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MINNESOTA

# CLOSED

# LANDFILL

# PROGRAM



1996 ANNUAL REPORT:

**On The Way**



**Minnesota Pollution Control Agency**  
Ground Water and Solid Waste Division

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# **Minnesota Closed Landfill Program**

## **1996 Annual Report:**

### **ON THE WAY**

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# Executive Summary

The 1994 Landfill Cleanup Act (Act) created Minnesota's Closed Landfill Program. The Program is an alternative to Superfund for closed landfills and the first of its kind in the nation. The Minnesota Pollution Control Agency (MPCA) is required by the Act to provide a report to the legislature on past fiscal-year activities and anticipated future work. This report fulfills the requirement and covers fiscal year 1996 (FY96), which is from July 1, 1995, to June 30, 1996.

## Program Overview

The Closed Landfill Program (Program) cleans up and manages qualified mixed municipal solid-waste (MMSW) landfills by completing closures, taking over long-term care and reimbursing eligible parties for their past clean-up costs. To qualify for the Program, a landfill must be a disposal facility that was permitted by the State and that stopped accepting MMSW by April 9, 1994, and demolition debris by May 2, 1995.

For each landfill in the Program, the landfill owner, operator or responsible party must enter into a Binding Agreement with the MPCA. After completing the tasks identified in the Binding Agreement, the MPCA issues a Notice of Compliance (Notice). When the Notice is issued, the state assumes responsibility for any remaining clean-up work and long-term care and can reimburse eligible parties for certain past clean-up costs. Under an agreement between the MPCA and the U. S. Environmental Protection Agency (EPA), once

a landfill has received a Notice, EPA will defer to the regulatory authority of the State for the landfill. Under the EPA/MPCA Agreement (signed August 1995), the EPA has agreed also to remove landfills with Notices from the National Priorities List, terminate Federal Cleanup Orders and/or Consent Decrees, close federal cost-recovery cases, and remove EPA liens on properties.

## Funding and Expenditures

Funding for the Program comes from a combination of state general-obligation bond funds, solid-waste assessment fees, Metropolitan Landfill Contingency Action Trust Fund and financial-assurance transfers. Major funding to pay for the Program has come from an expansion and increase in the solid-waste assessment fee.

As a result of the 1995 Legislative Session, the Minnesota Department of Revenue (MDR) was able to add additional staff to assist in education and compliance, which resulted in improved fee collection for FY96. In FY96 the total fee collected was \$20,085,643. The additional revenue received in FY96, compared to FY95, can be attributed to a full year of expanded and increased fee collections as well as to the increased efforts by MDR staff and better coordination with MPCA staff. A Memorandum of Agreement between the Department of Revenue and the MPCA (August 1, 1995) helped coordinate the collection of several fees that fund Ground Water and Solid Waste Division programs, including the Closed Landfill Program. Projections for FY97 are that the fee collection will remain around \$20 million, which is adequate to cover program expenses, including reimbursement to owners and operators, responsible parties and EPA.



A total of 26 of the 106 landfills in the Program had established some type of mechanism for financial assurance, as was required for landfills open past July 1, 1990. The estimated costs for financial assurance were often underfunded because of the limited time landfills had available to accumulate funds before they closed. The owner or operator of a qualified facility must transfer to the Landfill Cleanup Account any financial-assurance funds that remain after landfill closure, postclosure and response actions are completed at the landfill. Eight landfills transferred a total of \$2,778,084 to the Landfill Cleanup Account in FY96.

### **Program Activities**

In August 1995, EPA and MPCA signed an agreement which ends EPA's involvement with the 10 closed landfills on the National Priorities List, as well as the other 96 landfills in the Program. For landfills that have received Notices, the agreement calls for EPA to delist the landfills from the National Priorities List and terminate Federal Cleanup Orders. To date, 8 of 10 closed landfills that were on the National Priorities List have either been delisted or noticed for delisting. These landfills include: Olmsted County, Dakhue, Kummer, Waste Disposal Engineering (WDE), Washington County, East Bethel, St. Augusta and Oak Grove. Federal Cleanup Orders have been terminated at WDE and Oak Grove.

The MPCA is also involved in deleting qualified landfills from the State's Permanent List of Priorities (PLP), once they have received a Notice. The PLP originally included 49 closed landfills. In June 1996, 17 landfills were delisted by the MPCA Citizen's Board. The MPCA anticipates that an additional 20 to 25 landfills will be delisted from the PLP in December 1996.

Under the Act, the MPCA has established a separate priority list for qualified landfills. Four landfills have been reclassified and/or rescored for the Program's Priority List in FY96 as follows:

- WDE reclassified from D to B with a one-point rise in score due to continuing ground-water contamination that will require additional remediation;
- Adams reclassified from B to D with a five-point reduction in score due to waste removal;
- Dakhue remains in Class D with a two-point rise in score due to concerns about landfill gas, and
- Lincoln County reclassified from B to D with a 21-point reduction in score due to waste removal.

During FY96, the MPCA made a total of \$7 million in reimbursement payments to eligible persons. A total of 11 non-owners/operators and five owner/operators received reimbursement. Based on the approved reimbursement applications, the State will pay an additional \$25,699,457 for reimbursements over the next six fiscal years. At the end of FY96, not all eligible parties had filed their final reimbursement application, since they have until October 15, 1996, to do so. As a result, the MPCA cannot put a final number to the remaining reimbursement claims and total obligations to the State.

Under the EPA/MPCA Agreement, the EPA is to be paid a portion of its unrecovered costs associated with Federal Superfund actions at those landfills on the National Priorities List. EPA is paid on December 1 of each year. For FY96, only two National Priorities List landfills (East Bethel and Olmsted County) received Notices by November 1, 1995, and the total



reimbursement to EPA was \$40,000. The balance owed EPA is \$3.96 million, for eight landfills, payable over the next five years.

In FY97, the MPCA will continue working on finalizing remaining Binding Agreements, issuing Notices to eligible landfills, and reimbursing the maximum annual amount allowable (\$7 million) to eligible parties. The MPCA plans to issue the next reimbursement payments on December 1, 1996. In addition, in FY97 the state anticipates a significant cost-recovery payment to EPA of approximately \$800,000.

### Site Activities

The MPCA has been involved in design and/or construction at the following 21 landfills: Adams, Becker County, Bueckers #1 and #2, French Lake, Greenbush, Hopkins, Houston County, Isanti/Chisago, Korf Brothers, Land Investors, Lincoln County, Paynesville, Pickett, Pipestone, Red Rock, Roseau County, St. Augusta, Wadena, Washington County and Yellow Medicine County. The construction has included landfill covers, active gas systems, and ground-water treatment systems. The ability to offer a large number of projects for design and construction results in greatly reduced costs as compared to remediation under the Superfund Program. Construction has begun or been completed at 15 landfills since the Program was initiated in June 1994.

The Program has realized a significantly increased efficiency in contracting for the cleanup of closed landfills by using the State of Minnesota M-contract list. M-contract consultants have now been used for five design projects.

Several state contracts were regionalized and bid during FY96. There are four regions

(Northeast, Northwest, South and Metro) for sampling and analytical contracts (testing ground-water samples). The existing water sampling contract expires April 30, 1997, with the possibility for two one-year extensions. The analytical contract is effective through May 1, 1999, and is established for three years with an option of two one-year extensions.

Once the state is responsible for the landfill, general operation and maintenance (O&M) of the facility is contracted. The general O&M contract is primarily for mowing and erosion control, but allows for fence repair, gate installation and other miscellaneous maintenance work. Three contractors were selected to work in seven regions of the state. The contract expires November 30, 1998, with the option to extend for 2 years.

Presently, the MPCA anticipates 14 landfills will require corrective-action operation and maintenance contracts in FY97: Anoka Municipal, Becker County, Carlton County South, East Bethel, Hopkins, Ironwood, Isanti/Chisago, Koochiching County, Oak Grove, Olmsted County, Telling John, WDE, Washington County and Woodlake. Contractors will be hired for this work starting January 1997.

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#### FY96 Accomplishments:

- 56 Binding Agreements signed
  - 37 Notice of Compliances issued
  - 11 site reimbursements  
(out of a possible 17)
  - 15 construction projects
  - 21 construction designs, and
  - EPA/MPCA Agreement
- 



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Permittees or the State conducted ground-water monitoring in FY96 at 100 of the 106 landfills in the Program. Ground water at 98 of those 100 was contaminated. Ground-water standards for drinking water were exceeded for volatile organic compounds (VOCs) at 66, and 11 landfills exceeded metal standards. Surface-water contamination was detected at nine landfills and was associated with leachate seeps or contaminated ground-water discharging to nearby water bodies. Ground-water corrective-action systems or alternative drinking-water supplies are currently in place at seven landfills. Two residential wells were replaced as part of the corrective action at two landfills. The MPCA staff anticipates, based on current trends from properly capped landfills, that ground-water quality will improve significantly following the installation of upgraded covers and adequate gas-extraction systems.

Three landfills were relocated to other qualified landfills this past fiscal year (Adams, Greenbush, and Lincoln County). The waste from these small landfills was used to improve slopes on nearby large landfills. This reduced the need to purchase soil to improve slopes and also eliminated long-term postclosure maintenance and monitoring costs at the small landfills. The total project cost savings for postclosure care over the next 30 years, in present dollar value, for the three landfills is \$1.42 million.

### **1996 Legislation**

The insurance recovery legislation, enacted March 1996, directs the MPCA and the Attorney General (AG) staff to gather insurance-policy information relating to businesses which disposed of waste at the 106 qualified landfills in the Program. This policy information, in conjunction with past, present and future costs, will be used to reach

settlement agreements with individual insurance carriers. Ten landfills have currently been identified by MPCA and AG for the first phase of this insurance recovery program: Dakhue, East Bethel, Hopkins, Kummer, Oak Grove, Olmsted County, Red Rock, St. Augusta, Washington County, and WDE.

The MPCA and AG staff are meeting with approximately 15 insurance-carrier groups to advise the carriers of the legislation, determine carrier's interest in proactively seeking settlement with the state and address specific concerns the carriers may have regarding the information-collection and settlement process.

By early 1997, the MPCA anticipates reaching settlements with several small carriers. The MPCA also anticipates that one or two larger carriers will enter into final settlement negotiations by the middle of 1997.

During the 1996 session, the Legislature passed an amendment to the Waste Management Act that authorized the state to use up to \$737,500 in proceeds from bonds available for the Program to pay Benton County for expenses incurred as part of clean-up activities at the Greater Morrison Sanitary Landfill. An agreement between MPCA and Benton County is currently being developed. The history of this matter is presented on page 21.

### **What's Ahead:**

#### **FY97 and Beyond**

The percentage of time MPCA staff are involved with different Program activities will change over time. In 1995, approximately 78 percent of staff time was spent working on Binding and Reimbursement Agreements, approximately 20 percent of time was spent on construction



and the remainder of time was spent on operation and maintenance (O&M) activities at the landfills. In comparison, the MPCA projects that by 1999 approximately 60 percent of time will be spent on O&M activities, approximately 38 percent on construction and the remainder of time spent on any remaining Binding Agreements. Figure 5 (page 22) is a graphic presentation of the Program's activity future.

Based on current progress for landfill design and construction, the MPCA should be able to complete all "A" and "B" priority classifications by the end of the year 2000. It is projected that an additional two years may be needed for construction at "C" and "D" priority landfills.

The MPCA anticipates design and construction in FY97 for the following seven landfills: Battle Lake, Crosby, Freeway, Kummer, Leech Lake, Lindala, and Mankato. Other landfills under consideration are McKinley (move to East Mesaba) and Koochiching County.

Presently, MPCA staff are taking advantage of existing opportunities to develop land-management plans with private landowners, municipalities, counties and other agencies and organizations. The future challenge will be to devise land-management plans that meet the needs of interested parties, protects public health and the environment, and protects the state's investment in closure and remediation of the landfill.

Funding for the program in FY97 and beyond will continue to consist of fee dollars, bond dollars for construction-related projects at publicly owned facilities, and some transfer of financial assurance funds. The MPCA also

anticipates that insurance recovery dollars may be available by the end of FY97.

Because of outstanding obligations and the Report due date, final fiscal numbers are not available. As a result, a FY97 Legislative Initiative has been proposed to extend the Report submittal date until after fiscal accounts are closed and the information is available.



## Program Overview

In June 1994, Minnesota began a new program for cleaning up and managing mixed municipal solid-waste (MMSW) landfills that were no longer accepting waste. The Closed Landfill Program (Program) is a long-term program to deal with closed, state-permitted landfills, and is an alternative to the Superfund-driven cleanup of landfills. This report fulfills the requirement to provide an annual report to the Minnesota Legislature on the program activities for the past fiscal year (FY96) and anticipated activities for the future.

Presently, the Program is funded by the following four sources of revenue: 1) solid-waste assessment fees, 2) up to \$90 million in state general-obligation bonds, 3) funds transferred from the financial assurance accounts of closed landfills, and 4) funds transferred from the Metropolitan Landfill Contingency Action Trust (MLCAT) Fund prior to July 1, 1994. Another source for revenue may be landfill-related insurance policies. Legislation in 1996 provided procedures for MPCA and Attorney General staffs to recover from insurance companies.

The Landfill Cleanup Act mandates that the MPCA assume responsibility for qualified landfills with Notices of Compliance and authorizes the MPCA to initiate clean-up actions where necessary, carry out closure activities, take over long-term care at the landfills and reimburse eligible parties for their past clean-up costs. To be in the Program a landfill must be a disposal facility that was permitted by the MPCA and stopped accepting mixed municipal waste by April 9, 1994, and demolition debris by May 2, 1995.

Once a landfill is determined to be qualified to enter the Program, the landfill owner, operator or responsible party negotiates a Binding Agreement (a legal document), with the Commissioner of the MPCA. The Binding Agreement stipulates specific tasks which must be accomplished prior to the MPCA taking over the responsibility of the landfill. Once the requirements or tasks under the Binding Agreement are accomplished, the MPCA issues a Notice.

Issuance of the Notice starts several actions in motion. First, the State will assume the cost of any additional clean-up work and expenses for operating and maintaining the environmental protection systems at the landfill. Second, within 60 days of MPCA notification to the EPA that the landfill has received a Notice, the EPA defers regulatory authority to the State. Under the EPA/MPCA Agreement (signed August 1995), the EPA will also remove any landfill from the National Priorities List, terminate Federal Cleanup Orders and/or Consent Decrees and close cost-recovery cases. EPA will also remove liens on properties at MPCA's request. Lastly, in conjunction with a Reimbursement Agreement and a Notice, the State reimburses owners, operators, and responsible parties for eligible past clean-up costs, not including legal and administrative costs.



## Funding and Expenditures

Currently, funding for the Program comes from a combination of bond funds, solid-waste assessment fees, the Minnesota Landfill Contingency Action Trust Fund and financial-assurance transfers.

### Bond and Fee Funds

The legislature authorized up to \$90 million in state general-obligation bond funds to be used at public landfills for design and construction work over a minimum ten-year period. Bond funds available for the Program in the first two years were: \$2 million in FY95 and \$8 million in FY96. New bond funds available for FY97 are \$12.5 million. At this time, bond-fund use through FY96 has totaled approximately \$4 million. However, because of the continuous accounting of the fund, an accurate number for fiscal year accounting cannot be obtained. Obligations for existing construction contracts and projections for construction in FY97 indicate an expenditure of bond funds totaling \$22.3 million through FY97 out of \$24.5 total available from bonds.

The solid-waste assessment fee began in July 1993, with the money collected targeted for implementing and administering the MPCA's Solid Waste Program, including assessment of closed landfills. Then, in June 1994 legislation established the Closed Landfill Program. Funding to pay for the Program came in large part from an increase in the solid-waste assessment fee on commercial waste and expanded coverage for demolition debris and other waste. The fee increased on January 1, 1995, from 12 cents per uncompacted cubic yard to 60 cents per uncompacted cubic yard. Residential users are assessed at two dollars

per year. Fees are typically collected by the waste haulers and remitted to the Department of Revenue.

When the legislature began the Program, the MPCA anticipated that the solid-waste assessment fee would yield the following amounts: \$7 million (FY94), \$15.1 million (FY95), and \$23.2 million in FY96 and following years. While actual collection has been lower than the original estimated projections, the fee dollars are proving to be adequate for current program needs, including maximizing annual reimbursements to eligible parties. In FY96, the percent shortfall (difference between projected and actual fee income) was at its lowest point (13 percent), with the total fees collected \$20,085,643.

The Program sources of income and amounts received are identified in the following table.

Table 1: Income FY96

Income Source	Amount
Solid Waste Fees FY96	\$20,085,643
Carryover FY95 <sup>1</sup>	\$14,242,000
Investment	\$933,447
Financial Assurance <sup>2</sup>	\$2,778,084
Insurance	\$0
Other	\$4,289
<b>Subtotal</b>	<b>\$38,043,463</b>
Bond Authority FY96 <sup>3</sup>	\$9,641,947
<b>Total Income</b>	<b>\$47,685,410</b>

<sup>1</sup>The 1995 Annual Report reported a FY95 carryover of \$14,964,345. The difference was due to additional obligations not available by the Report printing date.

<sup>2</sup>Financial assurance amounts represent confirmed deposits as of September 16, 1996.

<sup>3</sup>\$8 million available in FY96 plus carryover of \$1,641,947 from FY95.



In FY96, the Minnesota Department of Revenue (MDR) took several steps to improve waste fee collection. The 1995 Legislature authorized MDR to hire one additional compliance staff in FY96. The additional staff, along with better communication with the MPCA, has allowed MDR to increase its educational efforts to make waste haulers aware of the fees. MDR also has increased compliance efforts, including audits of haulers. Projections for FY97 are that the fee collection will remain around \$20 million, which appears to be adequate to operate the Program. Table 2 identifies the Program activity expenditures for FY96.

Although fee collection has run behind projections, the amount of fees collected is adequate to cover current program expenses, including reimbursements to owners and operators, responsible parties and EPA in FY97. As more landfills receive their Notices, the amount of fee dollars spent on operation and maintenance will increase. Additionally, the MPCA is maximizing its use of bond funds on construction activities in order to save fee dollars. At this time, the MPCA does not anticipate a fee-rate increase.

Figure 1 (page 9) graphically illustrates expenditures in FY96.

Table 2: FY96 Expenditures<sup>1</sup>

<b>Activity</b>	<b>Amounts</b>
Solid Waste Programs	\$3,259,329
Closed Landfill Program	\$1,739,501
Design and Construction <sup>2</sup>	\$5,348,682
O & M	\$906,198
MPCA SW Legal	\$313,813
Insurance Recovery	\$173,587
Dept. Revenue	\$45,376
Dept. Natural Resources (DNR) <sup>3</sup>	\$99,969
EPA Reimbursement	\$40,000
Reimbursements	\$7,000,000
<b>Total</b>	<b>\$18,926,455</b>

<sup>1</sup>State fiscal year closeout amounts not available at time of report preparation.

<sup>2</sup>\$3.6 million of Bond Funds were used for construction.

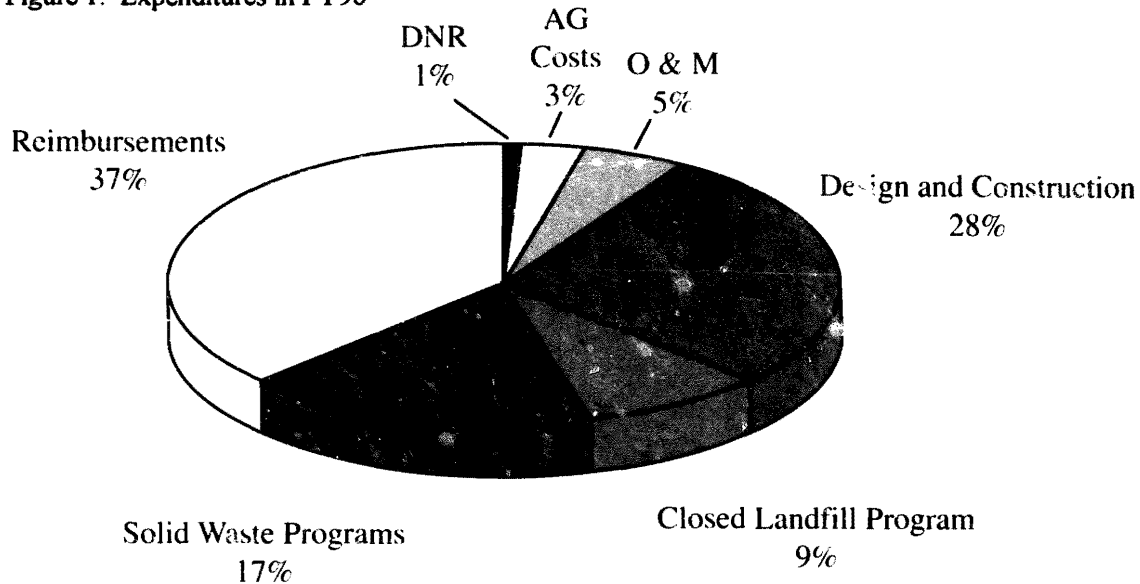
<sup>3</sup>To assist in enforcement activities.



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Figure 1: Expenditures in FY96



### Financial Assurance

Landfills that were open past July 1, 1990, were required to establish financial-assurance funds to pay for closure, postclosure and response actions. A total of 26 of the 106 landfills in the Program were open past July 1, 1990, and had established some type of mechanism for financial assurance. The estimated costs for financial assurance were often under-funded because of the limited time the landfill had available to accumulate funds before it closed.

The owner or operator of a qualified facility must transfer to the Landfill Cleanup Account any financial-assurance funds that remain after landfill closure, postclosure and response actions are completed at the landfill. The legislation for the Program specified that political subdivisions had the flexibility to use any portion of the financial-assurance funds for closure or postclosure care and to transfer the remainder to the MPCA. Of the 37 landfills that have received Notices, owners or operators of eight landfills have provided a total of \$2,778,084 to the Landfill Cleanup Account.

The status of the Landfill Cleanup Account at the end of FY96 is identified below in Table 3.

Table 3: General Ledger Balance FY96

Income*	\$ 47,685,410
Expenditure	\$ 18,926,455
Fund Balance	\$ 28,758,955

\*Includes \$9,641,947 Bond Fund Authority available in FY96.

### Fiscal Tracking of Landfills

Accurate and complete individual landfill fiscal tracking information for FY96 is currently unavailable due to outstanding obligations and technical limitations of Minnesota Accounting Procurement System (MAPS). Attempts are now being made to expand the capability of MAPS to produce detailed cost reports by landfill for FY97.



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## Program Activities

We are well on the way in FY96! The MPCA staff, working together in a team approach for landfill cleanups, has accomplished many Program objectives in FY96.

### Empowerment of Staff Teams

During the preparation of the Closed Landfill Assessment Report (1994) and in anticipation of the Landfill Cleanup Act, MPCA staff were assigned to specific landfills as teams. Each team consists of a project manager, an engineer, and a hydrogeologist. In 1995, a regional representative was added to the teams. This mix of personnel leads to better consistency in the approach to landfill problems. Each staff member is typically assigned to 15 to 35 landfills, depending on the scope of work.

Three MPCA staff are regional representatives located in St. Paul, Redwood Falls and Brainerd. These locations provide for more efficient and local accessibility for their assigned duties. Their role is to conduct periodic inspections at qualified landfills, coordinate annual maintenance, and provide on-site inspection during construction activities to ensure work is being performed as specified in the approved work plans. The representatives' main activities this past year were: securing and inventorying each landfill, coordination with contractors for mowing and general maintenance at the landfills and conducting on-site inspections during construction activities.

As construction is completed, the monitoring program will be revised to gather sufficient data to document that the remediation is effective. Once the database is large enough to give confidence in the remedy, the MPCA anticipates that monitoring will be reduced and, in cases where waste relocation has occurred, eliminated entirely. The minimum level of monitoring will depend on landfill conditions, such as the proximity of human receptors, sensitive or unique resources, or thoroughness of the remedial action. In cases where residents are using an affected aquifer for their drinking water supply, monitoring will continue for an extended period of time.

### FY96 Accomplishments

The following list identifies Program accomplishments.

- 
- 56 Binding Agreements signed
  - 37 Notice of Compliances issued
  - 11 site reimbursements  
(out of a possible 17)
  - 15 construction projects
  - 21 construction designs, and
  - EPA/MPCA Agreement
- 

### Delistings and Termination of Federal Cleanup Orders

The Program is intended to eliminate Federal and State Superfund involvement in closed landfill cleanup, including resolving cost-recovery and clean-up obligations of responsible parties. To that end, the MPCA and EPA signed an agreement (Agreement) in



August 1995 that recognizes the MPCA's desire to reduce or altogether eliminate federal involvement at the 10 closed landfills on EPA's National Priorities List (NPL), as well as the other 96 landfills in the Program. The Agreement calls for EPA to delist the 10 NPL landfills 60 days after receiving notice from the state identifying landfills that have been issued Notices of Compliance. To date, 8 of the 10 closed landfills on the NPL either have been delisted or noticed for delisting. These landfills include: Dakhue, East Bethel, Kummer, Oak Grove, Olmsted County, St. Augusta, Washington County, and WDE. The remaining landfills needing deletion from the NPL are Freeway and LaGrande.

Another portion of the Agreement provides for termination of Federal Cleanup Orders. Again, EPA is required to accomplish this task 60 days after receiving notice from the state. The Federal Cleanup Orders have been terminated at WDE and Oak Grove. Previously, these orders obligated numerous businesses associated with these landfills to continue long-term clean-up responsibilities.

Qualified landfills that have been issued Notices also are being deleted from the State's Permanent List of Priorities (PLP). Of the 106 closed landfills in the Program, 49 were initially on the PLP. In June 1996, 17 of the 49 landfills were delisted by the MPCA Citizen's Board. Because of new delegations and streamlining of the delisting process, the MPCA anticipates that an additional 20 to 25 landfills will be delisted from the PLP in December 1996 and the remaining landfills by June 1997.

### Site Classification and Scoring

The original site classification and scoring for cleanup of qualified facilities was defined in the 1994 Closed Landfill Assessment Report. A revised priority list on December 11, 1995, resulted in one site being moved to a lower class with a lower score and another site remaining in the same class with a lower score. The MPCA plans to revise the priority list annually, with additional revisions if needed to address emergencies.

While there are few changes in this year's list, the MPCA anticipates that there will be more changes in the following years (to lower classifications), primarily due to completion of construction at sites. This year's priority list includes reclassification and/or rescoring of the following four sites:

- WDE: reclassified from D to B with a one-point rise in score due to continuing ground-water contamination that will require additional remediation.
- Adams: reclassified from B to D with a five-point reduction in score, since all the waste was excavated and moved to the Red Rock site.
- Dakhue: site will remain a D classification with a two-point rise in score due to some off-site migration of landfill gas.
- Lincoln County: reclassified from a B to D with a 21-point reduction in score because all the waste was excavated and moved to the Pipestone County site.





The following table provides a summary of priority list updates. Appendix 1 is a complete list of the 106 landfills and classification definitions.

Table 4: Summary of Priority List Update

Classification	Dec. 1994	Dec. 1995	July 1996
A	9	9	9
B	34	39	38
C	29	34	34
D	22	24	25
<b>Total</b>	<b>94*</b>	<b>106</b>	<b>106</b>

\*12 landfills not initially qualified

### Reimbursements

The Landfill Cleanup Act authorizes the MPCA to reimburse eligible owners, operators and responsible parties who incurred clean-up costs at qualified landfills. The statutory ceiling for total reimbursement payments is \$7 million each fiscal year. Under the Act, MPCA must give priority to reimbursement of non-owners/operators. The MPCA submitted a Reimbursement Plan to the 1996 Legislature on October 1, 1995, that identified a six-to-one ratio giving priority to non-owners/operators and called for two \$3.5 million reimbursements in FY96.

On November 27, 1995, the first reimbursement event was held in the Governor's reception room. A second event was held at the St. Augusta Township Hall on May 14, 1996. A total of 11 non-owner/operators and five owner/operators received reimbursement payments during this second round.

Some parties who are qualified to receive reimbursements had not filed their final reimbursement application by the end of FY96 (June 30, 1996). However, they have until October 15, 1996, to file. As a result, the number of remaining reimbursement claims is not known. Based on the approved applications, minus \$7 million paid in reimbursement during FY96, the MPCA will pay an additional \$25,699,457 in reimbursement over the next six years.

For FY97, the MPCA plans to issue reimbursement payments on December 1, 1996. The MPCA anticipates that the entire \$7,000,000 maximum reimbursement amount allowed will be distributed during that event.

The following table summarizes the total reimbursement approvals and the remaining obligations for 11 landfills.



Table 5: Total Amounts Approved and FY96 Reimbursements

<b>Landfill - Nov. 95</b>	<b>Total Approved</b>	<b>FY96 Reimbursed</b>	<b>Remainder</b>
East Bethel	\$4,079,443	\$648,276	\$3,431,167
Isanti/Chisago	\$282,644	\$43,104	\$239,540
Kluver	\$563,040	\$90,243	\$472,797
Kummer	\$3,024,564	\$486,513	\$2,538,050
Olmsted Co.	\$2,151,107	\$321,176	\$1,829,931
Sauk Center	\$234,229	\$35,720	\$198,509
WDE	\$12,343,183	\$1,874,968	\$10,468,215
<b>Subtotal</b>	<b>\$22,678,210</b>	<b>\$3,500,000</b>	<b>\$19,178,209</b>
<b>Landfill - May 96</b>	<b>Total Approved</b>	<b>FY96 Reimbursed</b>	<b>Remainder (End FY96)</b>
East Bethel	Above	\$440,011	\$2,991,156
Isanti/Chisago	Above	\$20,630	\$218,910
Kluver	Above	\$60,631	\$412,166
Kummer	Above	\$325,478	\$2,212,572
Olmsted Co.	Above	\$157,597	\$1,672,334
Sauk Center	Above	\$17,096	\$181,413
WDE	Above	\$1,342,439	\$9,125,776
Hansen	\$488,964	\$62,705	\$426,260
Oak Grove	\$5,917,414	\$735,682	\$5,181,733
St. Augusta	\$529,454	\$67,897	\$461,557
Washington Co.	\$3,085,415	\$269,835	\$2,815,580
<b>Subtotal</b>	<b>\$10,021,247</b>	<b>\$3,500,000</b>	<b>\$25,699,457</b>
<b>Final Total</b>	<b>\$32,699,457</b>	<b>\$7,000,000</b>	<b>\$25,699,457</b>

Under the agreement with the U S Environmental Protection Agency (EPA), the MPCA is to pay the EPA for a portion of its unrecovered costs associated with past Federal Superfund actions at those landfills on the National Priorities List (NPL). Payment is to be made on December 1 of each year, for landfills which received Notices at least 30 days prior to the payment date. For FY96, only two NPL landfills (East Bethel and Olmsted

County) received Notices before December 1, 1995, and the total payment to EPA for those two landfills was \$40,000. The balance owed to EPA is \$3,960,000, for eight landfills with past costs, payable over the next five years.

The MPCA anticipates that possibly all eight of those landfills will have Notices before the next payment is due, and thus a partial payment of approximately \$800,000 is planned.



**Landfill Report 1996**

Minnesota Pollution Control Agency

## Site Activities

The Program has resulted in the MPCA stream-lining its construction contractual process and regionalizing most contract work.

### Design and Construction

Since the spring of 1995, the MPCA has been working on construction to remedy contamination at high-priority landfills as identified in the 1994 Closed Landfill Assessment Report. The FY95 Landfill Cleanup Program Annual Report noted that design and construction activities would begin on 12 landfills in FY96. However, construction work has been delayed on the Geisler, Koochiching County, Lindala and Wabasha Landfills.

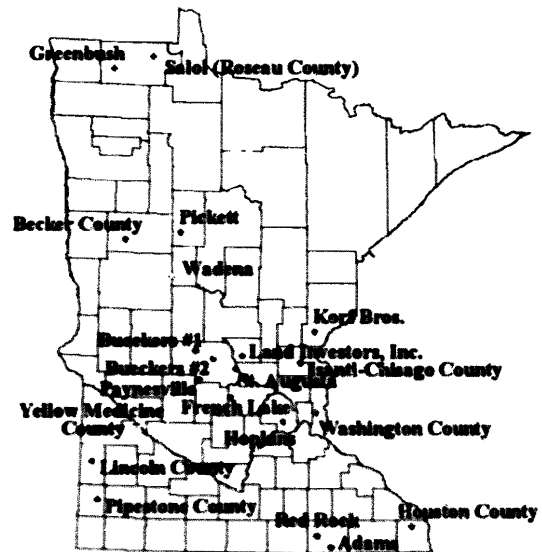
Listed in Appendix 2 are brief explanations of construction activities, design and oversight costs, contractor costs, construction completion dates and MPCA classification at 21 landfills. Figure 2 provides the geographical location of the 21 landfills.

Each landfill in the Program was assigned a priority based on the existing or potential impacts on the environment and public health. Each year, design and construction is initiated based on landfill priorities, available funding and staff resources.

Depending on site needs, the construction can include landfill covers, active gas systems and/or ground-water treatment systems. This construction does not include smaller projects, such as the installation of passive gas vents, monitoring wells and fences, which are completed by separate contractors who have

specific contracts with the state for this type of work.

Figure 2: Construction Site Locations



In 1996, the Program began to use consultants on the State of Minnesota M-contract list for design and construction oversight. Because of the larger number of consultants on the M-contract list, it was possible to request proposals from a number of consultants and select the consultant that submitted the best proposal. M-contract consultants have been used for the last five design projects (design costs are shown in Appendix 2), and it appears that there is a cost savings because the large number of consultants encourages competitive proposals. M-contracts were used for Houston County, Korf Brothers, St. Augusta, Wadena and Land Investors. The ability to offer a large number of design and construction projects appears to result in greatly reduced costs as compared to remediation under the Superfund Program. This is demonstrated by the following comparison.



### Largest Superfund Projects

(does not include administrative and legal costs)

East Bethel:	\$ 4 million Construct cover and ground-water treatment system for 34-acre landfill
Oak Grove:	\$ 5.8 million Construct cover and partial active gas system for 50-acre landfill
WDE:	\$ 12.2 million Construct cover and ground-water treatment system for 70-acre landfill

### Largest Closed Landfill Program Projects

Korf Bros.:	\$ 1.8 million Construct cover and passive gas system for 20-acre landfill
Washington County:	\$ 3.4 million Construct cover and active gas system for 38-acre landfill
Red Rock/Adams:	\$ 4.2 million Move Adams on top of Red Rock and construct cover and passive gas system on 35-acre landfill

Construction has begun and/or been completed at 15 landfills since the Program was initiated in June 1994.

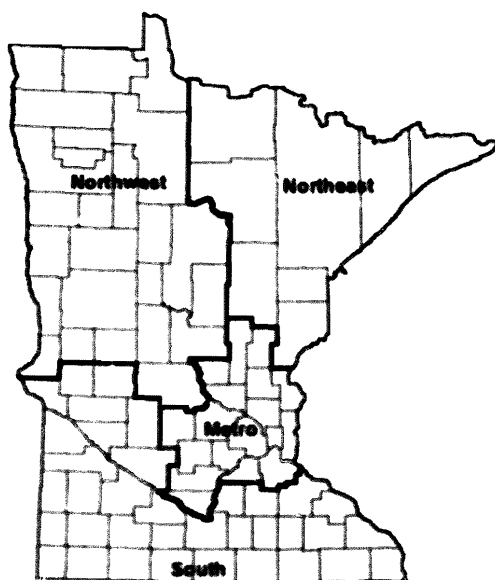
### Regional Contracts

The MPCA has regionalized various landfill maintenance contracts as required in the Act.

**Sampling and Analysis:** The MPCA has delineated four regions (Northeast, Northwest, South and Metro) for sampling and analytical

contracts. The existing water sampling contract, with three private contractors, expires April 30, 1997, with an option of two one-year extensions. This past year, MPCA staff developed a new water-analysis contract to regionalize analytical work. Three regional analytical contracts were awarded to private firms, and the Metro region was awarded to the Minnesota Department of Health. The analytical contract is effective through May 1, 1999, with an option of two one-year extensions. A provision in the analytical contract allows other programs within the MPCA and other government entities to use the contract. Below in Figure 3, the four contract regions are graphically identified.

Figure 3: Four Contract Regions



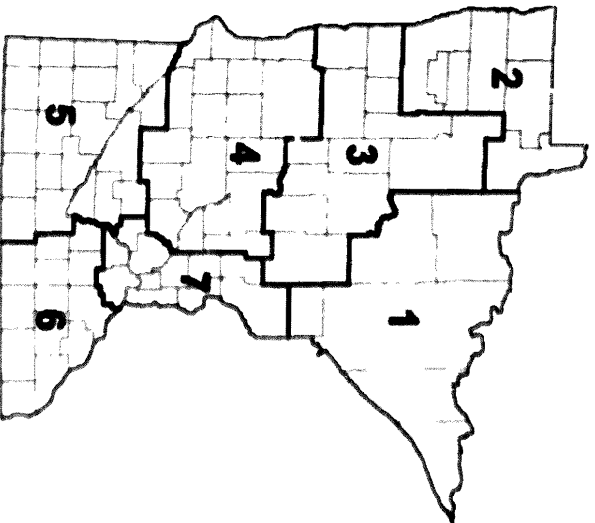
**Drilling:** For its well drilling needs, the Program has an existing state-wide contract which was modified to allow the contractor to install gas vents and gas probes. The current contract expires September 30, 1997, with an



option to extend the contract up to three additional years.

**Operation and Maintenance (O&M):** When the MPCA takes responsibility for a landfill, the general O&M of the facility is contracted. This contract is primarily for mowing and erosion control of the landfill-cover system, but also allows for fence repair, gate installation, signs or other miscellaneous maintenance work as directed by the MPCA staff site teams. The MPCA has established seven O&M regions in the Program. Three contractors have been selected for the seven regions. This contract expires November 30, 1998, with the option to extend for two years. Below in Figure 4, the seven O&M contract regions are graphically identified.

Figure 4: Seven O&M Contract Regions



### Corrective-Action O&M Contracts

The Program contracted with an environmental consulting firm to assist the MPCA staff in

developing comprehensive corrective-action O&M manuals and proposal documents for the O&M contracts. The MPCA anticipates the Department of Administration announcing the contracts in September 1996, finalizing the corrective-action O&M contracts in December and releasing the contracts January 1997. The contracts are anticipated to be issued for the following 14 landfills: Anoka Municipal, Becker County, Carlton County South, East Bethel, Hopkins, Ironwood, Isanti-Chisago, Koochiching County, Oak Grove, Olmsted County, Tollyjohn, WDE, Washington County, and Woodlake. The landfills will likely be grouped together for proposals based on the type of site-remediation system (i.e., gas flare, ground-water pumpout, etc.).

### Ground-Water and

#### Surface-Water Monitoring

Ground-water monitoring was conducted at 100 of the 106 landfills in the Program, including approximately 1,155 monitoring points. Contamination was detected at 98 of the 100 landfills monitored. Eleven monitoring wells were added and 31 removed (abandoned) in response to the installation of upgraded covers and continuing operation and maintenance at the landfills. Ground-water standards for drinking water were exceeded for volatile organic compounds at 66 landfills, and 11 landfills exceeded ground-water standards for metal compounds.

In some instances, the detection of additional contamination (since 1994) is due to the improvement in sampling methodology.

Corrective actions, such as pump-and-treat systems or alternative drinking-water supplies, are currently operating at seven landfills. Two residential wells were replaced as part of the corrective action at two landfills. The MPCA staff anticipates, based on trends from property



capped landfills, that ground-water quality will improve at many landfills with the installation of upgraded covers and gas-extraction systems.

Surface-water contamination was detected at nine landfills and was associated with leachate seeps or contaminated ground water discharging to nearby water bodies.

### **Wetland Issues at Construction Sites**

The MPCA examined the Wetland Conservation Act's applicability to relocation and cover construction at the Paynesville, Washington County, and Wadena Landfills. At all the landfills, either there were adjacent wetlands or water sometimes ponded or poorly maintained landfill covers. The MPCA and local officials visited these landfills to assess whether wetlands were present. A County Soil and Conservation District wetland specialist helped assess the sites.

The MPCA developed guidance criteria to assist staff in determining when an intervention remedy was warranted based on the Wetland Conservation Act. Five specific items were identified.

Three items which are not subject to the regulations are:

- a wet area exhibiting wetland characteristics but located on the fill area,
- borrow areas contiguous to the landfill fill area and engineered to accept runoff, and
- leachate ponds at the toe of the landfill slope, not part of the fill area but part of the permitted area.

Two items which are subject to the regulations are:

- borrow areas that develop into wetland but not contiguous to the landfill fill area and
- natural wetlands immediately adjacent to the landfill or otherwise within the permitted boundary of the landfill facility, but not part of the operational fill area of the landfill.

At the Paynesville Sanitary Landfill, the Program restored 5.5 acres of wetland but did not formally bank this acreage.



## Relocating and Restoring Sites

The State's experience in remediating a large number of landfills has presented options which includes the ability to consolidate a small landfill with a larger landfill. The waste from the small landfill is used to improve slopes on the large landfill, reducing the need to purchase soil. Moving a small landfill also eliminates long-term postclosure maintenance and monitoring costs at the small landfill.

Prior to making a relocation decision, an evaluation is done to compare the cost of moving waste and the long-term postclosure costs at the small landfill to determine if moving the waste is cost effective. Also, public meetings are held to determine community acceptance. Listed in Table 6 are the landfills that have been moved under the Program and the projected cost saving for postclosure care over the next 30 years, in present dollar values.

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The benefits of moving the Greenbush Landfill are highlighted by an article in the *Tribune*, April 16, 1996, which stated, "The three wins in the project are that the City of Greenbush will not have a site; the county will benefit by getting free fill for the Salol Site; and the state will not have the maintaining and liability costs associated with two landfills."

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Table 6: Landfill Relocation Savings

Landfill	Approximate Volume of Waste Moved	Estimated Savings Postclosure Care
Adams	42,000 cubic yards	\$673,000
Lincoln	61,000 cubic yards	\$522,000
Greenbush	39,000 cubic yards	\$225,000
<b>Total</b>	<b>142,000 cubic yards</b>	<b>\$1,420,000</b>



## 1996 Legislation

During last year's session, the Legislature passed amendments to the Landfill Cleanup Act and Waste Management Act that affect the Program.

### Insurance Recovery Act

The Landfill Cleanup Act directed the Attorney General's Office (AG) to conduct a wide-ranging evaluation of the insurance buy-out program created in the 1994 Act. The AG reported on this evaluation of the buy-out program in its "Report on Insurance Recovery under the Landfill Cleanup Act" in January 1996. This report indicated the buy-out program was not adequate to address the concerns of the insurance industry or the needs of the state. Based on the findings in the report and the recommendations of the insurance industry, new insurance recovery legislation (Minn. Stat. ch. 115B.441 - 115B.445) was enacted on March 26, 1996. The Legislature always intended that the insurance recovery be an integral part of the Program's funding.

The new insurance recovery legislation directs the MPCA and the AG to gather insurance-policy information relating to businesses which disposed of waste at the 106 qualified landfills in the Program. This policy information, in conjunction with past, present and future costs (estimated by the MPCA), would be used to make settlement offers to individual insurance carriers. The Act also gives the AG authority to initiate a "state action" against those carriers who have not reached settlement agreements with the state.

On May 24, 1996, the AG and MPCA identified 10 landfills for which the MPCA

intends to gather insurance-policy information: Dakhue, East Bethel, Hopkins, Kummer, Oak Grove, Olmsted County, Red Rock, St. Augusta, Washington County, and WDE. These 10 landfills are a subset of the 15 landfills the AG used in the investigations it conducted last year in preparing for the report.

The MPCA and AG staff will be sending an average of 200 requests for information (RFI) to owners, operators, haulers and other businesses (waste generators) associated with each of the 10 landfills. The disposal and insurance information provided from these RFIs will be entered into a database to assist in developing carrier, and policy cost, and allocation estimates, and in preparing settlement offers to individual insurance carriers. A list of approximately nine additional qualified landfills will be developed by the end of 1996. Information on these 19 landfills, representing 60 percent of the estimated total cost of the Program, will allow insurance carriers and the MPCA to negotiate "global" settlements for all 106 qualified landfills.

The MPCA is currently identifying all past, present and future Program costs associated with the 106 qualified landfills. Past costs include all reimbursements (including MPCA payments to EPA) and expenditure of Metropolitan Landfill Contingency Action Trust dollars. Present and future program costs will include actual or estimated closure, postclosure and contingency action dollars, as well as anticipated operational costs of the program over the next 50 years. A duration of 50 years was selected because the MPCA anticipates operating active gas-extraction systems at landfills for up to 50 years, and the State is accepting long-term care of these landfills in perpetuity.





In conjunction with the RFI and cost-estimation activities, the MPCA and the AG are meeting with approximately 15 larger insurance-carrier groups to: 1) advise the carrier's of the legislation, 2) determine a carrier's interest in proactively seeking settlement with the state, and 3) address specific concerns these carriers may have regarding the information-collection and settlement process. (Larger carriers are those with larger amounts of insurance coverage or greater numbers of policies written for qualified landfills.) The approximately 97 smaller carrier groups currently determined to be associated with the qualified landfills are being notified and informed of their responsibilities through letters and telephone contact. To date, approximately 480 individual carriers have been identified at 15 landfills.

The MPCA and the AG either jointly or separately, have issued several press releases informing businesses and insurance carriers of the new insurance recovery legislation. This information is crucial to enabling the business community in Minnesota to realize the benefits provided them by contributions from the insurance industry to the Program. Complete policy information will allow the MPCA and AG to negotiate as complete and equitable a settlement possible.

By early 1997, the MPCA estimates it will receive information from more than 8,000 businesses concerning 50,000 to 80,000 general-liability and excess insurance policies. The MPCA anticipates that several small carriers, based on this information, will conclude settlement negotiations and reach settlement agreements with the MPCA by early 1997.

The MPCA also anticipates that one or two larger carriers will enter into final settlement negotiations with MPCA by the middle of

1997. These negotiations probably will be lengthy because of the number and complexity of the policies. Many factors, such as policy terms (i.e., qualified pollution exclusions), case law, and types of coverage, must be considered in developing a settlement offer for an individual insurance carrier.

The insurance study database contains the current and projected status of the data-collection process. Each entry contains the necessary associated information, such as, "insurance policy totals" (policy numbers, type of policy, coverage dates, issuing insurance carriers, policy limits, exclusions) and other pertinent information. The following table summarizes the status of the insurance study database as of July 26, 1996.

Table 6: Insurance Study Database Summary

<b>Generator</b>	<b>Current Entries</b>	<b>Projected Entries</b>
Insurance Group Total	112	112
Insurance Carrier Total	480	480
Insurance Policy Total	17,761	80,000
Qualified Landfills	106	106
Targeted Landfills	15	19
Estimated PIPs*	3,364	8,000
Disposal Date Totals	3,300	10,000
Waste Types Identified	225	225
Hauler/Arranger Total	319	450

\*Potential Insured Policyholder



### **Benton County Reimbursement**

During the 1996 session, the Legislature passed an amendment to the Waste Management Act that appropriated \$737,500 in bond proceeds available in the Program to repay Benton County for expenses they incurred as part of clean-up activities at the Greater Morrison Sanitary Landfill. The law did not increase the original \$90 million bonding authorization, nor did it allow payment out of fee revenues.

This difficult situation arose out of events beginning in the early 1970s, when the municipalities in Benton County joined Morrison County governments in the operation of a sanitary landfill near Little Falls. During the 1980's, the municipalities dropped out of the landfill board, leaving control to Morrison County. Morrison County later sued Benton County municipalities for a share of the clean-up costs. In May 1994, the municipalities of Benton County settled, agreeing to pay \$1.47 million to Morrison County. This money came from a combination of Benton County solid-waste bonds and cash payments from the municipalities.

Following this settlement, the Closed Landfill Program was created, offering opportunities for reimbursement of past clean-up costs at qualified landfills. However, Morrison County declined to close its landfill and did not qualify to participate in the new program. Because this situation is unique among landfills in the state, and because the payment proposed in the amendment involved bond proceeds rather than solid-waste fee revenues, the MPCA did not oppose the amendment even though it involved costs at an open landfill rather than a fully closed landfill.

The MPCA, the Attorney General and Department of Finance have been working with the Benton County municipalities on an agreement between the state and the county to pay the amount appropriated in the 1996 legislation. If this is accomplished, the first payments will be made in FY97. These state payments are expected to continue on an annual basis until the Benton County solid waste bonds are fully paid in 2003 or 2005.



# What's Ahead: FY97 and Beyond

The Program's accomplishments will evolve over time. As we complete tasks, new tasks, like land-management plans, will be undertaken. Construction and/or cleanup will continue followed by long-term operation and maintenance.

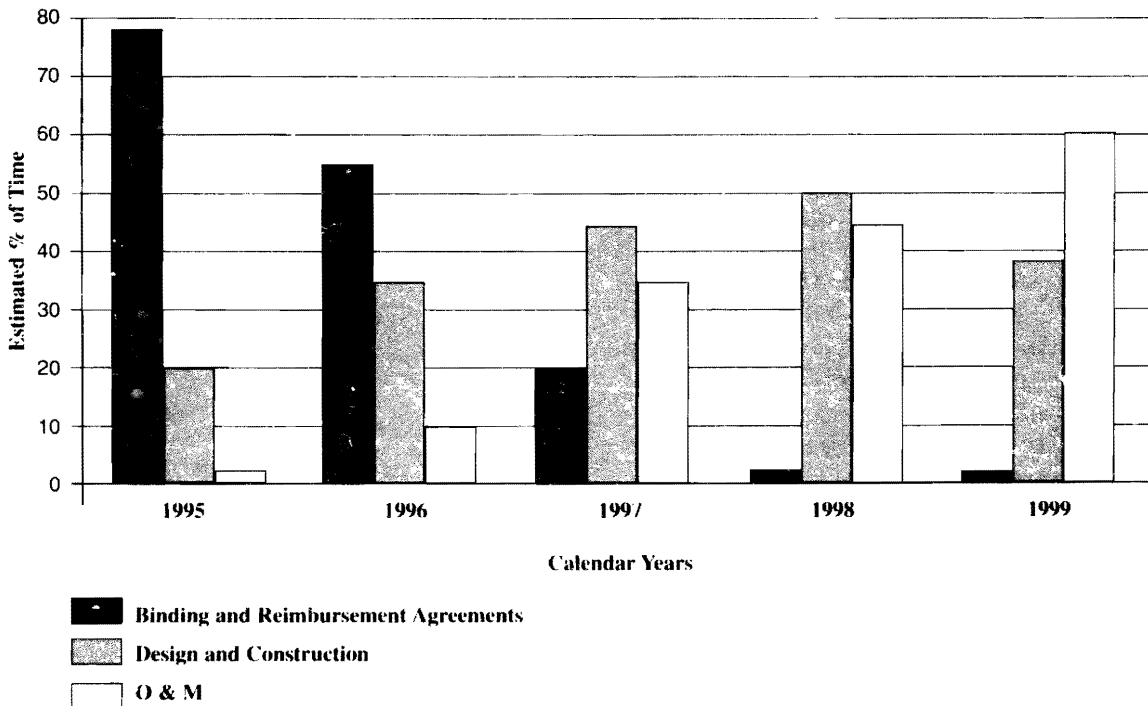
## MPCA Program Activity Changes

To date, MPCA staff has spent a significant amount of time preparing and negotiating Binding Agreements and Reimbursement Agreements and developing contracts for implementation of construction, field and

maintenance work at the landfills. With the completion of many of these activities, there has been a gradual shift of staff resources to implementation of landfill cleanups and postclosure care work. The MPCA anticipates that this shift will be completed within the next fiscal year, as remaining Binding Agreements are signed and Notices of Compliance issued. The major future administrative work activity remaining for staff will be to develop land-management plans for each of the 106 qualified landfills. The purpose of these legislatively mandated plans, which will incorporate local community concerns, is to avoid creating future health and safety risks from activities at and around the individual landfills.

The following figure illustrates the Program's shift in activities over time.

Figure 5: Program Activity Chart



## Future Construction

There are five types of major contract expenditures in the Program: 1) design and construction, 2) sampling and analysis, 3) general O&M, 4) O&M of active gas and water-treatment systems, and 5) drilling of wells and gas vents.

Based on current progress for landfill design and construction, the MPCA should be able to complete all "A" and "B" priority classifications by the end of the year 2000. The MPCA projects that an additional two years may be needed for construction at "C" and "D" priority landfills. Construction at these lower priority landfills may be required if monitoring shows gas or ground-water problems. (Classification, priority and definitions are provided in Appendix 1.)

Guidelines are being established for sampling and analysis results which will trigger reduced sampling requirements at landfills. A reduction of sampling will be possible when sampling trends demonstrate compliance with ground-water standards and decreasing levels of contamination.

The MPCA anticipates design and/or construction in FY97 for the following seven landfills: Battle Lake, Crosby, Freeway, Kummer, Leech Lake, Lindala and Mankato. Other landfills under consideration are: McKinley (move to East Mesaba) and Koochiching County.

## Land Management Plans

Land management at landfills currently in the Program is being addressed through the conditions and restrictions included in Binding Agreements. Landfills that have signed

Binding Agreements are generally restricted from having buildings constructed on or adjacent to them, and in some cases, public access is controlled. These restrictions are especially important at landfills where active gas-extraction and/or ground-water treatment systems have been installed.

Because the first years of the Program require a significantly larger work load of administrative and construction tasks, land-management plans will be addressed as more landfills are closed and construction activities end. MPCA staff, however, is taking advantage of existing opportunities to develop land-management plans with private landowners, municipalities, counties and other agencies and organizations.

The challenge will be to devise land-management plans that meet the needs of interested parties, protect public health and environment, and protect the state's investment in closure and remediation of the landfill. Land-management plans for landfills are expected to range from the preservation of open or green space to recreation areas such as golf courses and hiking trails.

## FY97 Program Objectives and Funding

The MPCA anticipates that future staff efforts will focus on four major areas:

- completion of Binding Agreements;
- issuance of Notices of Compliance;
- reimbursement to various eligible parties; and
- construction, cleanup and postclosure activities at qualified landfills.



In FY97, the MPCA will continue working on finalizing Binding Agreements, issuing Notices and reimbursing the maximum annual amount allowable (\$7 million) to eligible parties. In addition, in FY97, the state anticipates a significant cost-recovery payment to EPA of approximately \$800,000.

As the landfills are issued Notices and reimbursement and contractual obligations are better understood, the state is better able to evaluate the scope of overall obligations encompassed by the Program. The information gained by past cleanup, construction and postclosure care is useful in estimating future program activities and expenditures. This information, coupled with known commitments, has allowed MPCA staff to establish a program expenditure and obligation table that has been provided to the Department of Finance (Appendix 3). At the end of FY96, state obligations totaled \$152.3 million. The MPCA anticipates that at the end of FY97 those obligations will increase significantly as additional landfills become the state's responsibility. While these obligation numbers involve some uncertainty given the nature of forecasting future work and estimating costs, they give the state some basis for understanding long-term funding requirements.

Funding for the program in FY97 and beyond will continue to consist of fee dollars, bond dollars for public construction projects and some transfer of financial assurance funds. The MPCA also anticipates that insurance recovery dollars may also become available by the end of FY97. However, it must be recognized that fee dollars, which provide the bulk of the funding for the Program, are not sensitive to inflation. In addition, fee "surpluses" that are reflected in this annual report do not reflect future obligations.

Because of outstanding obligations and the Report due date, final fiscal numbers and total staff costs for Report preparation are not available. As a result, a FY97 Legislative Initiative has been proposed to extend the Report submital date until after fiscal accounts are closed and the information is made available.



# **Appendices**

**Appendix 1: 106 Closed Landfills Priority List Update**

<b>July 1996</b>				
<b>Landfill</b>	<b>Classification</b>	<b>Priority Score</b>	<b>FIR Acres</b>	<b>County</b>
Adams	D	0	3	Mower
Aitkin	B	27	7	Aitkin
Albert Lea	D	25	27	Freeborn
Anderson Sebeka	B	7	5	Wadena
Anoka Municipal	D	24	70	Anoka
Barnevillie	C	1	4	Wilkin
Battle Lake	B	19	8	Otter Tail
Becker	A	29	33	Becker
Benson	D	3	11	Swift
Big Stone	C	22	11	Big Stone
Brookston	C	2	8	St Louis
Bueckers 1	D	4	17	Stearns
Bueckers 2	D	0	0	Stearns
Carlton Co 2	D	5	30	Carlton
Carlton Co South	B	10	7	Carlton
Cass Longville	D	5	4	Cass
Cass Walker	D	2	10	Cass
Chippewa	D	38	18	Chippewa
Cook Area	C	4	8	St Louis
Cotton Area	B	4	6	St Louis
Crosby	B	16	12	Crow Wing
Crosby American	D	25	37	Dakota
Dakhue	D	8	28	Dakota
Dodge	D	30	11	Dodge
East Bethel	B	47	35	Anoka
East Mesaba	D	18	20	St Louis
Eighty Acre	B	15	4	Beltrami
Faribault	B	43	23	Faribault
Fifty Lakes	C	7	4	Crow Wing
Floodwood	C	5	6	St Louis
Flying Cloud	C	12	106	Hennepin
Freeway	B	100	138	Dakota
French Lake	A	30	6	Wright
Geislers	B	7	6	Winona
Gofer	C	17	34	Martin
Goodhue Co-Op	C	11	6	Goodhue
Grand Rapids	D	5	30	Itasca
Greenbush	B	5	3	Roseau
Hansen	C	14	15	Blue Earth
Hibbing	D	7	30	St Louis
Hickory Grove	C	3	8	Aitkin
Highway 77	C	2	5	St Louis
Hopkins	A	37	26	Hennepin
Houston	B	29	6	Houston

**Appendix 1: 106 Closed Landfills Priority List Update**

<b>July 1996</b>				
<b>Landfill</b>	<b>Classification</b>	<b>Priority Score</b>	<b>Fill Acres</b>	<b>County</b>
Hoyt Lakes	C	3	10	St Louis
Hudson	C	5	15	St Louis
Iron Range	C	4	9	Itasca
Ironwood	C	14	13	Fillmore
Isanti/Chisago	A	13	22	Isanti
Jackson	C	6	19	Jackson
Johnson Bros	C	11	28	Anoka
Karlstad	C	4	4	Kittson
Killian	B	5	9	Todd
Kluver	B	15	18	Douglas
Koochiching	B	24	35	Koochiching
Korf Bros	B	21	25	Pine
Kummer	B	16	23	Beltrami
La Grand	C	6	5	Douglas
Lake Co	C	15	39	Lake
Lake Of The Woods	C	8	15	Lake Of The Woods
Land Investors	B	7	3	Benton
Leech Lake	B	19	17	Hubbard
Lincoln	D	2	5	Lincoln
Lindala	B	35	13	Wright
Lindenfelser	B	19	38	Wright
Long Prairie	D	7	22	Todd
Louisville	B	40	57	Scott
Mahnomen	C	10	6	Mahnomen
Mankato	B	19	14	Blue Earth
Maple	D	28	21	Cass
Mckinley	C	4	3	St Louis
Mecker	D	3	25	Mecker
Mille Lacs	B	12	5	Mille Lacs
Minn Sanitation	B	20	7	Le Sueur
Murray	C	103	10	Murray
Northome	D	3	6	Koochiching
Northwest Angle	B	2	2	Lake Of The Woods
Northwoods	B	5	12	St Louis
Oak Grove	A	41	50	Anoka
Olmsted	C	13	51	Olmsted
Orr	B	5	5	St Louis
Paynesville	A	34	13	Stearns
Pickett	A	24	9	Hubbard
Pine Lane	B	20	40	Chisago
Pipestone	C	11	20	Pipestone
Portage Mod	D	0	1	St Louis
Red Rock	A	105	35	Mower



**Appendix 1: 106 Closed Landfills Priority List Update**

<b>July 1996</b>				
<b>Landfill</b>	<b>Classification</b>	<b>Priority Score</b>	<b>Fill Acres</b>	<b>County</b>
Redwood	B	20	32	Redwood
Rock	C	16	17	Rock
Salol	B	26	30	Roseau
Sauk Centre	C	8	7	Stearns
Sibley	C	7	13	Sibley
St Augusta	B	22	30	Stearns
Stevens	B	30	16	Stevens
Sun Prairie	D	22	20	Le Sueur
Tellijohn	B	34	28	Le Sueur
Vermillion Dam	D	0	1	St Louis
Vermillion Mod	C	3	7	St Louis
Wabasha	B	14	8	Wabasha
Wadena	B	25	18	Wadena
Waseca	D	10	16	Waseca
Washington Co	A	27	35	Washington
Waste Dispsal Eng	B	117	70	Anoka
Watonwan	C	50	19	Watonwan
Woodlake	C	8	85	Hennepin
Yellow Medicine	C	2	22	Yellow Medicine

**Classification A** Pose immediate public health and/or environmental threat.

**Classification B** Pose no immediate public health or environmental threat but require remediation to control gas migration, ground-water contamination, and/or to correct a severely inadequate or nonexistent cover. Also included are sites where waste may be relocated to another closed site.

**Classification C** Pose no immediate public health or environmental threat, but lack a cover that meets current MPCA standards. These sites may need minor repair or installation of gas vents and may be upgraded to current closure standards.

**Classification D** Currently pose no threat to public health or the environment and, in most cases, meet current standards for closure.

In the future, another classification (Classification E) might be appropriate for those landfills where waste has been removed and no ground-water contamination is documented at the landfills.

**Appendix 2: Construction Site Summaries**

Landfill	MPCA Classification	Landfill Construction Activities	Design & Oversight Costs <sup>1</sup>	Construction Contractor Costs <sup>1</sup>	Construction Completion Date
Becker County	A	Install active gas system	179,166		Dec-96
		Install enclosed flare			
Bueckers #1 and #2	B	Move 33,000 cy from #2	143,000	1,143,000	Oct-96
		Construct 17 acre cover at #1			
		Install passive gas vents			
French Lake	A	Move farm buildings	125,000	566,000	Nov-96
		Construct 7 acre cover			
		Install passive gas system			
Greenbush/Roseau County	B	Move 39,000 cy to Roseau	MPCA	550,000	Jun-96
Hopkins	A	Install active gas system	202,000	713,000	Aug-96
		Install enclosed flare			
Houston County	B	Construct 6 acres of cover	64,174		Nov-97
		Install passive gas system			
Isanti/Chisago Counties	A	Hydro Study	196,000	544,000	Nov-95
		Construct wetland for treatment system			
Korf	B	Construct 20 acre cover	83,709	1,794,000	Nov-96
		Install passive gas system			
Paynesville	A	Construct 13 acre cover	109,000	788,000	Oct-96
		Install passive gas vents			
Pickett	A	Construct 10 acre cover	134,000	1,159,000	Aug-96
		Install passive gas vents			
Pipestone/Lincoln Counties	B	Move 68,000 cy from Lincoln	175,000	692,000	Sep-96
		Construct 10 acre cover			
		Install passive gas vents			
Red Rock/Adams	A	Move 42,000 cy from Adams	433,000	3,795,000	Nov-96
		Construct 35 acre cover			
		Install passive gas vents			
St. Augusta/Land Investors	B	Move Land Investors	119,000		Dec-96
		Construct 30 acres of cover			
		Install passive gas system			
Wadena	B	Remove barrels	142,000	1,049,000	Nov-96
		Construct 15 acre cover			
		Install passive gas system			
Washington County	A	Construct 38 acre cover	300,000	3,157,000	Nov-96
		Install active gas system			
		Install enclosed flare			
Yellow Medicine <sup>2</sup> County	C	Assist County in closure via contractor oversight	50,000		Oct-96

<sup>1</sup>Costs are money which have been authorized for the landfill project (actual costs maybe different).

<sup>2</sup>Yellow Medicine is a County project with State assistance.



**Appendix 3: Future Financial Obligations for the Closed Landfill Program as of July 1, 1996**

Landfill	Binding Agreement Date	NOC Date	Obligations (Millions of \$)				Total Obligations
			Unpaid Reimbursement to RPs & EPA	Closure/ Upgrade	Post -Closure <sup>3</sup>	Contingency Action	
Hoyt Lakes	5-Apr-96	26-Jun-96			0.320	0.167	0.487
Hudson	7-Mar-96	10-Jun-96			0.488	0.279	0.767
Iron Range	19-Jun-96						0.000
Ironwood							0.000
Isanti/Chisago	3-Oct-95	31-Oct-95	0.219	0.798	4.905	0.330	6.252
Jackson Co.	16-Oct-95	5-Mar-96			0.999	0.335	1.334
Johnson Brothers							0.000
Karlstad	15-Dec-95						0.000
Killian							0.000
Kluver	31-Oct-95	31-Oct-95	0.412	0.080	0.871	0.316	1.678
Koochiching Co.							0.000
Korf Brothers <sup>2</sup>				1.850			1.850
Kummer	16-Oct-95	7-Nov-95	2.213	0.798	5.686	0.345	9.041
La Grande <sup>1</sup>					0.558	0.208	0.766
Lake Co.							0.000
Lake of the Woods Co.	27-Oct-95	18-Apr-96		0.067	0.720	0.270	1.057
Landfill Investors, Inc.							0.000
Leech Lake							0.000
Lincoln Co. <sup>2</sup>	24-Nov-95						0.000
Lindala							0.000
Lindenfelser							0.000
Long Prairie	29-Aug-95	18-Jan-96			0.581	0.380	0.961
Louisville							0.000
Mahnomen Co.	27-Oct-95						0.000
Mankato	10-Jul-96						0.000
Maple							0.000
McKinley							0.000
Meeker Co.	15-Jul-96						0.000
Mille Lacs Co.							0.000
MN Sanitation Services							0.000
Murray Co.	24-Nov-95	5-Mar-96			1.186	0.255	1.441
Northome							0.000
Northwest Angle Inlet	27-Oct-95	18-Apr-96		0.159	0.269	0.030	0.458
Northwoods	19-Jun-96	24-Jun-96		0.958	0.849	0.180	1.987
Oak Grove	5-Mar-96	18-Apr-96	5.486	2.394	5.676	0.774	14.330
Olmsted Co.	10-Jul-95	27-Oct-95	1.691	2.394	9.546	0.792	14.423
Orr	5-Apr-96	26-Jun-96		0.591	0.310	0.170	1.070
Paynesville <sup>2</sup>	10-Jun-96			0.650			0.650
Pickett	27-Sep-95	31-Oct-95		0.236	1.791	0.557	2.584
Pine Lane							0.000
Pipestone Co.	5-Dec-95	20-Jun-96		0.175	0.780	0.400	1.355
Portage Modified	5-Apr-96	26-Jun-96					0.000
Red Rock <sup>2</sup>	12-Oct-95			1.200	1.983	0.525	3.708
Redwood Co.	13-Jun-96						0.000
Rock Co.							0.000

**Appendix 3: Future Financial Obligations for the Closed Landfill Program as of July 1, 1996**

Landfill	Binding Agreement Date	NOC Date	Obligations (Millions of \$)				Total Obligations
			Unpaid Reimbursement to RPs & EPA	Closure/ Upgrade	Post -Closure <sup>3</sup>	Contingency Action	
Salol	26-Dec-95						0.000
Sauk Centre	31-Aug-95	27-Oct-95	0.181	0.000	1.022	0.285	1.488
Sibley Co.	1-Dec-95	5-Mar-96		0.013	0.578	0.195	0.786
St. Augusta	31-Aug-95	2-May-96	0.499	3.192	1.418	0.720	5.829
Stevens Co.							0.000
Sun Prairie							0.000
Tellijohn							0.000
Vermilion Dam	5-Apr-96	26-Jun-96					0.000
Vermilion Modified	5-Apr-96	26-Jun-96		0.027	0.479	0.105	0.611
Wabasha Co.							0.000
Wadena <sup>2</sup>	18-Jan-96			0.046			0.046
Waseca Co.	15-Mar-96						0.000
Washington Co.	21-Nov-95	21-Nov-96	2.947	2.991	10.658	0.575	17.171
Watsonwan Co.							0.000
WDE	27-Oct-95	30-Oct-95	9.126		9.978	1.950	21.054
Woodlake							0.000
Yellow Medicine Co. <sup>2</sup>	17-Jul-96			0.050			0.050
<b>TOTALS</b>	<b>59</b>	<b>37</b>	<b>28.959</b>	<b>23.424</b>	<b>84.520</b>	<b>15.376</b>	<b>152.279</b>

1) NOC not issued, but State obligation through EPA Agreement, tax forfeiture or bankruptcy agreements.

2) NOC not issued, but State obligation through design/construction contract in anticipation of NOC.

3) Estimated costs for 50-Year Post-Closure care.