

# Solid Waste Management

A publication of the Association of Minnesota Counties

Solid Waste Management in Minnesota has been under almost constant change since the early 1970's when it became apparent that waste management practices were contaminating water. Since that time legislation has been enacted at the federal and state levels that have reduced reliance on landfills as the only waste management method, while changing landfill construction and operating practices to reduce the potential for environmental problems related to managing waste.

Minnesota entered its current phase of waste management in 1980 with passage of the Waste Management Act (WMA) (Mn. Stat. 115A). The WMA established significant roles for the Pollution Control Agency (PCA), and a sequence of sister state agencies, currently, the Office of Environmental Assistance (OEA), as well as significant responsibilities for counties to further State waste management goals. Currently, the PCA is primarily focused on regulation and enforcement, and the OEA is focused on planning, financial and technical assistance.

Waste management in Minnesota is significantly driven by the waste management hierarchy, (Mn. Stat. 115A.02) which is as follows (in order of preference):

1. Waste reduction and reuse.
2. Waste recycling.
3. Composting of yard waste.
4. Resource recovery through mixed municipal solid waste composting or incineration.
5. Land disposal which produces no measurable methane gas or which involves the retrieval of methane gas as a fuel for the production of energy to be used on-site or for sale.
6. Land disposal, which produces measurable methane and which does not involve the retrieval of methane gas as a fuel for the production of energy to be used on-site or for sale.

## County Waste Management Authority

Counties were first given the authority to undertake waste management programs in 1971. This authority was expanded in 1980 with passage of the Waste Management Act. Counties are currently engaged in the full range of waste management activities at this time, including: education; reduction, reuse, recycling, composting, waste to energy, landfilling, and hazardous waste management.

Much of county waste management activities are governed by waste management plans. State law and rule provides significant direction on what should be in solid waste plans and how plans are developed and approved. Mn. Stat. 473.803 governs metro area county solid waste plans and Mn. Stat. 115A.46 and Mn. Rules Chapter 9215 govern Greater Minnesota solid waste planning.

County solid waste plans are approved by the OEA and must be re-submitted for approval every five years. Plans must address a variety of waste management activities, including: solid waste reduction; solid waste education; recycling; yard waste programs; mixed municipal solid waste composting; solid waste incineration and energy recovery; land disposal of mixed municipal solid waste; waste tire disposal and recovery; major appliance management; used motor oil and lead-acid and dry cell batteries management; household hazardous waste management; and demolition debris. The OEA is currently working on a package of legislative proposals that will significantly change county solid waste planning.

## Current Issues in Waste Management

### *Waste Generation and Reduction*

A goal of waste management in Minnesota has been to reduce the amount of waste that is being produced. Despite a statutory goal of reducing per capita waste generation by at least 10 percent of 1993 levels by the year 2000, per capita generation has instead increased by 25 percent over that time period. The chart on the following page clearly shows this policy has not been achieved. However, it is also not known what waste growth would have been in the absence of state and county waste reduction efforts.

### Recycling

Recycling has been one of the successes of state and county waste management. In 2000, Minnesotan's recycled 47.7 percent (2,267,952 tons) of waste generated. This recycling rate is second in the nation only to Delaware. However, the State's recycling rate has grown slowly since 1995 (see chart below).

The passage of SCORE (Select Committee on Recycling and the Environment) legislation in 1989 provided the primary stimulus to achieving Minnesota's standing as a national leader in recycling. Current recycling goals are 35 percent for counties in Greater Minnesota and 50 percent for metropolitan counties. According to the 2000 Report on SCORE Programs 56 counties met their recycling goals.

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The recycling rates shown in the map on the following page are calculated by dividing the tons recycled by the tons of waste generated and includes a yard waste credit of up to 5 percent, and a source reduction of up to 3 percent. Counties are eligible for these credits by including waste reduction and yard waste in their solid waste programs.

In addition to the recycling goals, counties are required to ensure that residents "have an opportunity to recycle". Each county must have at least one recycling center (in 2000 there were 103 materials recovery facilities), convenient sites for collecting recyclable materials (in 2000 counties sponsored 586 recycling drop-off centers and 726 recycling stations), and curbside collection in Greater Minnesota cities of more than 20,000 population and metro area cities of more than 5,000 population (there are currently 765 curbside recycling programs).

Commercial recycling is not mandated, but 68 counties have programs to promote commercial and industrial recycling, and 20 counties require businesses to recycle. Commercial recycling is important, as 75 percent (1,669,544 tons) of materials recovered in 2000 came from the commercial, industrial, and institutional sector.

## Composting

Composting of waste in Minnesota has a mixed record. Mixed municipal solid (MSW) waste has had problems while yard waste composting has been very successful in diverting waste from the solid waste stream. Yard waste was banned from the municipal solid waste stream in 1995; in 1994 over 400,000 tons of yard waste were collected, representing 9.7 percent of the waste stream. Further evidence of the success of this state policy, is that the 2000 MSW Study showed that yard waste only makes up 2.3 percent of nonrecycled MSW in Minnesota.

Mixed MSW composting has been less successful. Four facilities were constructed in the early 1990's, but only one is still operating (serving Faribault and Martin Counties). Issues ranging from odor control, loss of flow control, and cost issues forced these facilities to close.

A recent trend in waste management has been to establish source separated compost programs for food and other organic waste. Examples of the success of these programs are in Hutchinson, Western Lake Superior Sanitary District (Duluth), and a program by the Solid Waste Management Coordinating Board's sale of composting bins that greatly exceeded supply.

## Waste to Energy

Waste to energy, also referred to as resource recovery continues to manage a significant share of solid waste in Minnesota, approximately 22 percent (1.25 million tons) of waste generated in 2000. However, this is down from 37 percent of waste generated in the early 1990's, this reduction has occurred due to increased waste generation while waste to energy has remained static. There are currently nine waste-to-energy facilities in Minnesota. The development of additional waste to energy capacity in the future is likely to be minimal due to the loss of flow control as well as the lower costs of landfilling.

## Landfilling

Landfilling of waste continues to be the dominant waste management method in Minnesota. In 2000, 33 percent (1.9 million tons) of waste generated was disposed of in landfills. The reliance placed on landfilling

has increased significantly in recent years; the amount of waste generated landfilled in 1993 was 18.5 percent.

The loss of flow control in 1994 has led to a significant increase in the amount of waste exported to out of state landfills. Evidence of this cause and effect is that exported waste climbed by more than 200 percent the year after flow control was ruled unconstitutional by the U.S. Supreme Court. In 2000, 700,000 tons of Minnesota-generated waste was sent to out of state landfills. This is 13 times the amount of waste exported in 1991 when counties still had flow control authority.

Minnesota counties should be concerned about this trend toward increased waste exporting because: there is a potential legal and financial liability to Minnesotan's if these landfills cause environmental problems; and waste that leaves Minnesota bypasses state solid waste policy and the policies established by counties through their solid waste plans.

## Hazardous Waste

County management of household hazardous waste (HHW) is voluntary under state law. However, counties and the PCA have formed a very effective partnership to ensure that Minnesotan's have a means to properly manage toxic products that are intended for residential use. All counties participate in a program where the PCA provides a small management grant to nonmetropolitan counties, and takes liability for waste shipped for final disposal, and counties provide the means to collect HHW. In 1997, more than 2.2 million pounds of HHW was collected.

## Funding

County waste management programs are financed through a variety of mechanisms. These include property tax, special assessments or service fees, SCORE grants, processing payments, sale of recyclables, and sale of energy produced from waste (electricity and steam). Total county revenue and expenditures are not known, but State financial assistance to counties includes approximately \$1 million for HHW programs, \$12.6 million for SCORE programs and \$7.5 million for solid waste processing payments in State fiscal year 2003.

SOURCE: "Report on 2000 SCORE Programs: A Summary of Waste Management in Minnesota," Minnesota Office of Environmental Assistance, April 2002.

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