



# Hoover, Alabama WVO to Biodiesel Case Study

EPA Region 4  
Biodiesel Workshop  
October 14-15, 2009



# Mayor Petelos and City Council



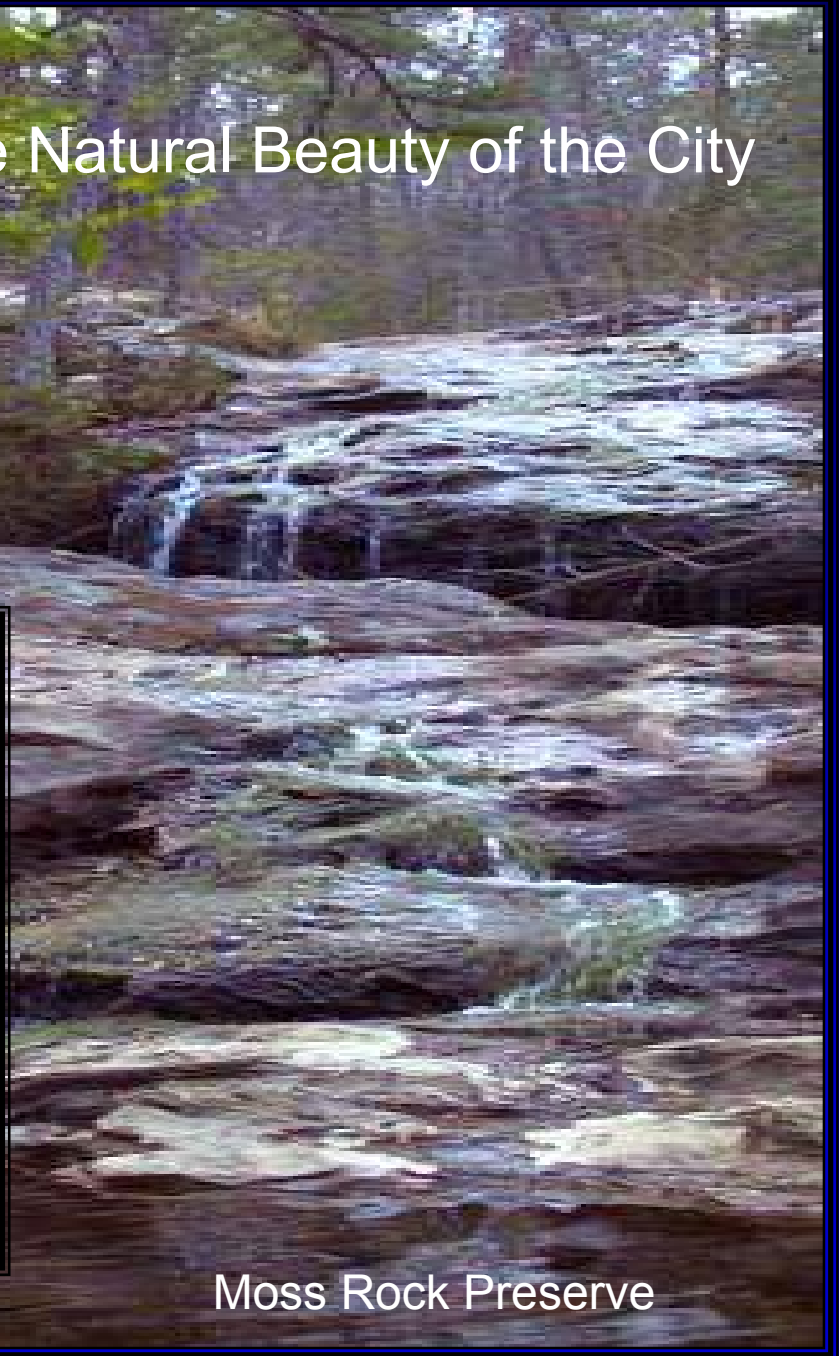
**Vision & Leadership**



Preserve the Natural Beauty of the City



Cahaba River



Moss Rock Preserve

# President Bush in Hoover September 29, 2006



**To Recognize Hoover's usage of Alternative Fuels in Municipal Fleet**

# Hoover Fueling Facility



Commercial Fuel  
Storage Tanks

# City of Hoover – A Leader in Alternative Fuel Usage

- **Largest alternative-fueled (E85) Law Enforcement Fleet in the Nation!**
- **196 vehicles use E-85 Ethanol Fuel**
- **Over 12 million miles driven on E-85 ethanol**
- **Over 900,000 Gallons of E-85 used**
- **Fueling portion of fleet with E85 made from City's wood waste & converted to cellulosic ethanol by Gulf Coast Energy**



# Biodiesel Fuels Hoover's Diesel Fleet

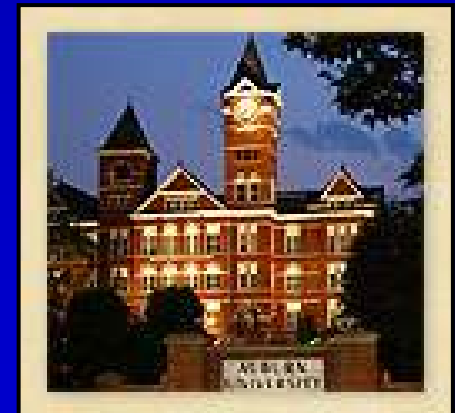
- 161 vehicles use B-20 Biodiesel Commercially Purchased
- 40+ vehicles fueled with B100
- 25,000 gallons of B-100 produced from WVO
- B-100 Bio-Diesel is made in Hoover by our City Employees!



85% of all the fuel used by the City of Hoover is a qualified alternative fuel....more than 500,000 gallons in the last 2 years

# WVO to Biodiesel Programs In Alabama...

- Daphne Utilities
- City of Hoover
- City of Gadsden
- Auburn University
- ADAI & the City of Montgomery
- City of Andalusia
- Henry County
- Calhoun County
- City of Enterprise
- Alabama Institute for Deaf and Blind
- Plus other private organizations







**Daphne Utilities**

*Your Hometown Utility*

## ***The Beginning!!!!***

### ***Daphne Turns a Problem into an Opportunity!***

- Problem: Grease clogs in sewer system
- Opportunity: Begin oil recycling program to keep oil out of sewers
- What do we do with the oil?
- AHA!! – Use the recycled oil to make biodiesel! Win-Win!



**G20 = Grease 2 Oil!**

Hoover collects used cooking oil (WVO) from local restaurants and homes, then processes the used oil into B100 Biodiesel fuel that is used in fleet of diesel vehicles and equipment!!!

# Oil Collected from Participating Restaurants



# Community Recycling Stations

Collection Racks are placed at City Fire Stations for consumer drop off and pick up of containers



# Home WVO Recycling Program

*Donations of WVO Comes in All Shapes and Sizes!*



The first announcement about residential WVO recycling program netted 500 gallons of oil the first month!

# New Storage Rack Increases WVO Storage Capacity From 500 to 1500 Gallons



Initial Storage Tanks

# Addition of Second Processor Increases Production From 55 to 110 Gallons a Day



— BIODIESEL LOGIC INC —

# WVO Biodiesel Supplements Commercial Purchases of B20



Diesel Vehicles in for PM get “topped off” with B100 fuel



# Hoover uses B100 in Trolleys & over 40 other diesel vehicles



# Hoover WVO Biodiesel Production Facility Visited by Many!



← Auburn Team inspects Hoover's first Hoover Biodiesel Production – Using Waste Cooking Oil from local restaurants & homes



→  
**Dr. Ernst Cebert – Alabama A&M**  
**Agriculture Commissioner Ron Sparks**  
**Hoover Mayor Tony Petelos**  
**Hoover Fleet Mgt. Director, Dave Lindon**  
**Biodiesel Logic's, Jeff Breeden**

# Montgomery & Gadsden Implement “Grease to Biodiesel” Programs



*February 12, 2008. MONTGOMERY, AL  
Commissioner Ron Sparks and Montgomery  
Mayor Bobby Bright pumping the first batch of biodiesel  
into a City of Montgomery tractor*

*March 7, 2008. GADSDEN, AL  
Larry Fillmer, Auburn University, joined Mayor Sherman  
Guyton  
to open the “Waste to Fuel” Used Cooking Oil  
Recycling Program in Gadsden Fleet.*



# Department of Agriculture & Industries & Alabama A&M

## *Portable Demonstration Unit*



**Biodiesel Classroom on Wheels**



***Educating Alabama's Consumers***

# Hoover WVO to Biodiesel Program

## *By The Numbers*

- **\$25,000 total investment (recycling and biodiesel supplies and equipment)**
- **B100 Biodiesel produced at cost of approximately \$ .80 to .90 cents per gallon**
- **Payback on equipment - if purchased today: approximately 200+ days**
- **Sewer System operations realizes cost savings from fewer sewer clogs**



Leading the way in  
alternative fuel  
usage