



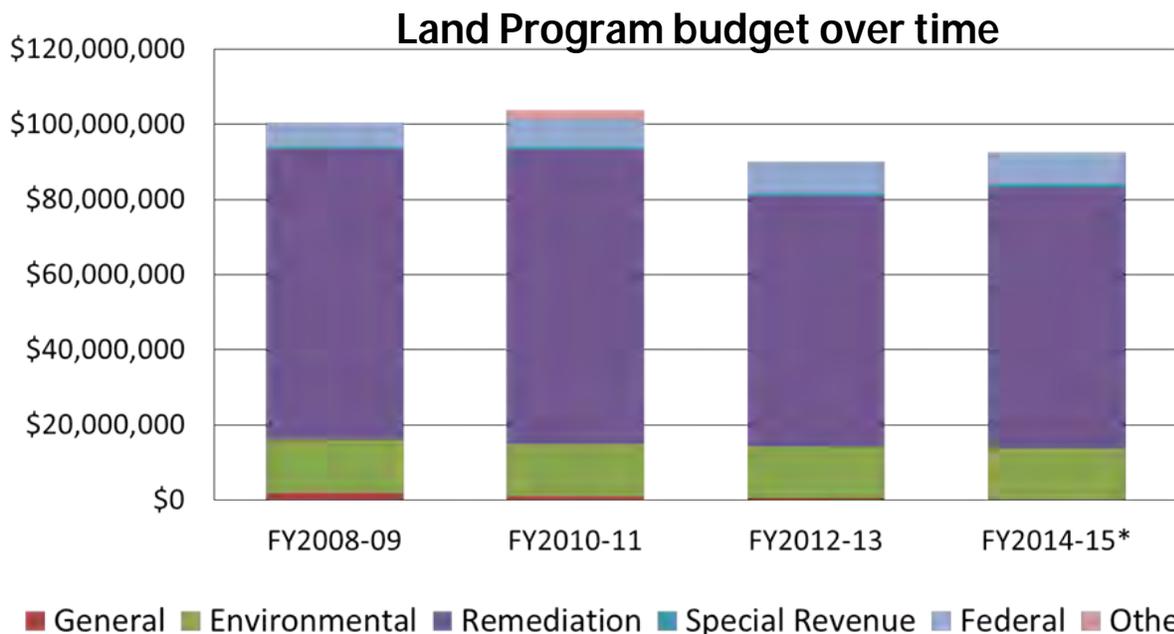
Land Program budget

Performance through FY 2013 and proposal for FY 2014 and FY 2015

The MPCA's Land Program protects the environment and public health through the management of solid and hazardous wastes and petroleum products. The agency encourages waste minimization and mitigation through waste reduction, recycling and reuse; and by managing risks at contaminated sites through site cleanup and restoring contaminated land to productive use. The MPCA's integrated system of activities ensures that the entire life-cycle of solid and hazardous wastes and petroleum products is managed properly.

The Land Program works directly with a large and diverse array of public and private entities including counties, cities, businesses, and consultants. The Program manages solid and hazardous wastes from a systemic approach. The MPCA characterizes certain types of waste as a resource and helps businesses and local units of government understand how this approach benefits their earnings and environmental management options.

Budget trends



Strategic overview

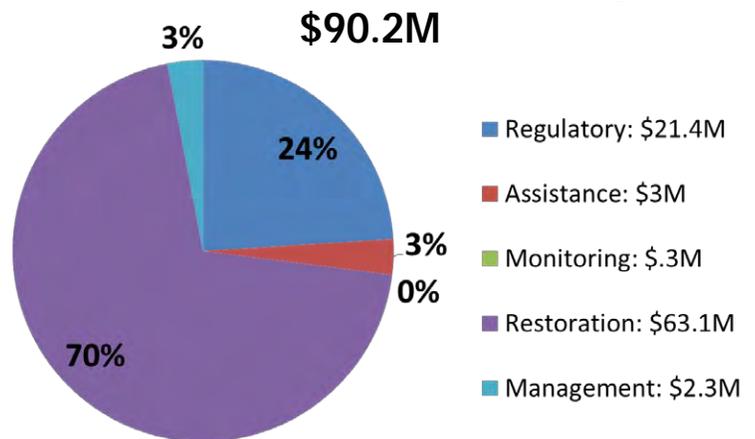
The MPCA's strategic vision is that Minnesota's land supports healthy ecosystems and sustainable land uses. The agency strategic plan lays out goals and objectives that help meet that vision. The land and waste program goals include:

- Goal L1:** Ensure solid waste is managed to conserve materials, resources and energy.
- Goal L2:** Prevent, minimize or reduce the release of contaminants to or from the land.
- Goal L3:** Manage risks to human health and the environment at contaminated sites to allow continued use or re-use.

These goals are supported by measurable objectives and associated metrics that help gauge how well we are doing at delivering services and achieving desired results. Measuring performance allows us to manage programs effectively.

Agency progress in the land program is measured in five categories including regulatory, assistance, monitoring, restoration and management. The chart at right shows land program allocations by activity in the FY 2012 and FY 2013 biennium. The next sections provide more detail about how these and previously allocated dollars have been used to achieve environmental and operational results.

FY 2012 and FY 2013: Land Program

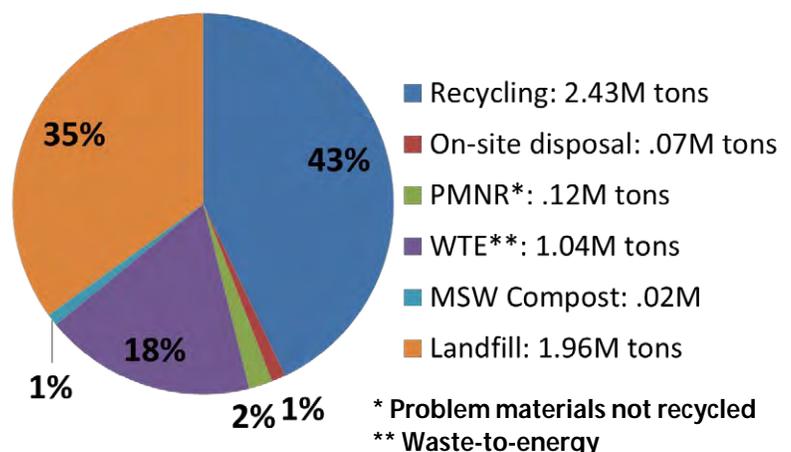


Land program: environmental metrics

What to track and why

While 70% of solid waste is recyclable, statewide recycling rates have remained fairly static over the years. The program is developing strategies to increase recycling in multiple sectors. Recycling and re-use of materials is both environmentally and economically beneficial. For example, reducing the waste stream lengthens the lifespan of existing landfills, minimizing the need for costly and often controversial new landfill facilities. In addition, state estimates show that Minnesota manufacturers using recycled components have an economic impact of more than \$8 billion.

Municipal solid waste in Minnesota



Household burning of solid wastes is harmful to human health and contaminates our air, water, and soil. Burning waste is against the law in Minnesota. While the number of households that burn their garbage is decreasing (12% reduction from 2006 to 2010), we have not met our goal of a 75% reduction. The program is looking at revising its efforts to improve its impact on reducing this practice.

The number of entities that generate hazardous waste and the total amount of hazardous waste generated continue to decrease.

Land program: activities and operational metrics

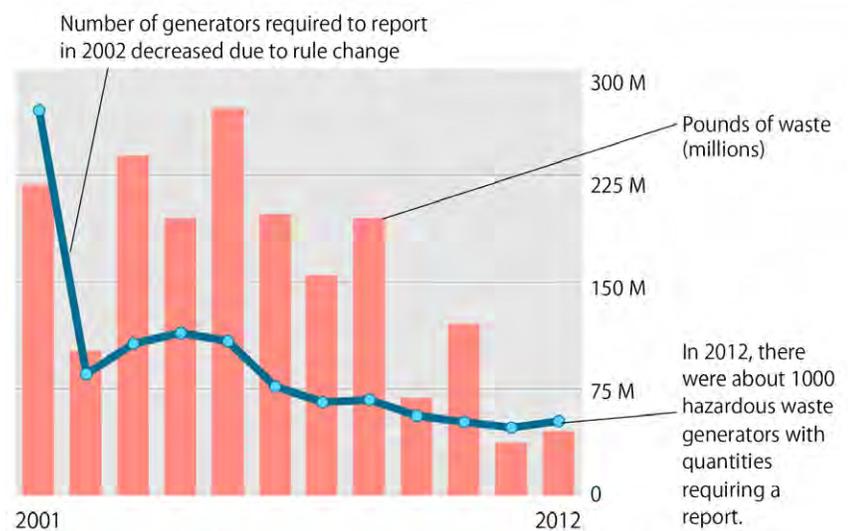
Regulatory

The MPCA issues solid waste permits and develops rules for the management of solid waste, hazardous waste and storage tanks that ensure Minnesota businesses and citizens meet federal law. Solid waste plans are also reviewed by MPCA staff to ensure the waste hierarchy guidelines are followed and annual reporting requirements are met. For these programs, 98 percent of permit holders comply with requirements.



Operational results

In Minnesota, commercial entities that produce any amount of hazardous waste are regulated as hazardous waste “generators” with requirements that depend upon the amount of waste they produce. Since 2003, the number of generators has dropped by more than half, and there has been a corresponding drop in the amount of waste. Progress is tracked and evaluated in these plans through the annual Solid Waste Policy Report.



Currently, updated Compost Rules are under development and are scheduled to be on public notice in July 2013.

Assistance

There are several areas where staff provide technical assistance and grant funding for waste prevention and reduction programs. These programs include working with business and educators on green chemistry, school assistance, Minnesota GreenCorps and environmental assistance grants.

Operational results

Environmental Assistance Grants are awarded through a competitive application process for projects that protect and improve Minnesota’s environment. In the last fiscal year, approximately \$570,000 was awarded in environmental assistance grant funding. Sustainable and measurable outcomes are a requirement for grant projects. For example, the Science Museum of Minnesota’s *Project No Waste* received grant funding to expand recycling and composting opportunities in public spaces, events and other venues. The Science Museum matched the grant funding and created a program that is on track to increase its recycling rate from 18 to 75 percent in two years. It also has an educational component that allows the Science Museum to educate more than one million visitors annually.

The Environmental Assistance program also provides support to Minnesota schools in a variety of ways. More than 70 percent of school waste can be recycled or composted. Currently a study is being conducted to provide solutions and best practices to help schools reduce waste and recoup cost savings.

Environmental Assistance Grants have also been awarded to schools to expand recycling and composting programs.

In the area of green chemistry, the MPCA has executed four grant agreements for curriculum development with the University of Minnesota-Duluth, University of Minnesota-Twin Cities, St. Catherine University and Winona State University. The number of students reached through this project is expected to be 510 to 540 in introductory courses per year, 1,137 students in advanced courses each year, 165 to 175 chemistry and chemical engineering students annually and 37 to 47 graduate teaching assistants each year. Additional green chemistry demonstration projects include:

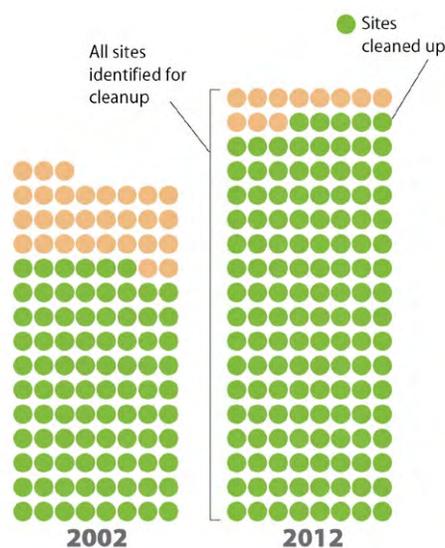
- Cortec Corporation developed a new alkyl/PVDC primer for use in industrial applications resulting in a 40 percent reduction in volatile organic compound (VOC) content, potentially reducing VOC emissions by 4,187-8,375 tons per year. They also developed a second product that reduces VOC content by 47 percent and annual VOC emissions by 2,500 to 5,000 tons per year.
- Salo Manufacturing's demonstration project replaced 8,000 pounds/year of acetone with more environmentally friendly products. This will reduce acetone related hazardous waste by 600 pounds per year and reduce annual hazardous waste disposal fees by \$400 – \$600.
- Ecolab worked to develop a new line of hard-surface cleaners by moving to renewable and bio-based raw materials, making the product 73 percent bio-based.

Monitoring

The MPCA Remediation programs that investigate and monitor the impacts of petroleum releases and hazardous waste substances into the environment include: Petroleum Remediation, Closed Landfills, Superfund/Site Assessment, RCRA Corrective Action, Emergency Response, and Brownfields. This monitoring involves collecting and analyzing samples from various environmental media, including soil, indoor and ambient air, soil gas, groundwater and surface water.

Operational results

The monitoring results are used to define the extent and magnitude of the contamination at such remediation sites, and to complete public health and environmental risk assessments. The risk assessment and monitoring data are used to make a final decision about appropriate corrective actions or restorations at contaminated sites. Site monitoring is also conducted following the completion of restoration activities to assess the effectiveness of the remedies. Monitoring at and in the vicinity of remediation sites often continues for the long term to ensure that public health and environmental risks are managed appropriately.



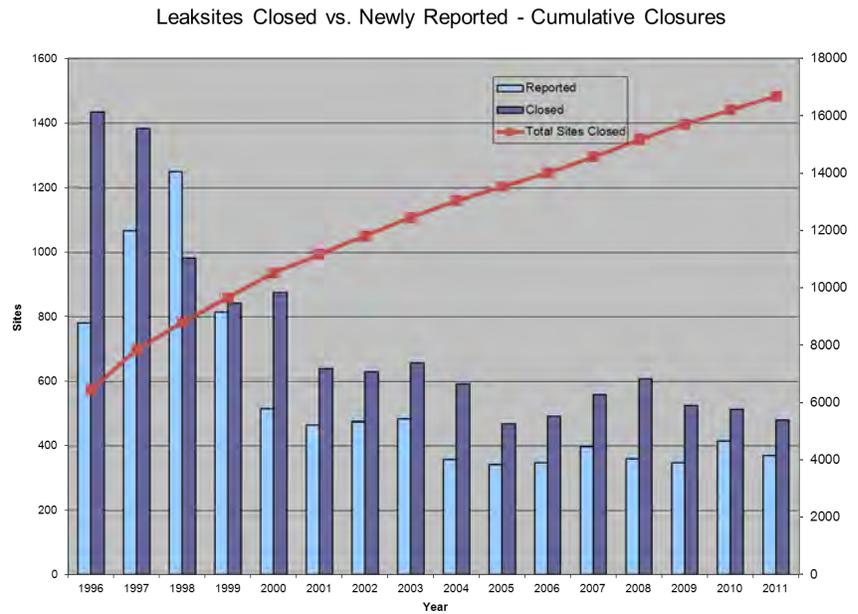
| | 2002 | 2012 |
|------------------|--------|--------|
| Identified sites | 14,365 | 18,171 |
| Cleaned up sites | 11,865 | 17,243 |

Restoration

Putting abandoned, idled, or underused industrial and commercial properties back into productive use can be complicated by actual or suspected environmental contamination. The MPCA helps make this land available for redevelopment by investigating and cleaning up these sites.

Operational results

The Petroleum Tank Release program oversees the work of responsible parties to investigate, cleanup, and close petroleum tank release sites. When responsible parties are unwilling or unable to conduct investigations or cleanups, the program takes over management of the project sites. On average, the number of sites needing cleanup through the Petroleum Tank Release program has declined by 150 sites per year from 2000-2011.



Management

Management activities include business support functions directly related to the land program. Many operational measures reflect the activities associated with management including documentation related to permit and environmental review public notices and enforcement actions. This section also incorporates the activities of the Assistant Commissioner for Land.