

**OCL Study Session
Managing Solid Waste
Oct. 27, 2009**

Presenters: Tom Rhoads, executive director of the Onondaga County Resource Recovery Agency (OCRRA); Tim DiGiulio, solid waste engineer, Department of Environmental Conservation

Tom Rhoads—

Three most important points:

- A fully integrated framework—reduction/recycling/recovery—is essential, with the most emphasis on reduction.
- OCRRA doesn't make trash; we do. So how do we change societal habits and priorities, and what is OCRRA's role in that effort? Have to think "upstream," before items wind up at a landfill.
- "Stuff" costs money. And having revenue tied to disposal volume is oxymoronic. Tying revenue to the quantity of trash we generate is not sustainable.

What makes a solid waste management program "green"? We need to first concentrate on reduction, then recycling, then recovery for energy, and, as last resort, landfill.

*** One important way to try to reduce waste: Product Stewardship**—in which manufacturers, in particular, take responsibility for reducing the environmental impact of their products (designing for reuse or recyclability through choice of material, avoiding toxic substances, etc.)

How does Onondaga County rate in recycling efforts? Very high recycling rates. Waste-to-Energy facility one of the best in the country. (*POWER* magazine ranked it among the **top five renewable energy facilities in the world.**) Since 1994, the WTE facility has processed more than 4.6 million tons of garbage and produced nearly 3 billion kilowatt-hours of electricity for Central New York. Sending nonrecyclable trash to WTE facility diminishes greenhouse gases (landfills produce methane gas, which is 21-24 times more potent than CO₂ in trapping heat in the atmosphere.

We MUST focus on waste reduction.

- Landfills are one of the worst generators of greenhouse gases. Difficult to cut down on waste in an economy driven by consumer spending and a culture of disposable (or nonrecyclable) products. As products have gotten more convenient, they've become more disposable, less "green."
- Need to focus green efforts "upstream," long before trash reaches the landfill. Again, "product stewardship."
- In U.S., 28 states have programs on product stewardship for electronics—designer is responsible for product's end-of-life. Prompts them to build in recyclability.

- Need to educate public on choices and trade-offs—community-based social marketing encouraging people to recycle and reduce waste.

In Onondaga County, solid waste management is a bargain compared to other counties in state:

- Average household generates one ton of trash/year.
- Amounts to about \$65/year in their disposal cost per ton.

*** Need to decouple revenues from trash disposal** (see point #3 at top)—change model of how we derive revenue from solid waste disposal—in order to be sustainable. One solution: charging a flat household fee rather than \$XX per ton of trash. Tompkins County charges \$50/year as a “user” or household fee. Current system/culture values cheap disposal but ignores the whole environmental cost.

Onondaga County legislation requires recycling for both homes and businesses.

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Tim DiGiulio—DEC

DEC does not enforce recycling laws. It DOES:

- provide assistance or grant money to states for purchasing recycling equipment
- issue research and development permits to communities and entities that come up with innovative ways of reducing waste
- provide technical assistance and outreach to public
- support legislation (ie., bottle bill)
- beneficial use program—do a lot of review of beneficial use of solid waste. Try to avoid as much waste going into landfill as possible. Look for alternative uses—ie., tire chips as backfill or coal ash as aggregate substitute in concrete)

Steep decline in landfills between 1988 and 1994. About 47 open landfills in NYS now (down from more than 350 in late 1970s). Recycling rates have gone up substantially in same period.

Impacts of recycling—saves energy, natural resources, money, landfill space, and cuts down on pollution. In NYS, paper recycling saved:

- 6.7 million cubic yards of landfill space
- reduced greenhouse gas emissions by 5.2 million tons of carbon
- saved 231 trillion BTUs of energy

NYS recycling (household/industrial) rates from 1987-2006 were at about 48 percent. Municipal solid waste (just household waste) recycling is about 30 percent. Drops to about 20 percent if you take out yard waste.

What do we throw out? Paper accounts for largest chunk of residential trash (29 percent), then organic matter (23 percent) and plastics (15 percent).

Recycling habits today are due to municipal laws. But rates today have plateaued. Onondaga County is probably #1 in state for curbside recycling.

DEC does not enforce recycling laws; communities are responsible for that.

Need thorough carbon impact analysis of any proposed solutions to landfill problems before issuing mandates in order to achieve maximum benefit.

DEC's "Beyond Waste" program goals:

- Minimize waste generation
- Maximize reuse
- Maximize recycling
- Maximize composting and organics recycling
- Promote product stewardship
- Create green jobs
- Maximize energy value of solid waste
- Minimize climate impacts of solid waste

Some additional goals for achieving a more sustainable future:

- Capture methane from landfills
- "Pay as you throw" system—maybe taxing garbage
- Promote food waste composting
- State funding
- Market development
- Outreach, education, enforcement

Two Essential Steps: Need statewide push for product stewardship—thinking "upstream"—and for public education. Pursue on state level because local legislative mandates are too fluid and because statewide mandates make more significant impact on market.

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