



# Biobased Solutions

Winter 2007

FOR GOVERNMENT

## USDA Designates Additional Biobased Products for Federal Purchasing Preference

On October 11, the U.S. Department of Agriculture (USDA) announced a fourth proposed rule (published in the Federal Register) designating ten more biobased product categories that will receive preferential purchasing consideration by all Federal agencies.

These ten categories, which represent more than 480 individual biobased products, are:

- bath and tile cleaners
- clothing products
- concrete and asphalt release fluids
- cutting, drilling, and tapping oils
- deicers
- durable films
- firearm lubricants
- floor strippers
- laundry products, and
- wood and concrete sealers.

The newly named "BioPreferred" program was established by the 2002 Farm Bill.

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Even huge ships like this aircraft carrier require deperming after they've been in dry dock for repair. The world's largest naval station where deperming is done as well as Departments of Energy, the Interior and State facilities have all switched to a biobased transformer coolant fluid made from soybean oil that is better for the environment, less flammable and can extend the life of equipment.

photo credit: Naval Station Norfolk

## Federal Facilities Switch to Biobased Transformer Fluid for Environmental, Flammability and Equipment Benefits

Whether it's on land or sea, managers of more than 155 U.S. military facilities are quickly switching to, or installing new equipment that comes with a biobased transformer coolant fluid—Envirotemp® FR3®. Go to [www.soybiobased.org](http://www.soybiobased.org) to read why the world's largest naval station as well as Departments of Energy, the Interior and State facilities have all switched to the product made from

soybean oil that is better for the environment, less flammable and can extend the life of equipment.

"The direct and indirect costs associated with failed transformers can be staggering, especially when those transformers are located at the world's largest naval station," says

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## Department of Defense Takes Strategic Steps on Biobased Program

The Department of Defense (DoD) continues to ramp up its campaign to enhance mission and protect the environment with biobased products. Several key steps are underway to build on the DoD Pentagon event in September as well as the memorandum from the Department's Chief Acquisition Executive Under Secretary Kenneth J. Krieg.

Go to [www.soybiobased.org](http://www.soybiobased.org) for information on that event and a copy of the Krieg memo that states, "The DoD fully supports the efforts of the U.S. Department of Agriculture to promote the use of biobased products and has included biobased products as part of the overall DoD Green Procurement Program Strategy."

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# Department of Defense Takes Strategic Steps on Biobased Program

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DoD is focusing on advancing its Green Procurement Policy (GPP) and Strategy, which was signed in August 2004, to accomplish the following:

- Broaden the scope to emphasize the procurement and use of biobased products
- Align with national energy security policy
- Align with seven new DoD Acquisition, Technology and Logistics goals

To accomplish this, DoD has short and long-term objectives to help revise the existing GPP strategy and enhance the visibility of green procurement. Some of the objectives are:

- Revise existing requirements
- Establish new metrics
- Enhance training
- Pursue contract incentives; and
- Communicate/promote successes

The Department also plans to prominently feature biobased products at the Joint Services Environmental Management Conference that will take place May 21-23, 2007 in Columbus, Ohio. <http://www.jssemconference.com/2007/index.htm>. A session on green procurement as well as a dedicated biobased products session will increase understanding of biobased products.

The Defense Logistics Agency is implementing an environmental attribute for biobased products in the Federal Catalog System and on DoD EMALL that conform with the USDA guidelines. The link for the DoD EMALL is <https://emall6.prod.dodonline.net/main/>.

## Federal Facilities Switch to Biobased Transformer Fluid

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Deperming Engineer Jack Fay, who works at Lamberts Point Deperming Station at Naval Station Norfolk. "Our transformers are located on a waterway, so we required a solution that would not pose a threat to marine life."

Because FR3 fluid is soy-based and does not contain petroleum hydrocarbons, silicones or halogens, it typically biodegrades quickly in case of leak or spill. Tests show that FR3 fluid is 99% degraded in 21 days when tested per an Environmental Protection Agency method. In comparison, commonly used mineral oil is only 25% degraded in 21 days. In addition, the biobased fluid is considered non-toxic when evaluated by multiple standard test methods.



photo credit: Naval Station Norfolk

*The huge rusting radiators of the 16 transformers at the Lamberts Point Deperming Station were replaced with new stainless steel ones. A total of 6,000 gallons of mineral oil was removed and replaced with biobased Envirotemp® FR3® transformer coolant fluid.*



### *Dear Reader:*

In October, President George W. Bush again emphasized how renewable fuels, like biodiesel made from soybean oil, can

help America. He made his remarks in St. Louis at the Advancing Renewable Energy conference, hosted by the U.S. Department of Agriculture (USDA) and U.S. Department of Energy (DOE). The President said America is too dependent on foreign oil. "We've got to change our habits if we want to remain the economic leader of the world."

Thanks to all you Federal employees who are helping America change its habits with biobased products. A new study shows what biodiesel alone can do for America.

According to the economic analysis by John M. Urbanchuk of LECG and funded by the soybean checkoff through the United Soybean Board, the aggregate economic benefits of biodiesel include:

- America's biodiesel industry will add \$24 billion to the U.S. economy between 2005 and 2015, assuming biodiesel growth reaches 650 million gallons of annual production by 2015.
- Biodiesel production will create a projected 39,102 new jobs in all sectors of the economy.
- Additional tax revenues from biodiesel production will more than pay for the federal tax incentives provided to the

industry. It will keep \$13.6 billion in America that would otherwise be spent on foreign oil.

Through their checkoff program, U.S. soybean growers are investing their own money to help move our country toward greater dependence on American-made biodiesel and biobased products that are better for the environment and offer a boost for our economy. I hope you will join me in applauding the federal employees described in this newsletter. They have already changed their habits by switching to American-made biobased products.

*Sincerely,*

*Todd Allen,*

*New Uses Committee Chair*

# Chicago GSA Building to Get a New, Biobased Roof

Come next spring when workers in the many surrounding skyscrapers look down on the 10-story General Services Administration (GSA) rooftop of 10 West Jackson in Chicago's loop, they'll see a gleaming white roof. They will also view a lush, green garden instead of the old, non-descript tarred-and-gravel surface typical of buildings constructed in the 1940s.



*The bright white color of the new soy-based Environmental Liquid Membrane System® (ELMS) roof of the GSA building at 10 West Jackson Street in Chicago will reflect the sun. Combined with the green, living garden, the product will help reduce the "urban heat island effect." The ELMS system, like the one here, will be installed next spring.*

The 11,000-square-foot "gleaming white" portion of the surface will be the new soy-based Environmental Liquid Membrane System® (ELMS) installed by Pennsylvania-based Roofing Resources, Inc., and made by Green Products, LLC, of Romeoville, Illinois. The slightly smaller 9,500-square-foot green portion will be a living garden installed as part of a growing trend—especially in Chicago—to reduce the "urban heat island effect" of increased temperatures in metropolitan areas. It will also improve storm water runoff.

All of this is a result of the vision of architect William Wagner of the GSA Office of Tenant Operations in Chicago. "Yes, we're installing a completely new roofing system, but I see this as an on-going demonstration of innovative methods for other GSA buildings, other federal buildings and the real estate

industry in total. We'll measure the performance of both systems in many ways: How much energy do they save? How much does it really reduce the heat island effect? How do these products aid in reducing maintenance and life cycle costs," Wagner explains.

Roofing Resources, working with GSA and Will Wagner, was able to complete a thorough rooftop evaluation and bring together the biobased and green technologies in one high-performance design. The white reflective coating and the rooftop garden are designed to improve the total life of the roof system while offering a multitude of environmental benefits.

The ELMS system, which meets Federal biobased requirements, uses soybean oil-based polymers that outperform petroleum-based products. It has the following attributes:

- 100% waterproof liquid membranes designed to hold ponding water;
- 100% Environmentally Friendly—high biobased content products;
- Single coat application—cost competitive solutions for building owners;
- Meets and exceeds UL® Class A flame ratings for low slope roofing;
- 100% Resistant to mold, algae and bacteria (as third party tested under ASTM D 3273);
- Energy Star rated reflective and emissive—reduces rooftop heating through gain.

Senior Project Manager at Roofing Resources Erich Poch points out that his firm's GSA—Contract #GS-07F-5624P now includes the ELMS products and that detailed information is available at the GSA Advantage website [www.gsaadvantage.gov/advgsa/advantage/search/search.do?contract=GS-07F-5624P&sin=563+4](http://www.gsaadvantage.gov/advgsa/advantage/search/search.do?contract=GS-07F-5624P&sin=563+4)



*Biobased Products Users to be Honored*

## Closing the Circle Award Nominations Accepted in January

The Office of the Federal Environmental Executive (OFEE) has announced its requirements for the 2007 White House Closing the Circle (CTC) Awards. This program recognizes outstanding achievements by Federal employees and their facilities for efforts that resulted in significant contributions to, or have made a significant impact on, promoting environmental stewardship. Once again, the Green Purchasing category focuses on biobased products, the newest component of the Federal program. This category rewards trailblazers and leaders in biobased product use and purchasing. It recognizes how the agency, facility, or individual started to purchase biobased products through pilot projects, product testing, education and outreach to facility staff, or development of solicitation or contract language.

Nominations will be accepted from **January 2, 2007 through January 31, 2007**. Federal employee or teams/groups of Federal employees (including teams of Federal and contract employees) can make nominations of deserving persons in these same categories. Partnerships between Federal facilities or Federal employees and non-Federal entities, such as surrounding local communities or non-profit organizations, are encouraged to participate. More details are available on the OFEE website at [www.ofee.gov/ctc/ctc.htm](http://www.ofee.gov/ctc/ctc.htm). Further questions? Contact Juan Lopez, [lopez.juan@ofee.gov](mailto:lopez.juan@ofee.gov) or 202-343-9481.

## "Green Ship Initiative" In the Great Lakes

# NOAA Operates Three, 100 Percent Biobased Ships

As is often the case with people who start using biobased products, biodiesel gave Marine Superintendent Dennis Donahue his first experience with the products at the Great Lakes Environmental Research Laboratory (GLERL) in Muskegon, Michigan. Donahue's uses have come a long way since that first trial in 1999. For the last two years, three of GLERL'S diesel ships ran completely on biobased (rather than petroleum-based) products. Those made from soybean oil are ISO 32 & 68 hydraulic oil, 90W gear lube, lithium grease, general purpose cleaners, soy 2-cycle oil, diesel crank case oil and biodiesel.

Being part of the National Oceanic and Atmospheric Administration's (NOAA) research division, Donahue says that it's not only the responsibility of his organization and his facility, but also his personal duty to do his utmost to protect the environment. Go to [www.soybiobased.org](http://www.soybiobased.org) to read a full profile on how GLERL vessels ply all of the five Great Lakes in a "Green Ship Initiative" with biobased products. These products, says Donahue, have



photo credit: NOAA/GLERL

been tested under the rigors of the marine environment in both warm and cold climates and have been found to be equivalent to petroleum-based products' performance.

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 64 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.

## USDA-DOE Advisors Expand Vision for Biofuels and Biobased Products

The advisory committee to the U.S. Departments of Energy and Agriculture released an updated *Vision for Bioenergy and Bioproducts* in the United States on November 28 in Washington, D.C. The vision statement describes goals for the use of biofuels and biobased products in the United States through 2050. The advisory committee also includes representatives of major companies, university and private researchers and the agricultural community. The new vision sets goals including biofuels attaining 20 percent of the U.S. market share by 2030. It also calls for 55.3 billion pounds of biobased products to be produced by 2030. The statement says that achieving the vision will require a blend of research, demonstration and policy measures, such as tax incentives. The report is available at [www.biomass.govtools.us](http://www.biomass.govtools.us).

## USDA Designates Additional Biobased Products

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To date, USDA has proposed to designate a total of 36 biobased product categories—representing hundreds of individual products—for special consideration. USDA published a final rule designating the first six items (about 200 biobased products) for preferred procurement in March 2006. The next 20 were announced in August 2006.

"Once these rules are final, agency purchases will increase demand for existing biobased products, create incentives for new products, and generate new economic opportunities for biobased product producers, including our farmers and ranchers," USDA's Chief Economist Dr. Keith Collins said.

Federal agencies must give preference to designated biobased products in government purchases within one year of publication of the final designation rule. The October 11 Federal Register notice can be found on the USB website at: [www.soybiobased.org](http://www.soybiobased.org).

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