

Pinellas County Government
Fleet Management Department
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Background

Pollution prevention can provide the opportunity for local government to reduce the amount of waste operations generate and serve as a role model for the community. The Fleet Maintenance Department is one of several departments in Pinellas County government that implements pollution prevention practices to reduce wastes.

The Department's goals are to minimize the use of hazardous materials, reduce the total waste stream and reduce employee exposure to risk. This is currently accomplished through chemical substitution, process changes, best management practices and recycling.

Waste Reduction Efforts

- ◆ Berms surround the facility boundaries to prevent runoff from entering nearby waterways; all paved areas slope down to a central surface water collection system; a separator permits the water to flow through while contaminants are collected in the basin
- ◆ 11 System One parts washers replaced traditional mineral spirit parts washing dip tanks: 15 gallons X 11 units = 165 gallons/month reduced to 5 gallons/month; approximate **savings of \$2200/mth**
- ◆ Utilize aqueous-based Hurricane parts washer to degrease automotive parts and engines; rinsing parts in the Hurricane washer first with hot steam and detergent, the System One washer solvent life is extended; Hurricane recycles water in a closed-loop system, requiring disposal of the 55-gallon sump contents only 1x/yr
- ◆ Recycle and reformulate antifreeze on site; spent coolant typically will cost \$.52/gallon to haul off-site; **\$10,000/yr savings** vs. purchasing all new antifreeze; purchased a Cool 'r Cleaner unit for \$10,000 that has 0.5 micron filters and can recycle an average of 55 gallons/20 minutes
- ◆ Recycle thinner used to clean paint guns for body work; closed gun cleaner tank; outsource large-scale painting operations to minimize regulatory/environmental issues on site
- ◆ Utilize tire recaps at 1/3 the cost to purchase a new tire; recaps prolong the life of the tires and reduce the amount of tires entering the solid waste stream
- ◆ Recycle hydraulic oil for the past ten years resulting in new product purchase reduction from three 55-gallon drums/mth to one 55-gallon drum/mth

- ◆ Designed and built an oil filter crusher that can crush eight filters at a time; Commercial filter crushers typically can only crush two to three filters at a time and cost around \$1200; filters are recycled
- ◆ Utilize a separate heavy equipment/vehicle washing area that is bermed to contain rinse water, preventing runoff; rinse water is recycled through a three stage clarifier; water passes through a coalescing centrifugal separator, media filters, a chlorinated holding tank to control odor, and then a steam Jenny
- ◆ Contract with vehicle battery supplier to recycle used batteries
- ◆ Scrap metal from Weld Shop is sold to scrap metal salvage facility
- ◆ Facility lighting is replaced as-needed with high energy-efficient lighting
- ◆ Converting vehicles to biodiesel since November, 2000. The county plans to use the half regular diesel-half biodiesel mixture in more than 2,000 vehicles. Currently, 45 vehicles are using biodiesel. The Fleet Department anticipates biodiesel will cost less to purchase than diesel if Pinellas supplies the food grease for recycling and processing into the fuel. The conversions could eventually save the county in fuel purchasing costs, reduce air pollution and reduce solid waste by recycling grease from area grease traps. As of December 2001, per vehicle, the use of biodiesel has reduced CO by 35%, HC by 50% and particulates by 25%. Depending on the type of application in which the vehicle is used, a 2-3 gallon increase in fuel efficiency is possible. On Trailer type vehicles, the cleaner burning biodiesel has increased the pulling power by up to 30%.

Conclusion

Fleet Management's efforts are a good example of Pinellas County's commitment to develop and implement programs that are both economically and environmentally sound. By developing a sound strategy and implementing effective pollution prevention measures, the department has achieved its goals in a cost-efficient manner.

Unlike many other environmental programs that require capital expenditures to control pollution after it has been created, P2 actually pays for itself by reducing production inputs and reducing disposal costs.

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