

# WasteWIZARD Press:

Excerpts from recent articles about WasteWIZARD Scale Lane  
Automation



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# The following excerpts were taken from past issues of MSW Management. The articles feature WasteWORKS and WasteWIZARD.



By: Penelope Grenoble O'Malley

In Dallas, TX, Jennifer Stafford, business analysis for the city's solid waste disposal district, wanted software that could streamline financial transactions and produce reports required by the state environmental agency. Faced with having to build a new scale house at the city landfill, which receives 6,500 tpd, the district decided to install a systemwide software package combined with unattended scales. "We wanted the software to handle the monetary and financial side of the landfill and transfer station activities," she explains, "but also to help us evaluate our management efficiency." Stafford chose WasteWORKS from Carolina Software and installed an attendant-free WasteWIZARD automatic keypad control unit at the landfill and two of the transfer stations. Previously recordkeeping for billing was done manually with "people writing on cards and bringing them back and then someone else adding up the totals. Maybe they did it right, maybe they didn't," says Stafford. "An automated format is much more reliable. It's also faster.

"The unattended system works because there's no money handled at our transfer stations—only our city collection trucks use them. At the landfill we have two inbound lanes: one primarily for cash customers, the other a Wizard lane for credit customers, which includes our trucks and our large customers who pay monthly. Our outbound lane can also be used as inbound if traffic backs up. I would tend to guess that a lot of operations underutilize their software because they view it as a means to keep track of their cash. But there's so much more business-related information that we have found invaluable. The software enables us to enter material codes so we know what's coming in and we can relate those codes to tonnages so we know the weight; or if it's tires, how many. We need this information for the state resource conservation commission; before we didn't have the ability to report accurately. We can also use the program's cell grid to know where in a cell a certain kind of material has been dumped."

At the Sacramento County Department of Waste Management and Recycling, where weights were also previously entered by hand, Doug Kobold says the combination of WasteWIZARDS and WasteWORKS software has been "a god-send." The operation includes two transfer stations and a landfill, with one Wizard box at the landfill (150 out of 400 transactions a day are automated), two at one of the transfer stations, one on the inbound scale, one on the transfer scale, and one at the second transfer station, which is a completely unmanned site. "We're running a 24-hour-a-day operation," notes Kobold, "and with the Wizard boxes, we don't need three shifts. We use the software to do our billing and our report to the state and our DOE [Department of Energy] forms. Before I would have to select out all the materials. Now it's done by just running a material-type report. At this point we could have any clerk do it—all they need to know is the type of report we're requiring and then plug in the line items."



Sacramento County has four WasteWIZARD installations, including a fully automated transfer station.



**MSW**  
Management

*Feature*

*Good planning and proper equipment help control costs and trash flow.*

By Joseph Lynn Tilton

(excerpt)

### **Midwest Operator Gains Market Share**

The Metro Waste Authority, based in Des Moines, IA, also uses marketing strategy to help make the MSW operation more efficient. Historically it handled collections from 17 member communities, serving a total of about 400,000 residents. Now it serves 18 communities and 800,000 citizens.

As with their counterparts throughout the United States, increased regulatory pressure is a concern. Operations Manager Jeff Dworek says, "Regulations seem to be getting more stringent. Air quality is the latest. We're monitoring the landfill to make sure we're not releasing any surface emissions from the old disposal area."

The landfill is closed only on Sundays and three holidays a year, and Dworek points out that individual residents use the site. "They can unload on concrete into eight rolloff containers. We want to be more customer-friendly. We have to try to meet our customers' needs. We had to do interesting things to gain back market share. We've signed up 90% of our customers to long-term contracts that offered lowered prices for total waste collection." This strategy has increased tonnage from 350,000 tpy to about 440,000 tpy.

Commercial customers have access to an express lane with an automated scale system that reduces weighing time to less than 30 seconds. "We're using WasteWORKS by Carolina Software. Commercial drivers learned the system with just an hour's instruction because once they know their ID codes, it's a very easy system to learn. It took from one to three days to have all of our people comfortable with the system." But the system has helped them reduce labor requirements by about 50%.

"We have to remain competitive," Dworek reminds, "yet meet all the regulatory requirements. We've also seen a 20% increase in airspace utilization, which extends the life of our landfill by 20%. We've reduced tipping fees from \$31 per ton to \$26 per ton, offering a \$5 rebate, and have had that program running for three years now."

Another strategy includes running 25 trucks out of their transfer station, while boosting transfer production from 300 tons to 550 tons today. "We're also looking at extending the storage capacity this spring. One challenge, though, is we have only two compactor units, and trying to get trip cycles more efficient is tricky. We try to average five loads per day per transfer vehicle, with the landfill 17 miles away.

"Because of WasteWIZARD, our trucks can go into the express lane at the landfill, cutting down their cycle time." Dworek also tweaks production by filling six trucks just before closing so they can be sent out first thing in the morning. "At gate opening, we're moving 120 tons."

# What You Should Know About Weighing Systems



## Sidebar

### [Greenville County, SC: Keep the Line Moving](#)

*Be it tanks or containers, liquid or dry goods, short haul or long - each form of truck hauling has a different basis for delivery and billing, but the basic requirement for profitability is the ability to accurately weigh truckloads.*

By Daniel P. Duffy

#### (Excerpt)

Greenville County, SC, installed a Carolina Software WasteWIZARD system at its Enoree Landfill in August 2002. Solid Waste Disposal Manager Marcia Papin explains, "We noticed through our WasteWORKS reports that about 70 tickets a day were coming from the same vehicles hauling the same materials every time. Since installing the software, we've been able to automate all of the transactions for all our municipalities."

The benefits of an unattended point-of-sale system didn't stop there. "We then added all Sewer Authority transactions, county trucks, and the Sanitation Commission because they were using similar defaulted materials every time and they were such a significant part of our traffic," Papin continues. "We've got in- and out-bound scales going at once, so using WIZARD to handle that portion of the traffic keeps us from having to look up to deal with them at all. That really helps us keep the lines moving for all of the other customers coming in." With the system's ability to automate transactions and even provide an unmanned station for after-hours use, Papin looks forward to the increased use of automation as a vital element in creating an even more efficiently run facility.

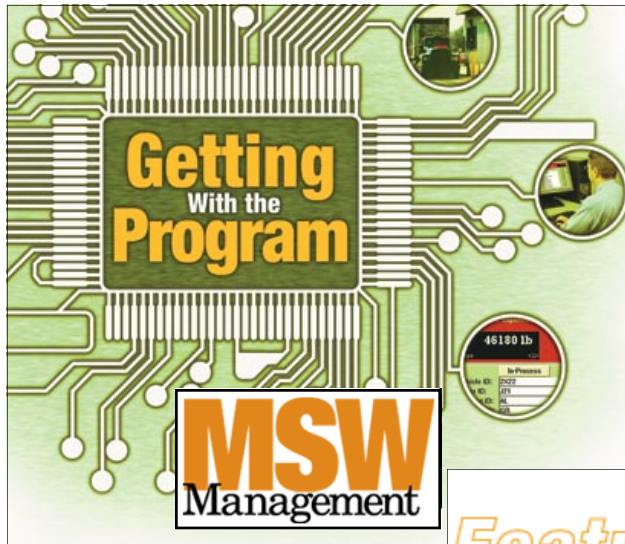


PHOTO: ATLANTIC



PHOTO: ATLANTIC COUNTY UTILITIES AUTHORITY

## Feature

***In the solid waste facility of the future, integrated software will tie the front office to operations and drivers to customer service.***

**By Penelope Grenoble O'Malley**

The emerging field of informal technology (IT) is making inroads in the solid waste industry with software programs to automate previously labor-intensive functions from weighing to billing to report writing. Large operations such as the Atlantic County Utilities Authority (ACUA) in New Jersey have gone so far as to install IT departments, but managers of smaller operations can take advantage of outside consultants and custom software experts to help get them what they need from off-the-shelf programs.

Both software developers and users agree that the name of the game is integration, but two other observations are also clear: No amount of software is going to solve problems you don't anticipate, and whatever you buy will be more effective if you keep your entire operation in mind.

Additional advice comes from Doug Kobold, solid waste planner for the Sacramento County Municipal Services Agency (MSA), who urges MSW managers to consider not only where they are now but where their organization is headed. "The first step is to evaluate what your true needs are on input and output," Kobold says. "Make sure the structure of the system meets what you need from the type of data you're going to be generating."

Tim Kaye, head of IT at the ACUA, agrees. "You don't want to buy one program and think that's it, because it's really just the tip of the iceberg. You have to outline your objectives for your various departments."

"What you choose depends in part on your volume," Kobold says. "If you're doing five transactions a day, a \$10,000 software package isn't going to do you much good. But if you're doing several hundred transactions daily, you're probably wasting a lot of time doing double entry into a spreadsheet." The MSA does between 650 and 700 transactions a day between the landfill it operates and two transfer stations. That's 250,000 transactions a year, which, Kobold observes dryly, "wouldn't work on a spreadsheet." Other indications that it's time to get automated include the need to tie multiple sites together and requirements to generate regular reports for internal use and to satisfy regulatory agencies.

At Cedar/Lynn County Solid Waste Agency (18 municipalities, 170,000 tons annually) in Cedar Rapids, IA, Office Manager Pat Myers reports she and Accounting Manager Tim Lukan chose the WasteWORKS receivables package from Carolina Software to consolidate data from two landfills and a pollution-prevention center. WasteWORKS reads individual vehicle weights automatically; computes charges by ton, cubic yard, or quantity; and prints tickets for cash or charge account transactions. The software computes pricing, including special contracts and discounts, customer billing, and financial reporting, and comes with built-in report-generating capacity. For

Myers, the bonus was being able to provide faster account information to customers. "We get information daily from the three sites," he says. "We needed something that would allow us to do that easily without having to move data from one file to another. Originally we did this maybe every two or three days, but there are times now when I have to run a daily report for some of our cash-based customers." A Carolina Software WasteWIZARD adds further efficiency at one landfill, where it is set up to handle regular haulers.

## **Doing it All**

Another advantage the organization was looking for was ease in generating reports such as the monthly accounting it provides to Iowa's Department of Natural Resources, which gets a portion of landfill tipping fees. Myers says in selecting the WasteWORKS program she and Lukan weren't necessarily looking for dollar savings but benefits in terms of time and personnel efficiencies. Besides billing and reports, the software has also helped streamline the agency's composting operation. "Anything that crosses our scale in or out we record according to product code," says Lukan, who uses WasteWORKS to generate the monthly accounting required by the agency's board of directors.

Before the MSA purchased WasteWORKS, which it uses in combination with Crystal Reports Software from Business Objects, the organization was making do with an outdated custom-written program. "I'm a big advocate of off-the-shelf software," Kobold says. "Once you know what information is going to be regularly required of you, you can structure how you want your data to look, and nine times out of ten you're going to find a software program that's doing that." Beware, however, of vendors who respond to your request for proposals by assuring you they can custom-design a program or tweak their standard package once you've signed a contract. "You want whatever system you buy to already be doing what you want it to do," Kobold says, "in part because you want the vendor to be able to support what you've bought, and so you're not at the mercy of individual programmers."

Kobold's primary goal was to track transactions at the agency's three facilities (a landfill and two transfer stations) and to generate data for reports required by the California Waste Management Board as well to meet state requirements for reporting the origin of the waste it takes in. The landfill that the agency operates, the only MSW landfill in the county, receives about 2,000 tpd. One of the two transfer stations is open to the public and brings in approximately 1,200 tpd. Another serves only agency vehicles for another 150 tpd.

"WasteWORKS works well for us," Kobold says, "because we were not necessarily focused on how the data is put into the system, but the specific kind of data we needed and how we wanted to extract it. Where the kind of customization we were after comes in is in the output. You don't even have to have WasteWORKS installed on your system as long as you have the databases it uses. And as long as you have all the data and all the fields you need, the sky's the limit. A query software like Crystal Reports, which we bought in conjunction with WasteWORKS, allows you to go into just about any data-based format and pull information out. Then, based on your filtering criteria and on the structure of your report, you can present it however you need it. So the message is to make sure that the structure of whatever system you choose meets your needs for the type of data you're going to be putting out. I was amazed, for example, how many software programs don't have an origin field, which is very important here in California because our annual reporting relies on this disposal reporting to show what our diversion tonnage is."

Over in operations, Senior Office Specialist Felix Gregorcyk gives high marks to RouteSmart for keeping collection vehicles moving. "We recently did a countywide reorganization of our routes," he says. "Using the old system where supervisors manually handled given areas, this kind of reorganization would have taken six years. We did it in six months with RouteSmart." Gregorcyk says he can also see how this kind of routing software could be used as an aid in bidding, given that the program can provide an exact customer count in an area as well as a breakdown of costs, and, with a little tweaking, for can inventory.

## Challenges of Integration

At the ACUA, where IT serves both solid waste and wastewater operations, Database Analyst Kevin Lee agrees that information technology is becoming more and more attractive for integrating systems and functions in service industries. But there are challenges, he cautions. For one thing, he says, don't get carried away. "Never lose sight of the goal," Lee says. "Make sure the operational staff needs whatever you're suggesting. We've set up committees with the operational side to tell them about what we have to offer and how it can work for them. We've also made it as simple as going to people and asking them what kind of data they want and how they want to use it.

"For example, as part of our operation we sell mulch and recycled products such as lumber, and I worked with the employee in charge of that operation to design a database internally to handle the delivery process. I've ticketed WasteWORKS software information and merged it into his database so he can see what's being picked up in the WasteWORKS database and compare it back into his scheduling. He also uses it to pull from the customer base that exists in WasteWORKS so he can determine, for example, whether a customer is tax-exempt. In the operations side, we set it up to generate reports on a regular basis that identify who's coming into the transfer station so we can report when a hauler is overweight, including the name of the hauler and the license plates of the truck. We've automated our driver's log. We're pulling information from WasteWORKS and merging it into an access database where the drivers can enter times in and out. We're tracking our routes through GPS on all our trucks and we're going to generate routes using our GIS [geographic information system], based off the data that we collect. Ultimately, we will merge the GPS package with WasteWORKS, so we can track individual trucks and what they're hauling."

Another plan for the future is posting individual accounts on the ACUA Web site so customers would be able to get real-time data on their accounts, plus e-mailing customer statements (an application Fahey also has in mind). "The integration points are there," Lee says. "What you have to identify is where the problems are. You have to ask people what their biggest bone of contention is with the present system. And if there isn't an IT person onboard, hire a consultant, a systems analyst, or a database analyst, not only to help you decide what to buy, but to make the most of what you decide on."

Kobold agrees. "If you don't have the technical expertise in-house, find it. Don't spend a lot of money, but find someone who can help you sort out what you need. Maybe all you want is a simple database platform that will keep your data whole and allow you to send out bills."

*Journalist Penelope Grenoble O'Malley writes frequently on environmental and MSW concerns.*