

FEATURE



Automating Scale-House Operations at Landfills

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If ever scale-house automation was welcomed, it was during the hurricane season of 2004, when the likes of Hurricane Charley ripped through Seminole County, FL, creating the ultimate solid waste disposal challenge.

By Carol Brzozowski

Truck after truck pulled up to the Seminole County Solid Waste Landfill Operations in a nonstop debris-removal effort. What separated the scenario from being untenable was Carolina Software's WasteWalker system, a union between a desktop and handheld application that draws upon Symbol MC70 Pocket PC computer technology, coupled with an industrial-strength thermal Cameo 3 printer.

"These devices allowed us to have one scale operator working the scales coming in, but we also had two handheld devices that allowed the weighmasters to go out and process those vehicles in line without them having to go over the scales, freeing them up and reducing wait time," notes Richard Meinert, landfill operations manager.

"More importantly, it allowed us to use these devices where we were collecting the materials offsite, away from the scales, and allowed us to immediately capture the information as it

came through, so later that night we could bring that into our invoicing system and financial package that accompanies WasteWorks [automation].”

So pleased were Meinert and his colleagues that the department has written the use of WasteWalkers into the county’s operations and emergency operation plans. An added benefit is the tonnage records paved the way for a better audit rate with the Federal Emergency Management Agency.

The Seminole County Solid Waste Landfill Operations is a Class 1 landfill and transfer station. The transfer station receives 2,000 tons of material daily that is transported to the landfill, which receives an additional 800 tons directly. Some 80 employees are employed in the operation.

Seminole County Solid Waste Landfill Operations is in the design phase of building a new scale house and installing new scales at the landfill.

“Part of the vision is also to have the scale automation at the landfill,” says Meinert. The transfer station was updated first, with automation added through two WasteWorks Visions and three WasteWizards.

The new WasteWizard system is an automated addition for WasteWorks sites and an upgrade for existing WasteWizard installations. It features an industrial stainless steel enclosure, an electrical and wiring system, and an integrated camera system for use with the WasteWorks Vision System.

A keypad device offers flexibility. Drivers select English or Spanish as a preferred language, while WasteWizard asks for information needed to process the load.

WasteWizard calculates the amount of the ticket, including special contract pricing and taxes. Accessories allow one to print one or two copies of the ticket, open gates, and operate signal lights. The system can be used with vehicles that do or don’t have stored tare weights.

Additionally, WasteWizard can be equipped with a number of other devices, such as RFID readers and barcode scanners. The system can be connected to a network and operated from any location, a plus for facilities with remote scales with no nearby building.

WasteWorks Vision provides added security to sites that use WasteWorks and WasteWizard.

The technology combines the same ticket information that prints on a ticket with one or more snapshots of the vehicle, driver, or license plate. The image is stored and numbered to match tickets for future viewing. Each system can accommodate up to four scale lanes.

“The WasteWorks Vision system allows video and still-picture capturing of customers on the Wizard System,” says Meinert.

“The nice thing about that is we’re able to bring up on our computer live video feed from these installed systems, so we can see what’s going on at our scales even though we’re not there.”

Since Seminole's transfer-station upgrades, site time for commercial customers has been reduced by at least 20 minutes.

The automation design took one year, notes Meinert.

"We were quite concerned with the layout of our scales and the close proximity to each scale for the protection of the equipment once it was installed," he says. "The actual installation only took us about a month. It's been up and running now for about a month and a half."

One benefit is the impact on residential solid waste rate when negotiating franchise agreement renewals.

An additional benefit of scale-house automation occurs after hours, when the weighmasters clock out and transfer drivers continue to work until all materials are off of the tipping floor.

"Previously, they had to keep a manual log on their tonnages and times, and, the following day, technicians would have to enter that information into the scale management system," says Meinert. "Now the transfer drivers are able to stop on their way out, have the information entered and recorded, and get a printed receipt.

"The manual log is replaced and the customer service technicians save at least an hour or more each day from not having to enter those transactions every day."

After-hours transactions can be augmented by means of optional password prompts and gate interface.

The scale-house automation frees employees up to do other tasks for enhanced productivity.

"We're bringing them up to oversee the commercial vehicles coming in to ensure proper procedures, because they still see the transactions on the screen," says Meinert. "We have different charges for different materials, so they still make sure that correct materials are being charged.

"It frees them up to give a more personal service to what we call the noncommercial entities, the 'moms and pops', which is where the majority of their time is consumed. As I'm sure is the case anywhere else in solid waste, 80% of our tonnage is from the commercial, but 80% of our customers are the moms and pops."

That personal service is key, Meinert says. One of the major problems the Seminole County landfill used to have is customers unhappy with the assessed charges for materials being brought in, Meinert says.

"We would be discussing this with them on the phone and not able to see what we were talking about," he says. "This allows us to bring it up on our computer and we can see the customer and see the material so we know exactly what we are talking about and are able to address it immediately."

Meinhert favors Carolina Software for its product upgrade accommodations. Technical support also is important, he adds. Seminole County had conflicts with previous scale manage-

ment systems.

“Carolina Software’s technical support is awesome,” he says. “When we would incur a problem on the previous scale-management system, the customer support for the scale management system would blame it on the scales.”

The scale customer service representatives would in turn blame on the county’s IT staff, “and we would spend several days having different support agencies pointing the finger at who was responsible for the problem to address it,” Meinert adds.

“With Carolina Software, anytime we have a problem we give them a call. We have somebody on the line within 15 minutes. There’s no finger-pointing; they just look at what the problem is and address it for us.”

For employees, the learning curve on the systems is short and easy, notes Meinert.

“On the WasteWorks and WasteWalker systems, my employees were comfortable with using them after the second day,” he says. “The initial training that was provided to them was about three hours long. After using it for two days, they were comfortable and had no problems.”

WasteWorks or WasteWizard customers have the choice to incorporate a lane control system that works in conjunction with the scales, signal lights and/or gate, and the software systems for controlling the traffic flow onto and off of the scale after a transaction is completed.

While that can be accomplished without the need for attendant interaction, a push button pendant is provided for manually controlling these devices as well.

WasteWizard provides express lane capability for manned ticketing sites with multiple scales or provide a fully automated scale house for unmanned facilities.