

## **BEST PRACTICES, Physical Plant - Transportation**

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**Title:** How the Reengineered Solid Waste Operation Produces \$400,000 in Annual Savings # 330

**Source:** University of Miami **Co Area:** Environmental Health & Safety

**Addl Info:** <http://www.appa.org/FacilitiesManager/articleDetail.cfm?ItemNumber=1188> (Scroll down)

**Abstract:** Institutional Benefits  
Described by former president Tad Foote as a "Campus in a Tropical Garden," the University of Miami's meticulously maintained Coral Gables campus consists of over 100 buildings on 260 acres. An enhancement to that vision has been our unique in-house trash collection program. Implemented in October 1992, this program produces \$400,000 in annual savings while providing numerous aesthetic and management benefits.

Unlike 35-ton commercial garbage trucks, our employee-operated customized flatbed truck weighs only 6.2 tons when fully loaded with three custom-made containers being hauled to one of several compactors located in convenient but secluded perimeter locations. Consequently, our commercial hauler can now charge by actual weight, rather than potential volume, so costs reflect monthly fluctuations in trash output.

Additionally, the removal of commercial trash trucks from internal campus areas reduces wear and tear on campus roads, eliminates the windswept material, glass particles, and offensive odors generated by on-site trash transfer, and allows for flexible pickup schedules tailored to each campus facility, virtually eliminating customer complaints with regard to trash collection. Additionally, much of the \$4 million in cumulative savings created by this process reengineering has been reinvested into plazas, major landscape features, and other campus beautification projects.

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**Title:** Vehicle Maintenance Pollution Prevention Program # 354

**Source:** Department of Defense Quality Management Program **Co Area:**

**Addl Info:** <http://quality.disa.mil/case/CaseStudyRecord.cfm?ID=12909>

**Abstract:** Hickam Air Force Base, Oahu, Hawaii  
The Pollution Prevention Program (PPP) consists of eleven separate but interrelated initiatives: antifreeze recycling; oil filter crusher; conversion to biodegradable parts cleaner washer; thinner solvent recycling; automatic paint spray gun cleaner; high-volume, low-pressure paint gun; styrobaffle paint booth filters; lubri-sensor engine oil analysis; use of vinyl adhesive lettering to replace stencil/aerosol spray painting; paint mixing machine; and an explosion proof vacuum recovery system. Most required the purchase of new equipment (capital costs). The Vehicle Maintenance Recycling Center is located on Hickam AFB. Its goal is to generate zero hazardous waste.

The initiatives have created savings by drastically reducing annual operating costs, both in hazardous waste disposal and purchase of supplies. They have also generated many environmental and quality of life benefits.

## **BEST PRACTICES, Physical Plant - Transportation**

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**Title:** Administration, Operation, and Recording of State-Owned Vehicles # 436

**Source:** University of Texas at San Antonio **Co Area:**

**Addl Info:** <http://www.utsa.edu/hop/chapter8/8-9.cfm>

**Abstract:** Covers -  
University Compliance Responsibilities  
University Fleet Management Responsibilities  
Vehicle Reporting Requirements  
University Vehicle Purchasing Policy  
University Vehicle Replacement Policy  
Donated Vehicle Guidelines  
University Fleet Refueling Policy  
Increase Vehicle Use, Improve Efficiency of the University Fleet and Reduce the Cost of Maintaining University Vehicles  
Fleet Minimum Use Criteria  
Authorization to Operate a UTSA (State-Owned) Motor Vehicle  
Recording Use of State-Owned Motor Vehicles

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**Title:** University of Washington Motor Pool # 505

**Source:** University of Washington **Co Area:**

**Addl Info:** <http://www.washington.edu/admin/motorpool/news/govaward.pdf> (page 4)

**Abstract:** The University of Washington Motor Pool buys, rents and maintains the University's fleet of 700 vehicles, 175 of which are alternative-fuel vehicles. There are also eight Flexcars on campus, which offer an alternative to car ownership.

The facility's sustainable practice efforts apply to all aspects of fleet management, from a nearly paperless reservations system to using soap and hot water instead of chemical solvent for parts cleaning. Much of the fleet runs on re-refined motor oil, about 9,000 gallons each year. The motor pool recycles everything it can, including oil, antifreeze, lead-acid batteries, even the toner cartridges used in the office.

Recycling the spent antifreeze has reduced new antifreeze purchases by 300 – 600 gallons per year. Also, changing to the soap and water parts washer means 400 less gallons of solvent purchased each year. No solvent used also means no disposal costs and no exposure to solvent fumes for employees.

The motor pool switched to more fuel efficient buses for the Health Science Express. The engines produce 60 to 80 percent fewer exhaust emissions, 20 percent less nitrogen dioxide (a greenhouse gas) and 30 percent fewer particulates. In addition, there is a "no idling" policy for UW buses and diesel trucks operating on campus.

Policies - [http://www.washington.edu/admin/motorpool/vehicle\\_policy/menu.php](http://www.washington.edu/admin/motorpool/vehicle_policy/menu.php)

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## **BEST PRACTICES, Physical Plant - Transportation**

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**Title:** Best Environmental Practices for Auto Repair and Fleet Maintenance # 601

**Source:** EPA & California Dept of Toxic Substances Control **Co Area:**

**Addl Info:** <http://www.dtsc.ca.gov/PollutionPrevention/VSR/upload/Profit-through-prevention02.pdf>

**Abstract:** The step-by-step instructions in this fact sheet can help you reduce waste, avoid regulatory problems, and save money! This fact sheet is the first in the "Pollution Prevention Tool Kit," a series of fact sheets highlighting the Best Environmental Practices for auto repair shops and fleet maintenance facilities. This fact sheet contains the following information:

- Step-by-step instructions for reducing your waste generation
- Tables to help you assess your waste stream volumes and costs before and after implementing the recommended practices
- References to other fact sheets in the series that contain detailed information on recommended practices
- Specific guidance on how common auto repair and fleet maintenance shop wastes are regulated.

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**Title:** RP-49 Energy Conservation Plan for Fleet Fuel Management # 631

**Source:** University of North Texas **Co Area:**

**Addl Info:** <http://www.facilities.unt.edu/util/UNTRP49FleetFuelPlan.pdf>

**Abstract:** UNT's Fleet Fuel Management Plan contains 5 components each of which will be addressed below.

1. Savings goal for fuel consumption
2. Employ a Preventative Maintenance Program
3. Educate Employees on Fuel-efficient Operating Practices
4. Fully Utilize the State's Fleet Data Management System
5. Document Agency Best Practices

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**Title:** Fleet Management Plan # 632

**Source:** University of Houston **Co Area:**

**Addl Info:** <http://www.uh.edu/mapp/03/030104.pdf>

**Abstract:** This document outlines procedures to be used in operating a responsive fleet management service to support the mission of the University of Houston. Emphasis is placed on providing professional customer service, efficient economical solutions to transportation and maintenance issues, and efficient use of the university vehicle fleet.

This document is consistent with State of Texas Government Code §2171.1045, Restrictions on Assignment of Vehicles, and other applicable requirements established by the State Council on Competitive Government and the Office of Vehicle Fleet Management (OVFM) within the Texas General Services Commission (GSC).

## **BEST PRACTICES, Physical Plant - Transportation**

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**Title:** State Vehicle Fleet Management Plan # 633  
**Source:** State of Texas **Co Area:**  
**Add Info:** <http://www.window.state.tx.us/supportserv/prog/vfleet/2003StatePlan.pdf>  
**Abstract:** Page 13 (19 or PDF File) contains current government and private sector fleet "Best Practices." These are intended to increase state vehicle use and efficiency and to reduce maintenance and operating costs for state vehicles. State fleet managers should emulate and adopt the practices when feasible.

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**Title:** Fleet Policies and Procedures # 634  
**Source:** Lamar State College **Co Area:**  
**Add Info:** [http://www.lsc.edu/PhysicalPlant/Fleet\\_Policies.htm](http://www.lsc.edu/PhysicalPlant/Fleet_Policies.htm)  
**Abstract:** POLICY STATEMENT  
  
Lamar State College-Orange vehicles are available under certain circumstances for use in support of the college mission of education. College vehicles are classified as either pool or service vehicles. The use and purpose of the vehicle determine the classification.  
  
This is a very comprehensive policy on vehicles

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**Title:** Energy Savings Program for Fleet # 664  
**Source:** University of Texas at Austin **Co Area:**  
**Add Info:** [http://www.utexas.edu/parking/fleet/energy\\_savings.pdf](http://www.utexas.edu/parking/fleet/energy_savings.pdf)  
**Abstract:** The University of Texas at Austin manages a fleet of 624 vehicles. During fiscal year 2004-2005, the fleet traveled 2,457,903 miles and used 216,414 gallons of fuel. The average fuel economy for the year was 11.36 miles per gallon. With the continued increase in the price of fuel, it is imperative that the University develop and implement a comprehensive fuel savings program for our fleet that reduces overall energy expenditures.  
  
There are three areas where the University can save on vehicle fuel consumption – proper maintenance, efficient driving habits, and intelligent purchasing of vehicles. By employing an effective preventative maintenance program, training our people on the best operating practices, and purchasing the right size vehicle for the given assignment, the University will improve our fuel economy by 1.2% from 11.36 miles per gallon in 2005 to 11.50 in 2006.

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## **BEST PRACTICES, Physical Plant - Transportation**

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**Title:** Bio Diesel: Changing Tomorrow, Today # 808

**Source:** University of Central Oklahoma **Co Area:**

**Addl Info:** [http://www.sacubo.org/sacubo\\_resources/best\\_practices/2007.html](http://www.sacubo.org/sacubo_resources/best_practices/2007.html)

**Abstract:** The employees of the Physical Plant recognized a problem that came with an opportunity. The department explored a move from Petrol-Diesel to Bio-Diesel fuel for their equipment. Bio-Diesel is fuel produced for diesel engines from vegetable oil or animal fat. This change allowed UCO to embrace a more economical fuel source, a more environmentally friendly fuel substitute, and create a template for other interested parties to implement.

One of the programs is the production of Bio-Diesel fuel. The Physical Plant requested waste vegetable oil from the University's Student Union. The Director of Food Services was very supportive, especially since this meant reducing cost of disposing of the waste vegetable oil. A byproduct of the Bio-Diesel process is glycerin. The motor-pool uses the glycerin as degreaser and soap for the mechanics.

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**Title:** Bio Diesel: Changing Tomorrow, Today # 905

**Source:** University of Central Oklahoma **Co Area:**

**Addl Info:** [http://www.sacubo.org/sacubo\\_resources/best\\_practices\\_files/2008\\_files/Bio-Diesel-Changing-Tomorrow-Today.pdf](http://www.sacubo.org/sacubo_resources/best_practices_files/2008_files/Bio-Diesel-Changing-Tomorrow-Today.pdf)

**Abstract:** The employees of the Physical Plant explored a move from Petrol-Diesel to Bio-Diesel fuel for their equipment. The Physical Plant invested time, money, and labor into the development of Bio-Diesel. The Bio-Diesel team consisted of both faculty and staff. Representatives from the Colleges of Business Administration and Math and Sciences teamed up with the Physical Plant to develop the necessary resources for this project to be successful.

The University is currently using Bio-Diesel in their forklift, two trucks, and a John Deere Tractor. The University plans to expand the use of Bio-Diesel to many of their other diesel running engines. The end result is a cleaner burning, environmentally friendly diesel fuel that has much better lubricating properties than fossil diesel fuel. Another positive reaction of the use of Bio-Diesel fuel is the pleasant smell of French fries when the fuel is burned. A byproduct of the Bio-Diesel process is glycerin. The motor-pool uses the glycerin as degreaser and soap for the mechanics.