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OLD-SCHOOL APPROACH

Michigan's Royal Oak Recycling has succeeded by sticking to traditional best practices.



by beverly rivera davis

UNPLUGGING FROM DIVERSION

Iowa's experience in offering another option to the waste diversion performance standard for solid waste agencies could serve as a sustainable and cost-effective pathway for others to follow in the 21st century.

High above the confluence of the Little Sioux and Ocheyedan Rivers, Thunder Bridge leads to the rural hub of Spencer, Iowa, and its historic streetscape. A beloved and essential natural resource for Clay County residents, the Little Sioux meanders through Spencer and, downstream, cuts across vast grain fields and rolling countryside as part of the Missouri River watershed.

Spencer's City Manager Bob Fagen is busy working on plans to clean up the Little Sioux, a project that will become part of Spencer's new EMS, or environmental management system.

"Part of our EMS plan will include an objective to clean up our rivers. It's something we've always wanted to do. Even though they don't run through our landfill, I believe it's a priority and creates a positive environmental impact, not just in our city, but [in] the entire region," Fagen says.

By embracing Iowa's voluntary EMS law, Spencer joins more than two hundred communities in the state already operating under EMS with the added ben-



efit of unhooking from the state's waste diversion program with its limitations, regulations and penalties.

"EMS is a phenomenal tool for the city of Spencer that supports best environmental practices and also increases operational efficiencies," Fagen adds.

THE PROBLEM

Cass County's Environmental Control Director Wendy Wittrock experienced the limitations of waste diversion before making the switch to EMS.

"We knew back in the '90s that the state's diversion system requiring an annual 25 percent waste-reduction goal didn't make sense, especially for smaller communities," Wittrock says. "It wasn't fair because we have limited control over what goes in our landfills. It also didn't allow us to get credit for all the other good environmental programs and landfill management improvements that we were making."

From the smallest agencies in rural towns like Atlantic and Pella to the sprawling suburbs and cities of Des Moines and Cedar Rapids, waste diversion requirements were dismissed as the sole measurement of a solid waste agency's performance for a variety of reasons from those who have their boots on the ground. While waste reduction regulations had been good back in the '90s, the system was showing its age.

Tom Hadden, executive director of Des Moines' Metro Waste Authority, the largest solid waste agency in the state, is another EMS booster. "Diversion was starting to go stale because most of the low-hanging fruit of waste reduction had long ago been picked. It wasn't unusual for landfill managers who couldn't make the goal to just drop out and pay the penalties. Besides, it's a kind of goofy system, because waste diversion is based on the landfill meeting goals that we [landfill managers] can't control."

Marie Devries, administrator for Cedar Rapids/Linn County Solid Waste Authority, an EMS designated agency, says, "Waste diversion alone was always something of a hit or miss. It didn't take into account the entire waste-stream cycle and all its environmental impacts."

Sara Bixby directs the rural South Central Solid Waste Agency. She participated in the early EMS committee work with state regulators. "EMS is a chance for us to take the next step," Bixby says.

When state regulators took a good long look into the future, they came to the same conclusions as industry leaders in Iowa. "Instead of only looking at the waste diversion metric—disposal management—as the primary driver, we needed to start looking at resource management, because solid waste agencies and their interaction with the environment extend way beyond just putting trash in a landfill," says Brian Tormey, chief of the Land Quality Bureau, Iowa Department of Natural Resources (DNR).

THE SOLUTION

The move to EMS began after Tormey vetted a white paper with industry members. Both regulators and solid waste managers agreed with the general premise that waste diversion wasn't sustainable and committed to work together to find a solution.

Eventually, they discovered that an entirely new wheel didn't have to be created because ISO 14000 was already in use by other industries and businesses. ISO-14000 is the foundation for an environmental management system.

The committee outlined the basic elements of EMS following the general ISO 14000 guidelines, focusing on six environmental areas from recycling and water quality improvements to greenhouse gases. It is intended to be a "holistic" approach to reducing waste based on continuous, small improvements in those environmental areas identified as controllable and measurable.

An alternative to waste diversion, EMS required changes in some Iowa regulations and laws. Therefore, the working committee reached out to State Rep. Donovan Olson, who was familiar with solid waste issues.

EMS INNOVATORS

As a member of the Boone County Board of Supervisors, Olson experienced firsthand how easy it was for that county's solid waste agency to meet diversion goals simply by taking credit for reductions at the Ames Recovery plant that burns solid waste. Even though the Boone agency was very involved in recycling, they could have stopped recycling and their other good environmental programs and still met their reduction goals.

"Conversely, I learned that other landfills were doing everything they could to recycle, reduce and divert waste, but couldn't meet their reduction goals for a variety of reasons beyond their control," Olson says.

After meeting with Tormey and the solid waste industry representatives on the committee, Olson says he recognized that EMS had the potential to drive innovation and creativity. "That's when I decided to make EMS the focus of my energies. We began drafting a new EMS law together," says Olson, who sponsored the EMS legislation.

BEYOND DIVERSION

Iowa's EMS law was designed to encourage responsible environmental management and solid waste disposal. It is a voluntary, nonregulatory approach. Designated EMS participants are allowed to set aside the waste reduction regulations and design activities and programs based on their specific community needs and goals. They also may qualify for financial assistance to implement their plans.

In 2008, the Iowa legislature unanimously passed HF 2570, also known as the EMS Law, that uses a radically different metric for environmental performance. Instead of continuing to strive only to meet the state-set landfill diversion goals, agencies designated as environmental management systems (EMS) set their own local environmental goals and measured performance in six areas.

Using a set of EMS management practices, solid waste agencies demonstrate regulatory compliance while identifying and engaging in activities that reduce environmental impacts and improve operational efficiencies through continuous and measurable improvement.

The DNR director also named a



ELEMENTAL SUCCESS

Laura Fiffick, an EMS consultant, provides advice for communities considering such an approach at www.RecyclingToday.com/rt0113-municipal-recycling-focus.aspx.

nine-member advisory council to develop the processes to implement the new EMS program and a two-year pilot phase with six participating agencies ranging from the smallest (less than 10,000 tons per year managed) to the largest (more than 550,000 tons per year managed). It also provided funding to pilot communities to implement their EMS programs.

FRIENDS WITH BENEFITS

EMS benefits extend well beyond improved environmental compliance. DNR and the six EMS pilot solid waste agencies documented reduced environmental risks and employee accidents, increased operational efficiencies and conservation of natural resources as well as improved employee morale. By opting into EMS, solid waste agencies also can opt out of some regulations and penalties.

DNR also helps solid waste agencies start an EMS program by providing fast-start grants (\$20,000), free training and software, webinars and on-site consultants. Of the state support given to EMS designated agencies, “the most important is providing them with an experienced EMS outside consultant,” Tormey says.

The language, metrics, planning and implementation of an EMS program can be daunting. “The advisory committee hired an EMS consultant firm, Gresham Smith and Partners (GS&P), to educate us,” Tormey adds.

A KICK START

Starting an EMS program includes the plan, do, check and act cycle. EMS pilot consultant Laura Fiffick recommends starting small because the metrics can be challenging. “Small is really the way to go in the beginning,” she says. “However, you can’t shortchange the metrics, which are probably the biggest pains of the system, but that’s how you know you are doing better,” Fiffick adds.

“The first year can be overwhelming,” Wittrock says, “but now that we’re in our third year, EMS has proven to be a far better environmental management system for our community, where we are now getting credit for all the good environmental improvements that we are making. We now know what works based on the numbers.”

After a successful pilot project, EMS is now being offered to all solid waste agencies and permitted landfills. Iowa has chosen to take the more cautious approach, growing slowly so that each EMS designated agency is given the time and attention it requires before adding another to the new system.

Iowa’s solid waste management agencies’ creative and effective EMS programs ranged from “no-idle” policies that improved air quality in Cedar Rapids to attaining a near zero-waste household hazardous waste facility in Des Moines. **rt**

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ELEMENTS OF SUCCESS

Laura Fiffick, a consultant who worked with Iowa’s pilot communities to establish their environmental management system (EMS) programs outlines the elements of such a startup, which includes a \$20,000 quick grant from the state.

- Gap analysis;
- Fenceline (scope of EMS);
- Team selection;
- Environmental policy statement;
- Environmental impacts;
- Legal and other requirements;
- Objectives and targets;
- Action plan;
- Identifying key resources and additional needs;
- Communication/training/awareness;
- Monitoring and measurement;
- Assessment; and
- Reevaluation and modification

