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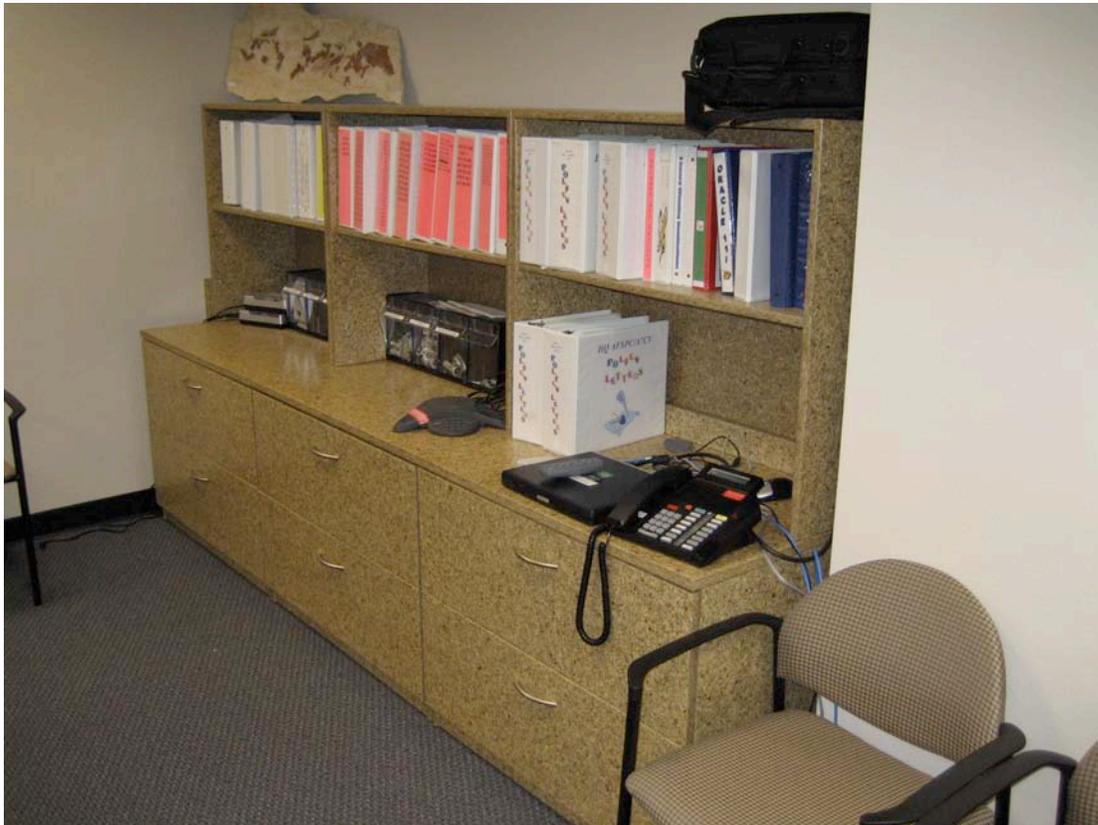
## **Sunflower furniture satisfies the senses of AFB unit**

The whole idea of outfitting some offices of a unit at Vandenberg Air Force Base with furniture made from sunflower hull wood seemed fitting for this renovated warehouse and its employees whose duties cover the gamut of environmental matters.

The environmental flight unit had more interest in this choice than normal because it deals with the environment, and the staff wanted to lead the move toward sustainability, according to Marilyn Johnson of Integrated Interiors International and the project's interior designer.

With 41 employees, the department manages hazardous waste, pesticides, storage tanks, toxic substances, wastewater and water quality—and everything dealing with substances that would affect or threaten the environment at this base on California's central coast near Santa Barbara.

Johnson suggested the group select sustainable furniture from Baltix Sustainable Furniture of Long Lake, Minn. ([www.baltix.com](http://www.baltix.com)). Baltix crafts its line from sunflower hull wood supplied by Environ Biocomposites Manufacturing ([www.environbiocomposites.com](http://www.environbiocomposites.com)) of Mankato, Minn. The sunflowers themselves are grown in the upper Midwest.



***The Environmental Protection Unit at Vandenberg AFB in California has file cabinets and other furniture constructed from sunflower hull wood.***

The sustainable furniture is showcased in the front foyer of the unit's new office building. The secretary's workstation, the file cabinets with upper shelving, tables for the conference and break rooms and the office furniture in the chief's office all ended up being sunflower hull wood. They were installed in 2007.

Although the initial cost of the furniture was slightly more than traditional office equipment, the furniture's projected life span of 20 to 30 years makes it a cost effective choice, according to John Woods, unit environmental protection specialist who oversaw the purchase.

Lori Redhair, who specializes in green procurement and was the unit's technical consultant working with Woods, reported the project did contain a few challenges and had a learning curve.

"One real challenge is the government has mandatory purchasing sources," she said. "It mandates where you buy the products."

Federal agencies make the majority of their purchases from contractors approved by the General Services Administration (GSA), but only small descriptions about green products exist in the GSA's online catalog. The government also encourages purchases from Unicor, a prison manufacturing enterprise, but Redhair found Unicor doesn't offer the "latest and greatest on the green market."

When funds are available at the end of the fiscal year, departments rely on the GSA catalog because they must move quickly, making it difficult to opt for green purchasing unless more research is done, Redhair said.

Subsequently, the Baltix furniture was only a small part of the building's office furniture because it came directly from the manufacturer. However, Baltix is in the process of securing a GSA contract to simplify green purchasing with the government.

Redhair indicated that convincing others to buy green is a big challenge because there's resistance to new, "uncharted stuff." Some have expressed dissatisfaction with the reception area furniture because it has an unfinished look.

However, Redhair explains the raw nature of the wood acts as a "truth window." The truth window concept derives from straw bale homes that routinely contain a window or closet revealing the straw bales contained within the plastered walls.

Another consideration to keep in mind is that the sunflower hull wood cannot be exposed to water. Erik Knutson, Baltix executive vice president, warned sunflower hull wood is

very porous and isn't recommended for moist environments such as bathrooms and kitchens unless it's infused with acrylic.

To prevent water from damaging surfaces, the unit opted to install ShetkaSTONE ([www.shetkastone.com](http://www.shetkastone.com)) on the tops of the desks and the conference room table, as well as other exposed places. ShetkaSTONE also is made in Minnesota by a company of the same name from recycled paper, plant and cloth fibers—even shredded money discarded by the U.S. Treasury.



***The secretary's front desk and other top surfaces are a recycled paper and fiber product known as ShetkaSTONE, which college art professor Stanley Shetka developed after years of research.***

“People find the money ‘cool,’” Redhair said. “They wonder how much money’s there.”

Stanley Shetka, founder of ShetkaSTONE and a professor of art and design at Gustavus Adolphus College, founded ShetkaSTONE about four years ago as part of All Paper Recycling Inc. The company specializes in tabletops and countertops.

But it's the sunflower hull wood that sparks the most clever and colorful comments. “It resembles sliced mushrooms and looks good enough to eat,” Woods said. He also liked its olfactory appeal.

“It has a pleasant scent when first installed,” he added. “It’s just like when you get new wood. You can smell the new hull.” Knutson noted the slightly sugary smell is usually not apparent to new users but this product was finished quickly to meet a deadline. The low volatile organic compound (VOC) finish is petroleum based, but Baltix is in the process of investigating biobased finishes.

Sunflower hull wood satisfies Redhair’s senses and her environmental sensibility too. “What I like about biobased furniture,” she said, “is you’re taking a waste stream and turning it into a product.”

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***This USDA BioPreferred program success story was prepared by Iowa State University Extension’s Center for Industrial Research and Service (CIRAS), [www.ciras.iastate.edu/](http://www.ciras.iastate.edu/).***