sustainable Energy and Environmental Programs (OSEEP). OSEEP also developed a [training videos](#), posted online, that walks users through each step.



Commerce Department Installs Solar Panels on Headquarters' for First Time



The Department of Commerce recently installed three solar panels on the roof of its headquarters, the Herbert C. Hoover Building in downtown Washington, DC. The first of its kind for the building, the installation is part of Commerce's efforts to in-

crease its use of renewable energy and commitment to environmental stewardship.

The installation also supports President Obama's December 5 Presidential Memorandum calling on federal agencies to obtain 20 percent of their electricity from renewable sources by 2020.

Two Commerce agencies – the National Oceanic and Atmospheric Administration and National Institute of Standards and Technology – have already installed solar panels on some of their facilities in recent years. The Department is challenging all Commerce bureaus to pursue renewable energy, implement energy conservation campaigns, and lead by example as good stewards of the environment.

The installation was a collaboration between the Office of Facilities and Environmental Quality's Office of Space and Building Management and Office of Sustainable Energy and Environmental Programs (OSEEP).

For more information on renewable energy or the Green Grants program, visit OSEEP at: <http://www.osec.doc.gov/ofeq/OSEEP/>.

Staying Warm While Keeping Heating Costs Reasonable this Winter

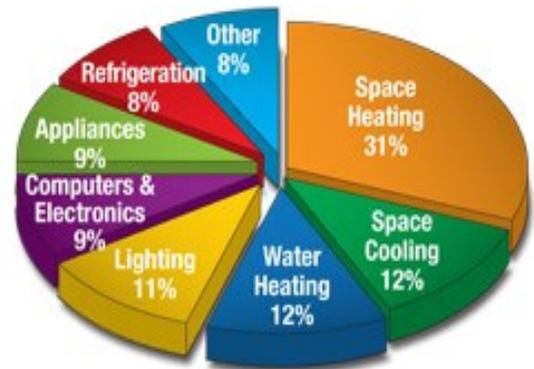
The beginning of the new year can often be a time when we resolve to adopt better habits in life. It is often a time when we go through our closets and cupboards getting rid of things no longer needed and setting our sites on a more organized and improved home.

This is also a good time for people to assess their homes' heating system, and whether it can be more efficient. According to the Department of Energy, 31 percent of the energy use in our homes is for space heating. With the National Weather Service showing record low temperatures in the DC metropolitan area this winter, keeping our homes comfortably warm may be more costly than usual this year.

To help save some cash during these cold times, the Office of Sustainable Energy and Environmental Programs has suggestions for several energy saving measures.

First, as people clean out closets kitchen cupboards, they should also switch out air filters. Ideally, this should be done once a month. Check for drafts through windows and door jams and insulate accordingly. If possible, people should also insulate their attic and make sure to check out their heating system components. Individuals without a programmable thermostat should consider purchasing one. It is worth the investment and makes it that less likely that the thermostat will manually go way beyond what is needed. Finally, check the output vents to make sure that nothing may be blocking the airflow. People can also close off the vents in rooms that are not regularly used. We hope these tips may help you to stay com-

fortable in your warm home without breaking the bank. Stay warm!



NOAA Fisheries Discusses Their “Green Team Talks”



The challenges of environmental sustainability are much more immediate to those living on an island. Here in Hawaii, we see the pressure of limited resources and the high cost of importing fuel, food, and other goods on a daily basis. Despite this fact, encouraging people to change their behaviors is a difficult task. In 2009, a few NOAA Fisheries Pacific Islands Region (PIR) staff got together to form a Green Team to “encourage and educate ourselves and others to make sustainable choices to mini-

mize the energy we consume and the waste we produce in all aspects of our lives.”

Since its creation, the PIR Green Team has initiated a number of sustainability programs; however, none have been more popular than the “Green Talk.” During each talk, a member of the PIR staff shares their personal challenges and solutions around a particular sustainability lifestyle topic. Talks to date have included: Home Aquaponics, Home Solar Panels, Green Commuting, and Living Trash-Free.

Working for an environmental agency like NOAA, staff often have hobbies that connect them to the natural world. “We appreciate the opportunity to share our efforts with like-minded people, which may be the reason it has been easy to get staff to lead the talks so far,” suggests Danielle Jayewardene, a Green Team member who organizes the sustainability sharing sessions. She also suggests that the high attendance numbers may have to do with the power of peer-to-peer education. “As an audience, we tend to trust those we know, so are likely to be more open to hearing ideas when they are presented by fellow staff members.”

If you are interested in learning more about our Green Talks or have any questions, feel free to contact the PIR Green Team at PIROgreen@noaa.gov.

*Article by Jennifer Metz, Education and Outreach Specialist
NOAA Fisheries Service, Pacific Islands Regional Office*

U.S. Department of Commerce, Office of Facilities and Environmental Quality (OFEQ)

Office of Sustainable Energy and Environmental Programs (OSEEP)

1401 Constitution Ave., NW Washington, DC 20230 Email: gogreen@doc.gov Website: <http://www.osec.doc.gov/ofeq/OSEEP>

