A Few Green Points

Point Reyes National Seashore

Fourth Quarter FY 2010 Issue

This is the FIRST issue of our quarterly newsletters highlighting some of our green activities at PORE. Feel free to contact Sara Hammond and Dale Dualan with future topics or suggestions.

Blending In With Biodiesel

By Sara Hammond

Biodiesel blending station located at Roads & Trails.

When I used to think of the Point Reyes National Seashore (PORE) roads crew members, I would think one thing: *dedication*. These men and women keep our roads safe, our culverts clean, and help us navigate through our beautiful park. Without them, we'd literally be lost! Now my perspective has changed: they are *dedicated environmental stewards*.

In addition to numerous sustainable practices in the roads division, the newest addition is the FlexBlend Biodiesel Fueling System. Championed by roads supervisor Jeff Jewhurst, the system consists of two 1,000 gallon tanks and a modified E-85 Glibarco-Encore dispenser. While other biodiesel fueling systems are available at other parks, PORE has the first *flexible* blending system.

Unlike petroleum diesel, pure biodiesel emissions contain no cancer causing compounds such as benzene and other polycyclic aromatic hydrocarbons (PAHs).

PORE is able to slowly increase the biodiesel percentage while observing the mechanical performance of each piece of equipment. While a forklift manufactured in 2009 may be able to utilize a B20 blend (20% biodiesel, 80% conventional diesel), a road grader from 2001 may only be able to utilize a B10 blend. The flexible system allows for a range of biodiesel blends to best suit equipment needs.

The biodiesel is soy-based and purchased from Redwood Coast Petroleum, a local vendor. It is trucked-in once a month and pumped into a 1,000 gallon biodiesel container. The second 1,000 gallon container houses conventional diesel. The two tanks are connected by a blending pipe. To illustrate, a B20 blend would pull 20% of the total volume from the biodiesel tank, 80% from the conventional tank, blend in the pipe, and then be dispensed. Currently, PORE is blending at B20 for off-road heavy equipment and is slowly increasing the biodiesel percentage.

PORE plans to expand the biodiesel blending system to its road mowers, trails and ground maintenance equipment, and small utility vehicles. While the blending system is not currently approved for use with U.S. General Services Administration (GSA)-leased vehicles due to metering

Sustainable Practices in PORE's Roads & Trails Division

- Heavy equipment uses green hydraulic fluid
- Bio-based oil for chainsaws
- Bio-based cleaners and degreasers
- 30% of park signs recycled from previous signs
- Recycled wood materials used in Muddy Hollow trails project

Administering Solar

A new photovoltaic system that will produce approximately 16,000 kilowatts (kW) annually was placed in service at Point Reyes National Seashore (PORE) in early February 2010. Mounted on the Headquarters building in Bear Valley, the system will harness energy from the sun to generate 33 percent of the electrical power consumed by the administrative operations.

Combined with photovoltaic systems annually producing nearly 19,000 kilowatt hours already in service in the Bear Valley area, and ongoing conservation efforts including a lighting retrofit and the installation of energy efficient thin-client computer terminals, the park will reduce its use of electricity generated in part by fossil fuels.

Additionally, in late July, seven additional photovoltaic systems funded by the American Recovery and Reinvestment Act at will be constructed at various locations throughout the park. These systems will generate an additional 48,000 kWh. Design calculations indicate PORE will generate over 45% of its net electrical use.

Point Reyes National Seashore will continue to integrate sustainable operations while educating staff and partners on how to be the best environmental stewards in conjunction with Pacific West Region's vision of carbon neutrality by 2016.

regulations, PORE is researching compliance options.

In accordance to Executive Order 13514, the FlexBlend Biodiesel Fueling System will enable PORE to reduce greenhouse gas emissions from transportation by 19%, as well as increase the park's alternatively-fueled vehicle fleet from five to seventeen.

Many thanks to Jeff Jewhurst and his crew for their stewardship excellence.

Solar panels atop the administration building.

The Administration building produced 37% of their electricity from solar energy for June 2010!

For more information on biodiesel please visit: http://www.biodiesel.org/
For more information on solar energy please visit: http://www.pge.com/solar/

Highlights & Upcoming Projects

Recycling At PORE

In collaboration with Conservation Corps North Bay (CCNB), we have updated our previous Park recycling pamphlet. It is available on the teams drive: N:\Recycling_Pamphlet

A Reusable Service

For the past 3 years, Point Reyes Nation, a local service supporting the West Marin Community, has been our provider of reusable tables, plates, and utensils for our Annual Sunrise Breakfasts. Thanks to the efforts of Park Ranger Loretta Farley, we are reducing our solid waste by shifting from disposable items to reusable and recyclable alternatives. For more info about Point Reyes Nation visit: http://www.pointreyesnation.com/

New Lighting

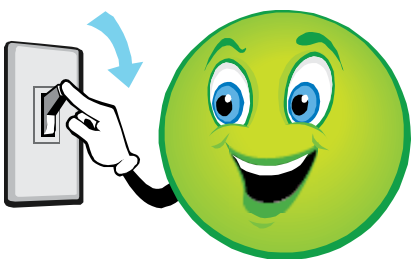
A lighting retrofit project soon will be underway at Point Reyes. The Park has partnered with SmartLights, out of Berkeley, in conducting energy audits. The audits gave the Park insight as to which lights should be replaced, where sensors are appropriate, and possibilities of delamping. The project includes retrofitting all existing inefficient T-12 fluorescent lighting with efficient T-8 lighting. Also, all inefficient electromagnetic ballasts will be retrofitted with efficient electronic ballasts. The project, which was 70% funded by PG&E rebate monies, will deter 15.9 metric tons of GHGs per year. Additionally, the park will use 47,689 kW less a year- that's equivalent of the Administration building's annual use!

Harnessing The Sun

With American Recovery and Reinvestment Act (ARRA) funding, PORE will be adding 33.5 kW worth of solar panels on several buildings within park boundaries. Calculations indicate 48,256 kWh will be produced by these systems. Added to the 22,000 kWh produced by existing solar systems, we will be generating 30% of our own electricity from the sun!

With the lighting retrofit project, computer energy management program and increase in thin-client and laptop computers, this percentage may increase as we decrease the amount of electricity we buy from PG&E. It will be exciting to see how high percentage of electricity we can generate here in our back yard. **But we need your help!** You can help lower electrical use in staff buildings by following a few simple guidelines:

1) Turn lights off that are not in use. Empty rooms love the dark.
2) Encourage procurement of Energy Star products
3) Turn off your computer and monitor when you are not at your desk (unless advised by IT)



DOI Discuss Environment

"The DOI Conference on the Environment" was held the last week in April in Portland, OR. Presentations ranged from sustainable design and project implementation, natural resources and climate change adaptation, and community and volunteer outreach. All PowerPoint presentations are available on the teams drive: N:\DOIConferenceontheEnvironment. We advise you start with the "Road Map" doc!

The Quarterly Challenge

Take public transportation, carpool, walk, or bicycle when running short errands or going to work. Conserve gas, save money, and help the environment!

A Point of Opportunity

Hello Park Service! I hope I will get to meet some of you in person instead of through this newsletter. My name is Dale Dualan and I'm a new Student Conservation Association (SCA) Intern working with the Facility Management Division. This upcoming year I will be assisting Sara Hammond, our park Energy Manager, with environmental management projects in efforts to promote sustainability and to help continue to foster our mission of environmental stewardship. I am from Modesto, CA. I received a B.S. in Conservation and Resource Studies from UC Berkeley in 2009. I am very delighted to be here and I look forward to working with you in the near future!

MEET THE TEAM:

Sara Hammond and Dale Dualan

Email us with any questions or suggestions or stop by our office at Buildings and Utilities!

We thank you for your sustainability efforts and cooperation!