

Eufaula, Alabama—Planning for the

Drive approximately two and a half hours southwest of Atlanta, to the shores Lake Eufaula on the Chattahoochee River, and you'll arrive in the city of Eufaula, Alabama, population 15,000. In many respects, Eufaula looks a lot like other southern towns—its large historic district is the centerpiece of downtown, while sprawl-type commercial zones, residential suburbs, agricultural fields, and industries spread outward.

Eufaula has the same environmental issues that face every other community in the United States. Its citizens generate waste, use energy, and build houses; they need good jobs and want young people to have opportunities to stay in Eufaula when they grow up. They want to live in a safe, clean, attractive, economically vibrant city.

Eufaula as a model

Eufaula's concern for the future of the community made it the perfect place to pilot the Sustainable Communities Program. Though Eufaula is a small city by many comparisons, it can be held up as a model of what many communities face in today's pressures for economic growth, regional development, and social equity.

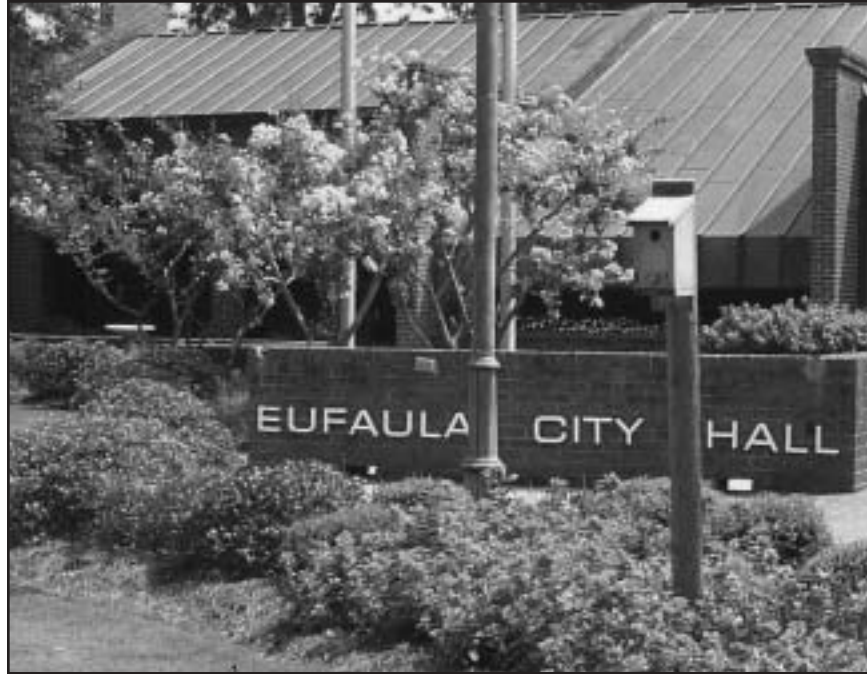
Since 1997, when Audubon International President Ronald Dodson was first invited to Eufaula, Audubon International has been assisting city government officials, citizens, businesses, and civic organizations chart Eufaula's future. Now known as *Eufaula 2020*, the initiative is the community's way of envisioning and planning for its future, using Audubon International's *Principles for Sustainable Resource Management* as a guide.

"Our work with Audubon International has galvanized community awareness, action, and strategic planning," states Eufaula's Mayor Jay Jaxon. "It has helped us chart a course toward a future that capitalizes on the best of what Eufaula offers, while addressing community problems and needs."

City Hall recognized for environmental stewardship

On October 10, 2002, Audubon International recognized the City of Eufaula as the first *Certified Audubon Cooperative Sanctuary Community*—the first step in the Sustainable Communities Program. The designation is the result of Eufaula's efforts since 1997 to develop a demonstration site at City Hall and involve its citizens in sustainable community initiatives. Environmental practices showcased on the approximately one acre City Hall site include native landscaping, waste reduction, energy and water conservation, and community education.

"Our involvement at city hall demonstrates to Eufaula's citizens that the city is walking the walk and not just talking the



The Eufaula City Hall showcases a variety of environmental stewardship practices to encourage community-wide involvement.

talk," says Neil Yarbrough, City Horticulturist and co-chair of the Eufaula 2020 steering committee. "We are constantly getting positive feedback from citizens and employees."

More important, the demonstration site at city hall has served the purpose for which it is intended: community involvement. "The success of the projects we have done over the past few years has been beyond our expectations," explains Yarbrough. "All three of our elementary schools have become certified in the ACSP, numerous homeowners have joined the backyard program, and several businesses are involved. But without a doubt the biggest success has been our city leaders' desire to have the whole city become a certified community."

Community input culminates in strategic plan

In 2001, Eufaula formed a partnership among Audubon International, Auburn University, Goodwyn, Mills, and Cawood, Inc., and the City to create a strategic plan. The document is the culmination of countless community meetings, focus group



discussions, and community-wide surveys, combined with careful analysis of Eufaula's resources. It addresses quality of government, land use planning, economic development, and quality of life issues and sets forth a plan-of-action to direct Eufaula's future.

"Our strategic planning process has given us a specific vision of the community we want to be in the year 2020," states Mayor Jay Jaxon. "Through the process we have gained the commitment of many citizens to work in achieving that shared vision."

"Citizens from all walks of life, all financial levels, and all social and cultural strata have participated in the planning process," says Dodson. "Everyone seems to realize that while we work to protect the environment of Eufaula, all citizens will benefit in the long-term as a result of these efforts."

R. Dodson

During one of many community meetings, Eufaula Mayor Jay Jaxon explains how "economy," "ecology," and "social equity" come together in sustainable communities.

Audubon International's Sustainable Communities Program

The Sustainable Communities Program is an education program designed to help people appreciate the unique environmental, social, and economic characteristics of their community, and work to protect and enhance them through citizen-driven planning and community action. Audubon International serves as a catalyst for action and works to facilitate partnerships with governmental agencies, academic institutions, and other environmental organizations that might provide support and assistance.

Stages of Involvement

Stage I: Community Outreach, Education, and Involvement

The municipality works with Audubon International to educate citizens and organize community involvement. It assesses its resources and develops a community-wide environmental plan designed to build awareness and engage a broad spectrum of people in stewardship action. The centerpiece of this effort is the development of a demonstration center at city hall or another central location to showcase environmental stewardship efforts. At the completion of this stage, the community is recognized as a *Certified Audubon Cooperative Sanctuary Community*.

Stage II: Strategic Planning

After Stage I, the community may choose to develop a strategic plan as a way to direct future policy. A strategic planning steering committee is formed to host town meetings, form focus groups, and conduct surveys to gain community-wide input toward developing a vision statement and goals that integrate the community's environmental, economic, and social priorities. These goals form the basis for a strategic plan. Audubon International confers an *Audubon Sustainable Community Award* to the community upon adoption of the plan by municipal leaders.

Stage III: Implementation of the Strategic Plan

During this final stage, the municipality creates an organization and a process to implement the strategic plan. Audubon International recognizes the community as a *Certified Audubon Sustainable Community* once a significant portion of the plan is implemented.

Following the Yellow Grease Road

BY PETER BRONSKI

At one point or another, we all—or at least most of us—have been through the drive-thru at a local fast food joint for a burger, fries, and a coke. But what if that same meal helped to fuel the very car in which you drove to pick it up? Sound like science fiction? Such a scenario may be a long way off for passenger cars that run on unleaded gasoline, but it has already become reality for diesel engines.

Meet biodiesel, an alternative clean-burning fuel derived from renewable domestic resources, like waste vegetable oil and animal fats. Also known as Yellow Grease, these fast food byproducts are literally fueling a revolution in how we think about fossil fuel dependency. The McDonald's and Burger Kings of the world (and a team of fast food savvy research scientists) just may provide the answer.



According to the National Biodiesel Board (NBB), more than 150 million gallons of biodiesel are produced each year, a number that is expected to more than triple over the course of the next twelve months. An April

Biodiesel has earned a loyal following owing to its significant environmental and human health benefits. (The Bartkus Oil Company in Boulder, CO, distributor for Blue Sun Biodiesel.)

2005 NBB report cites 40 commercial biodiesel production facilities in 18 states across the country, with another 24 facilities expected to come online in the near future, and there are hundreds, perhaps even thousands, of retail biodiesel fueling locations across the country. Still, these numbers are just a drop in the bucket compared to the 50 billion gallons of diesel fuel consumed in the U.S. in 1991.

Biodiesel prominence is rapidly growing (liberal estimates suggest that up to 50% of U.S. demand for diesel could be met through biodiesel production), but its largely under-the-radar status leaves many people asking, What exactly is it again?

Biodiesel is created in a straightforward process known as *transesterification*. In plain language, waste vegetable oil is converted into two component parts: glycerin, which is a valuable byproduct used to make soaps and other products, and methyl ester, otherwise known as biodiesel.

Among biodiesel's many selling points is that it can be used in any existing diesel engine with few or no modifications. It is essentially ready



More than 30 Audubon Cooperative Sanctuary Program members are using biodiesel to fuel delivery trucks, school buses, tractors, and other diesel vehicles. Above, Superintendent Aidan O'Hara (left) and Richard Hayden of Mount Juliet Golf and Country Club, a Certified Audubon Cooperative Sanctuary in Thomastown, Ireland, show school children a mower that runs on biodiesel during a field trip to the golf course.

for market, and can be used in pure form or blended with its petroleum-based cousin. Such blends are designated by the letter B, followed by the percent content biodiesel. For example, B20, one of the most common formulations, contains 20% biodiesel and 80% petroleum diesel.

Biodiesel has earned a loyal following owing to its significant environmental and human health benefits. For example, it is *ten times less toxic* than table salt, and biodegrades at the same rate as dextrose sugar (four times faster than standard diesel fuel). Vehicle emissions are dramatically improved as well. Compared to standard petroleum diesel: hydrocarbon emissions, which contribute to ozone and smog, are reduced by 50-67%; carbon monoxide emissions are reduced by 47%; and sulfur emissions, a major contributor to acid rain, are virtually eliminated. Finally, pure biodiesel is the only alternative fuel to fully complete the health effects testing requirements of the Clean Air Act.

Making the Switch in Eufaula, Alabama

In October 2003 the City of Eufaula, Alabama, started to seriously consider biodiesel for its community. Years earlier, Eufaula began working with Audubon International as the first community to pilot the then-fledgling Sustainable Communities Program. During a visit to Eufaula in 2001, Audubon International President Ron Dodson introduced the idea of biodiesel as a part of sustainability. Bill Clark, a consultant for the city, developed an immediate interest, and spent the next two years leading up to October 2003 creating a plan for the establishment of a biodiesel refinery using locally available waste vegetable oil.

Although Eufaula's population is only 15,000, it is also the halfway point for Atlanta residents traveling to the beaches along Alabama's Gulf



Incorporating biodiesel contributes to a healthier environment for all of Eufaula's residents.

coast. Consequently, the community has "a few more fast food restaurants than would be normal for a town our size," notes Clark. By his calculation, those fast food establishments could reliably supply enough waste vegetable oil to generate upwards of 40,000 gallons of biodiesel each year. The City, for its part, used about 100,000 gallons of diesel per year for its municipal fleet and school buses. It seemed a match made in heaven, or least in Ronald McDonald Land.

Eufaula's City Council approved a \$10,000 budget line item to investigate the feasibility of Clark's idea. That \$10,000 proved unnecessary when less than a month later, City Horticulturist Neil Yarbrough learned of a grant opportunity through the Alabama Department of Economic and Community Affairs. Eufaula applied and won the grant, receiving a total of \$50,000 paid over a two year period.

The plan called for the city to establish a system for recycling waste vegetable oil (including collection from commercial establishments and a drop-off point for homeowners), a production facility, and a distribution system. Today that entire system is a reality, thanks in large part to product donations and support from area companies, like Southern Plastics, a local fishing lure manufacturer, and

Resources

- National Biodiesel Board
www.biodiesel.org
- American Bioenergy Association
www.biomass.org
- Biodiesel Association of Canada
www.biodiesel-canada.org
- Biomass Research and Development Initiative
www.bioproducts-bioenergy.gov
- U.S. Department of Energy:
 - Alternative Fuels Data Center
www.eere.energy.gov/afdc
 - FreedomCAR and Vehicle Technologies Program
www.eere.energy.gov/vehicle-andfuels
 - Biomass Program
www.eere.energy.gov/biomass
- U.S. Environmental Protection Agency Clean School Bus USA
www.epa.gov/cleanschoolbus/ (Site includes lessons for students and information on grants)
- Grant Opportunities
www.cleanair.org/dieseldifference/funding

LMR, a local latex products company. Ian Watson, a researcher at Lawrence Livermore National Laboratory in Berkeley, California, also provided a pro bono design for a small-scale biodiesel production system.

To date the city operates a two-and-a-half ton truck and a tractor on biodiesel, with plans to bring the school bus fleet on board as well. Clark is quick to point out that "the impetus for action on this project evolved out of the Eufaula 2020 Plan, a citizen-led long-range strategic plan based on Audubon International's principles of sustainability." But perhaps the most credit is due to the local leaders who stepped forward: Clark, Mayor Jaxon, the City Council, Horticulturist Yarbrough, and area businesses. Ultimately, their teamwork made biodiesel a reality for Eufaula, and the environment that much better for all of us. ●