Kansas' Best of the Best
Sedgwick County Fleet Management

Kansas State University Pollution Prevention Institute (PPI) was established in 1995 as a confidential, non-regulatory agency, with a mission to help Kansas businesses identify pollution prevention opportunities and provide compliance assistance. PPI has worked with hundreds of businesses over the past decade, but through an EPA Region 7-sponsored Best of the Best project, PPI identified three notable Kansas businesses that have taken steps to change the process, change the material, and/or change the technology in the name of pollution prevention and increasing their bottom line. The following case study details the successes of one such Kansas business.

Sedgwick County Fleet Management case study

Sedgwick County Fleet Management provides vehicle maintenance and collision repair service to a fleet of more than 700 vehicles. Marvin Duncan, director, Sedgwick County Fleet Management, recalls the day in 1998 when he interviewed for his current position: *"When I toured the fleet facility, I noticed there were about 50 or more drums on the shop floor and 16 solvent parts washers, and technicians carried aerosol cans of brake cleaner out of the storeroom by the armfuls. The shop was so dimly lit, it appeared to have dirt floors."* The county reassured Duncan they would support the necessary changes and asked him to be part of a team that would help plan a new facility and re-invent fleet management at Sedgwick County.

One of the first steps Duncan took while planning the new facility was to contact the Kansas State University Pollution Prevention Institute (PPI) to request a pollution prevention (P2) assessment. *"Sherry Davis toured our facility in 1999, and she was very gentle with us. She told us we had a lot of opportunity for improvement, but things were really not too bad,"* Duncan recalls. Sherry detailed P2 recommendations in a report that focused on inventory control, solvent-use reduction, body shop efficiency, and new technologies. Her report also included cost-benefit analysis for specific P2 options.

Sedgwick County Fleet Management team, above, (left to right): Boyd Powers, Crystal Bourrett, Matthew Endsley, Penny Mundell, Elden Titus, and Marvin Duncan.

Establish a team: *Change the process*

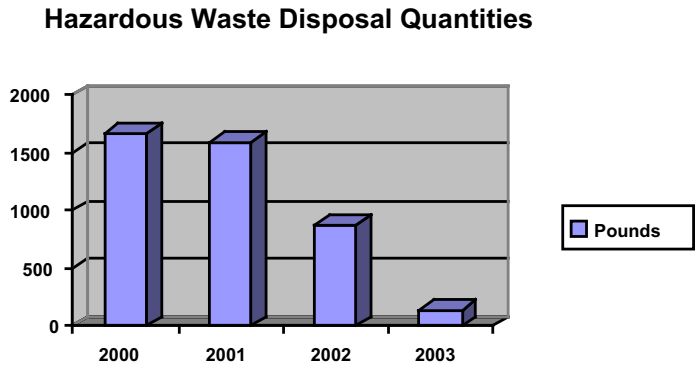
In 1997, Sedgwick County set a departmental goal to reduce hazardous waste generation by 25% by the year 2000. Duncan and his staff, which he refers to as "Team Fleet," achieved a 25% hazardous waste reduction by 2000, but it didn't stop there. After prioritizing recommendations made in the P2 assessment report, they began to slowly eliminate solvent parts washers. Instead of the 16 parts washers they had in 1998, the shop now houses only six solvent parts washers, two aqueous washers, and one paint-gun cleaning system. Boyd Powers and Matthew Endsley, both shop foremen, indicate that tight preventive maintenance (PM) of the fleet eliminated the need for heavy engine overhauls and as a result, the parts washers are not used as much. In addition to the fleet PM program, Endsley has instituted a PM program for the shop equipment as well. *"Each mechanic is assigned to monitor specific shop equipment for leaks or problems and must document the PM check,"* explains Endsley. These PM programs have encouraged employees to take pride and ownership in the facility, equipment, and successes they have achieved.

Inventory tracking: *Change the technology*

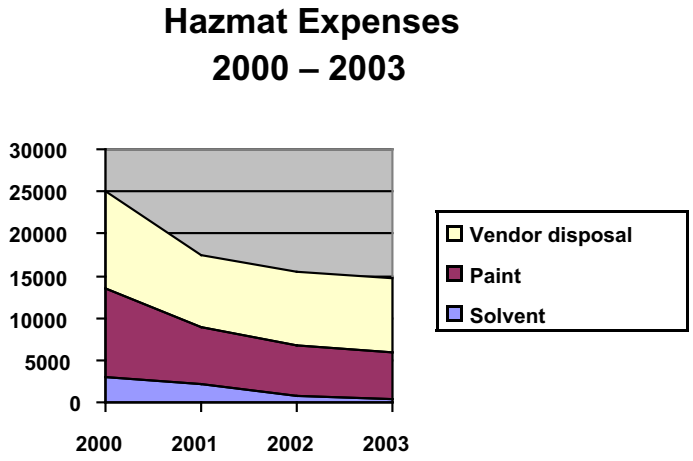
Duncan and "Team Fleet" instituted an electronic fleet management system using software called "FASTER CS." This change in technology tracks material use per vehicle and per technician, and allows the entire team access to vehicle maintenance history and supply inventory. The software enables team members to make fact-based decisions, instead of guesses or estimates, allowing for just-in-time ordering, material-use tracking, and identification of problem vehicles, resulting in tight inventory control and decreased wastes. *"With a fleet of 729 vehicles and more than 5000 work orders processed yearly, it used to take a room full of file cabinets to store all the paperwork orders and related reports. That has all been eliminated now and is kept in a central database available via the computer for all to use,"* explains Crystal Bourrett. Bourrett manages the inventory control system for bulk storage products as well as other chemical products that are tracked by mechanics as they are issued. For example, brake cleaning solvent is now issued in refillable aerosol cans from secured bulk storage. The cans are inscribed with the individual mechanic's name. The 250-gallon solvent tank that used to have open access has been replaced with one 55-gallon drum that is under controlled access. The 50 or more 55-gallon drums that used to sit on the shop floor have been eliminated. These simple changes in technology or processes result in waste reductions.

Coatings: *Change the material and technology*

Over in the collision repair shop, paint technicians no longer order a gallon of paint to get the half pint they needed for a small job. *"Today our technicians now have a Dupont-provided precision mix system, scales, stock, and tints to mix exactly what they need in their shop,"* explains Duncan. All paint purchases are now centrally controlled through the stock room. In fact, despite a higher cost, the body shop staff lobbied to change the material and switched to a higher quality paint, one that offered better UV protection, extending the life of the vehicle paint job. In addition, a new downdraft paint booth was installed which used a filtered air system, decreasing the contaminants that used to enter the paint booth through their old system. These changes in material and technology resulted in decreased need for supplemental vehicle paint and fewer touch-ups, thus decreasing labor costs, raw material use, and hazardous waste expenses. High-volume, low-pressure (HVLP) paint guns are now cleaned in an enclosed gun washer that is part of a closed-loop, solvent-recycling system. These changes in material and technology have resulted in a 60% decrease in raw material purchases between 2000 and 2003; and instead of generating gallons of waste paint solvent, they now generate a brick of solid hazardous waste.



As the numbers clearly indicate, Sedgwick County Fleet Management is one of Kansas' Best of the Best when it comes to looking at pollution prevention opportunities and embracing them for change. Duncan has been documenting hard numbers since 2000 and charts a 92% decrease in pounds of hazardous waste disposed of between 2000 and 2003. In the same time period, solvent expenses decreased by 89%, and paint material costs decreased by 46%. Duncan still leases solvent-cleaning systems from a vendor and has decreased those expenses by 25% over the last three years. He plans to eliminate some of the remaining solvent-cleaning lease expenses by purchasing and managing his own units in 2005. These decreases in raw material expenses and hazardous waste generation and disposal also add up to decreased air emissions and liabilities.



Duncan likens the process of instituting pollution prevention at their facility to peeling an onion, *"We have begun to remove several layers, but we know there are still more to go."* He credits the PPI P2 assessment report for helping them focus and prioritize. He looks to 2005 and beyond when he plans to remove the next "onion layer" by reviewing their remaining chemical inventory for less-hazardous alternatives. In addition, Sedgwick County Fleet Management is in the process of combining all of their procedures into an environmental management system. Last spring, they were recognized nationally by the Association of Equipment Managers for meeting unique challenges in delivering cost-effective management of mixed fleets of on-road and off-road equipment. All of these efforts and successes are the result of teamwork and certainly qualify them as one of Kansas' Best of the Best!

Where can I get more information?

PPI also operates the Small Business Environmental Assistance Program (SBEAP) for the state of Kansas. SBEAP operates a toll-free technical hotline, and can visit your facility to review compliance issues and identify pollution prevention opportunities. Call SBEAP at 800-578-8898 or visit our Web site at *www.sbeap.org* for free, confidential technical assistance. Marvin Duncan of Sedgwick County Fleet Management can be contacted at 316-660-7480.

This publication was created by Kansas State University's Pollution Prevention Institute (PPI) through a grant from the Environmental Protection Agency (EPA). PPI's mission is to help Kansas small businesses comply with environmental regulations and identify pollution prevention opportunities. PPI services are free and confidential. For more information, call 800-578-8898, send an e-mail to SBEAP@ksu.edu, or visit our Web site at http://www.sbeap.org. Kansas State University is an EEO/AA provider.

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