

Campus Vehicles

Impacts of university vehicle use



Indicators

Gallons of diesel fuel used - 0

Gallons of biodiesel fuel used - 35,193

Gallons of gasoline used - 287,587

Number of leased Motor Fleet Management vehicles - 293

Number of flex fuel vehicles in Motor Fleet Management - 156

Miles traveled by Motor Fleet Management vehicles - 515,405

Across NC State, daily University vehicle use has far-reaching impacts on the campus and the surrounding community. Not only do most faculty and staff drive to campus for work, they also utilize departmental or motor fleet vehicles on a routine basis. The types of vehicles, fuel and miles traveled all contribute to the impact of campus transportation.

In fiscal year 2003-2004, the University leased 293 vehicles from NC Motor Fleet Management. 156 of these were flex fuel vehicles. The new fleet management software that NC State Fleet Services started using in late 2004 allows for tracking of vehicle maintenance and the type of fuel used, as well as determining miles per gallon for each vehicle and the fleet overall. This will allow for performance comparisons between flexible fuel vehicles, alternative fuel vehicles, and conventional vehicles. Every year the University is expanding efforts to comply with the Energy Policy Act of 1992, a federal law requiring that 75% of North Carolina's new light-duty vehicle purchases be alternative fuel vehicles.

NC State has some experience using alternative fuels on a large scale, operational basis. Fleet Services has been using B-20 biodiesel since July 2003, and in the fall of 2004 Wolfline began a pilot program of using biodiesel to see how B-20 affects the buses. The University no longer even purchases regular diesel for use in campus vehicles. The cost of the B-20 is typically higher per gallon in cost than conventional low sulfur diesel on state contract. However, B-20 biodiesel on the whole produces fewer pollutants than conventional diesel, with estimated reductions of 12% in Carbon Monoxide, 20% in Hydrocarbons, 12% in Particulates, and 20% in Sulfates; B-20 is estimated to increase Nitrogen Oxide emissions by 2%.

Other attempts at NC State to reduce the impact of vehicle usage include many departments beginning to utilize small electric vehicles for travel throughout campus. The Office of Waste Reduction and Recycling uses small "Club Car" utility vehicles for their student recycling collection program. This allows the students to travel throughout campus collecting

Spotlight on Biodiesel



In 2003, NC State was awarded \$7,250 to operate 123 vehicles and pieces of equipment on

biodiesel (B20). This fleet includes trash trucks, semi-trucks, buses, street sweepers, backhoes, and recycling trucks. In addition, the funds will help purchase B20 to run the Wolfline bus service, contracted through Veolia. The Biofuels Program grant was awarded to the NC State Biodiesel Committee, a partnership of three University departments, a student, and Veolia. The Committee proposed a five-phase program over two and a half years to get all University diesel vehicles and buses operating on B20. The current award will cover Phase I and II.

recyclables without creating emissions or using gasoline. The library uses an electric vehicle to transfer books from main campus to the warehouse and Transportation utilizes a small electric vehicle for easy access throughout campus even in times of high traffic such as move-in and move-out. Many of Facilities' shops are also experimenting with electric vehicles in place of traditional gas powered "E-Z Goes". The fumes from those vehicles are often hard to tolerate because of the open cab.

Use of lower emission fuels such as biodiesel, purchasing flex fuel vehicles, and utilizing electric vehicles are all ways that NC State is attempting to improve regional air quality and reduce the impact of campus vehicle use.



OWRR's electric vehicle

Water

Executive Order 26- <http://www.sustainablenc.org/main/EO%2026.pdf>

Executive Order 156- <http://www.p2pays.org/ref/03/02221.pdf>

NPDES- <http://cfpub.epa.gov/npdes/>

Clean Water Act-<http://www.epa.gov/region5/water/cwa.htm>

Safe Drinking Water Act- <http://www.epa.gov/safewater/sdwa/>

Office of Energy Management-

<http://www.ncsu.edu/facilities/energy/>

NC Project Green- <http://www.sustainablenc.org/water.htm>

Irrigation Association- <http://www.irrigation.org/swat/>