

Biobased Products Perform & Help Meet Sustainability Goals

When you're tasked with protecting one of America's most treasured natural resources, you can't help but feel a tremendous responsibility. Grand Canyon Environmental Protection Specialist Deirdre Hanners is reminded of the importance of her task each day when she enters the park and takes in the awe-inspiring views of the Canyon.

"The mission of the National Park Service (NPS) is to preserve and protect the natural, cultural and historic resources in our parks for future generations," said Hanners. "At Grand Canyon National Park, we are charged with the important task of protecting historic buildings, archeological sites, endangered species, and the most famous views in the world. Eliminating harmful toxic chemicals and replacing them with biobased products that are derived from the natural world, directly upholds our mission and benefits human health as well."

The Grand Canyon is one of the most visited and widely recognized tourist destinations in the world. Nearly five million people visit the mile-deep Canyon each year where they can see nearly 2 billion years of the earth's geological history exposed through layer after layer of rock.

Because of this history, and the importance of preserving the park for future generations, the Grand Canyon has implemented a far-reaching Environmental Management System that stresses sustainability and pollution prevention.

Hanners explains that the park has numerous sustainable practices in place,

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— Grand Canyon Environmental Protection Specialist Deirdre Hanners

including the use of biodiesel fuel, an aggressive recycling program, a water reclamation facility that converts wastewater into a useable form of water for irrigation and toilets, a collaborative electronic waste program, and photovoltaic systems.

In 2011, Hanners began exploring additional "greening opportunities" through the use of soy biobased products. She became intrigued by the



(From left to right) Grand Canyon Environmental Protection Specialist Deirdre Hanners, Auto Shop Supervisor Johnny "J.D." Diaz-Gonzalez and Chief of Facility Maintenance Tim Jarrell show some of the equipment that they successfully run on B20 blend biodiesel as well as biobased hydraulic oils.

potential benefits of biobased products after meeting Pictured Rocks National Lakeshore Facilities Manager Chris Case at the 2010 Department of the Interior conference on the environment. Case and Hanners began a dialogue about the wide range of soy biobased products in use at Pictured Rocks. Case had great things to say about their performance and environmental benefits.

Soon after meeting Case, the Grand Canyon began using biobased hydraulic fluid in heavy equipment. The park then began a demonstration project, supported by the United Soybean Board, during which they tested eight soy biobased products in the auto shop and janitorial services. The products tested included:

- Soy Scrub Hand Cleaner
- Bio-Parts Cleaner/Degreaser
- SC - Glass and Window Cleaner
- SC - More Than Glass Cleaner
- SoyClean Floor and Tile Cleaner
- SoyClean Bathroom Tub and Tile Cleaner
- SoyClean Drain and Septic Cleaner
- SoyGreen Grafitti Remover



The South Rim auto shop tested floor cleaners and biobased hydraulic fluid for large equipment. Staff report that the soy biobased products performed very well and in some cases did the job more quickly or required less work than the product they had been using.

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Custodial and Sanitation Supervisor Howard Gourley said that the soy biobased products the janitors tested worked better than the products the division used in the past. "They save time, and they save the environment," he said.

The South Rim auto shop tested floor cleaners and biobased hydraulic fluid for large equipment. "The biobased hydraulic fluid has performed well in the pieces of equipment – garbage trucks, backhoe and loader – that have been changed out," said Auto Shop Supervisor Johnny "J.D." Diaz-Gonzalez who is also the park's heavy equipment mechanic. "There have been no issues with operability whatsoever."

The two test divisions, janitorial and auto shop, both plan to replace old products with the biobased alternatives they tried. Additionally, Hanners hopes to work with the National Park Service Emergency Services division and others to try a variety of biobased products and make them a purchasing habit at Grand Canyon National Park.



Grand Canyon Auto Shop Supervisor Johnny "J.D." Diaz-Gonzalez cleans up with soy-based hand cleaner.

Biodiesel Powers Park Vehicles

The diesel vehicles and equipment that service the South Rim of the park run on B20. These include backhoes, bobcats, snowplows, ambulances, pick-ups and more. Two biodiesel pumps are available at the filling station that provides B20 for Grand Canyon staff and park concessionaires to use.

"Grand Canyon National Park began using biodiesel at the South Rim in 2007," said Hanners. "Backhoes, garbage trucks, and pick-up trucks, among other pieces of equipment, use B20 year round to accomplish our mission. B20 also helps Grand Canyon meet the requirements of Executive Order 13514 to increase the efficiency of our fleet, lower our greenhouse gas emissions, and prevent pollution."

Park Honored with GreenGov Presidential Award

In November 2011, the Grand Canyon Green Team received the GreenGov Presidential Award in the Good Neighbor category. The award honored their success in helping neighboring rural communities to responsibly dispose of electronic and hazardous waste from the park and surrounding areas.

FACT FILE

For more information about the Grand Canyon's use of biobased products, contact Deirdre Hanners, Deirdre_Hanners@nps.gov

Grand Canyon National Park is using products manufactured by the following companies:

Franmar (<http://www.franmar.com/>)

- Soy Scrub

Gemtek Products (<http://www.gemtek.com/>)

- SC-More Than Glass Cleaner
- SC-Floor and Tile Cleaner

Renewable Lubricants (<http://www.renewablelube.com/>)

- Bio-Parts Cleaner/Degreaser
- Bio-synthetic Hydraulic Fluid
- Bio-High Temp 180 E.P. Grease
- Bio-Soy Orange All-Purpose Degreaser/Cleaner

Soy Clean (<http://www.soyclean.biz/>)

- Glass and Window Cleaner
- Bathroom Tub and Tile Cleaner
- Drain and Septic Cleaner

Soy Technologies (<http://www.soytek.com/>)

- SoyGreen Graffiti Remover

America's farms are just beginning to tap their potential as a source for natural, renewable biobased products that offer benefits to worker health, the environment, America's economy and energy security. To learn more about the many biobased products made from soybeans, go to www.soybiobased.org. Because of the potential for biobased products to create new markets for soybeans, U.S. soybean farmers have invested millions of dollars to research, test and promote biobased products. Much of this work was done through the United Soybean Board (USB), which is composed of 69 U.S. soybean farmers appointed by the U.S. Secretary of Agriculture to invest soybean checkoff funds. As stipulated in the Soybean Promotion, Research and Consumer Information Act, USDA's Agricultural Marketing Service has oversight responsibilities for the soybean checkoff.

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