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M I N N E S O T A



# Closed Landfill Program

## 1997 ANNUAL REPORT



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

# **Minnesota Closed Landfill Program**

## **1997 ANNUAL REPORT**

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**Landfill Report 1997**

Minnesota Pollution Control Agency

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**Landfill Report 1997**

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## EXECUTIVE SUMMARY

The 1994 Landfill Cleanup Act (Act) created Minnesota's Closed Landfill Program (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 1997 (FY97), which is from July 1, 1996, to June 30, 1997. The Program is in its third year and significant progress was made in a number of areas during the past year.

### PROGRAM OVERVIEW

The MPCA is authorized under the Program to initiate cleanup actions, complete closures, take over long-term operation and maintenance and reimburse eligible parties for past cleanup costs at the 106 qualified closed state-permitted landfills.

Program entry qualifications have remained the same, with 106 landfills either in the process of, or having completed all Binding Agreement (BA) requirements. Through June 30, 1997, 80 landfills had a signed BA and 72 have received a Notice of Compliance (NOC), at which time the state typically takes over landfill operations and maintenance.

### Program Accomplishments

The following list summarizes Program accomplishments through FY97:

- 80 Binding Agreements signed;
- 72 Notices of Compliance issued;
- 14 Reimbursements to landfill owners/operators and responsible parties totaling \$14 million;
- 5 EPA site reimbursements totaling \$178,167;

- 28 construction designs underway/completed;
- 21 construction projects underway/completed.

## FUNDING

Funding for the Program has or will come from five sources of revenue: 1) solid waste assessment fees (these fees also fund other Ground Water and Solid Waste Division activities), 2) up to \$90 million in state general obligation bonds, 3) funds transferred from the financial assurance accounts of closed landfills, 4) a one-time transfer of funds from the Metropolitan Landfill Contingency Action Trust Fund, and 5) future settlements from landfill-related insurance policies.

**Table 1: Income FY97**

Source	Amount
Solid Waste Fees FY97	\$21,389,995
Carryover FY96	\$23,254,000
Investment	\$1,383,001
Financial Assurance	\$1,092,830
Insurance	\$0
Other	\$787
<b>Sub Total</b>	<b>\$47,120,613</b>
Bond Authority Available FY97	\$12,500,000
<b>Total Income Available</b>	<b>\$59,620,613</b>

### Bond & Fee Dollars

The legislature authorized up to \$90 million in state general-obligation bond funds to be used for design and construction work at public landfills over a minimum 10-year period beginning in FY95. Bond funds available for the first three years of the Program were: \$2 million in FY95, \$8 million in FY96 and \$12.5 million in FY97. Bond funds used through FY97 total \$18 million. New bond funds available for FY98 are \$12.5 million. Obligations for existing construction contracts and projections for construction in FY98 estimate an expenditure of bond funds totaling \$10 million through FY98.



The solid-waste assessment fee is currently 60 cents per uncompacted cubic yard for commercial users and \$2 per year for residential users. Fees are generally collected by haulers who collect waste in the state and remit the fees to the Department of Revenue for deposit in the Solid Waste Fund. Fees are also included for demolition debris, medical waste and some industrial waste. Total solid-waste assessment fees collected in FY97 are \$21,389,995 (versus \$20,085,643 in FY96). The existing Solid Waste Generator Assessment (SWGA) is being repealed on January 1, 1998, and replaced with roughly half of expected revenues from the new Solid Waste Management Tax for the remainder of the fiscal year. The new law is drafted such that the Solid Waste Fund is assured revenues of at least \$22 million per year. This "floor" is about midway between current revenue figures and the originally anticipated projections of the SWGA.

### Insurance Recovery

In FY97, the MPCA and Attorney General's Office initiated settlement offers with insurance carriers with funds going toward Program activities. Already more than \$1 million has been collected in FY98 and additional settlements are anticipated (see additional information on page 4).

<b>Financial Assurance Revenue Collected in FY97</b>		
Source	Date	Amount
Chippewa Co.	Dec-96	\$362,515.71
Dakota Co.	Dec-96	\$157,411.00
French Lake SLF	Dec-96	\$1,571.44
Meeker Co. SLF	Nov-96	\$378,001.82
Paynesville SLF	Aug-96	\$89,025.73
Redwood Co. SLF	Jul-96	\$81,688.64
Stearns Co.	Aug-96	\$22,615.37
<b>Total</b>		<b>\$1,092,829.70</b>

### Financial Assurance

In FY97, the owners, operators or other parties associated with five landfills sent a total of \$1,092,829.70 to the Department of Revenue for deposit in the Solid Waste Fund as required by law or through state requests (see Table 2). Since inception of the Program, the owners or operators of 12 landfills have submitted a total of \$4,436,889 for deposit in the Solid Waste Fund.

## EXPENDITURES

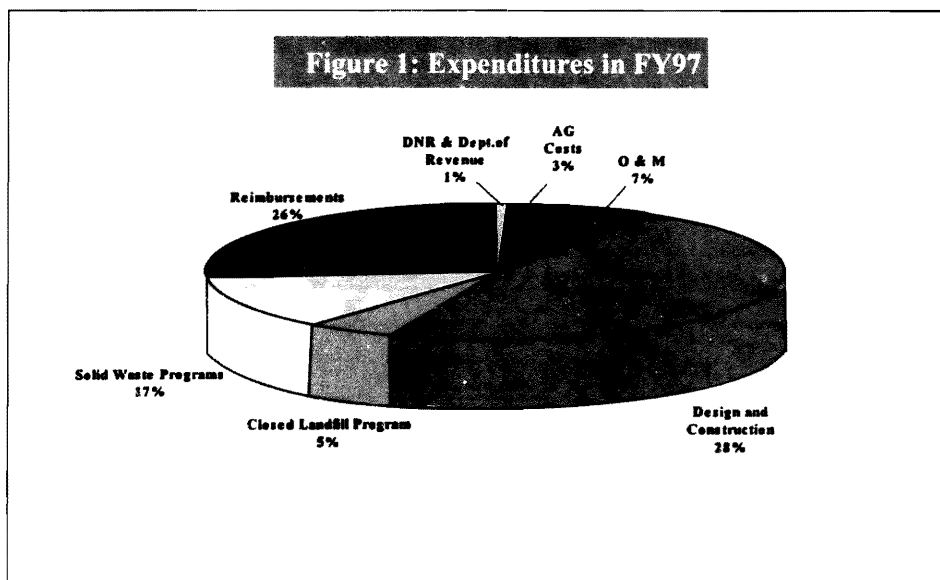
MPCA Closed Landfill Program expenditures are primarily for design, construction, operation and maintenance costs of landfills, reimbursements and administration (see Table 3 below and Figure 1 on page 3).

Expenditures	FY97
Solid Waste Programs	\$3,665,852
Closed Landfill Program Adm.	\$1,398,537
Design and Construction	\$13,038,499
O & M	\$1,961,580
MPCA SW Legal	\$383,000
Insurance Recovery	\$246,153
Dept. Revenue	\$48,000
Dept. Natural Resources (DNR)	\$100,000
EPA Reimbursement	\$138,167
State Reimbursements	\$7,000,000
<b>Total</b>	<b>\$27,979,788</b>

### Reimbursement

The deadline to file a reimbursement claim with the MPCA was October 15, 1996. Presently, there are 16 reimbursement claims that have met all Program requirements and final dollar amounts have been approved. Reimbursement claims for Ironwood and Flying Cloud Sanitary Landfills, were determined to be either ineligible or those claims have been waived. The MPCA issued \$7 million in reimbursement payments to landfill





owners, operators and responsible parties on December 1, 1996. An additional \$138,166.67 was reimbursed to the U.S. Environmental

Protection Agency (EPA) for three landfills associated with past federal Superfund actions (see tables 4 and 5).

**Table 4: Total Amounts Approved and FY97 Reimbursement**

Landfill	Total Approved	Past Reimbursements	FY97 Reimbursement	Remainder
Anoka	\$5,150,000	\$0	\$0	\$5,150,000
Becker Co.	\$146,200	\$0	\$21,296	\$124,905
Crosby American	\$1,413,379	\$0	\$205,873	\$1,207,506
East Bethel	\$4,079,443	\$1,088,287	\$854,949	\$2,136,207
Hanson	\$488,964	\$62,705	\$121,836	\$304,424
Hopkins	\$650,000	\$0	\$0	\$650,000
Houston Co.	\$104,902	\$0	\$0	\$104,902
Isanti/Chisago	\$282,644	\$63,734	\$31,886	\$187,024
Kluver	\$563,040	\$150,874	\$117,808	\$294,358
Kummer	\$3,024,564	\$811,991	\$632,410	\$1,580,162
Oak Grove	\$5,994,745	\$735,682	\$1,581,569	\$4,198,251
Olmsted Co.	\$2,151,107	\$478,773	\$243,592	\$1,428,742
Sauk Center	\$234,229	\$52,816	\$26,425	\$154,988
St. Augusta	\$529,454	\$67,897	\$131,925	\$329,632
Washington Co.	\$3,085,415	\$269,835	\$422,052	\$2,393,529
WDE	\$12,343,183	\$3,217,407	\$2,608,381	\$6,517,395
<b>Totals</b>	<b>\$40,241,269</b>	<b>\$7,000,000</b>	<b>\$7,000,000</b>	<b>\$26,762,025</b>





Table 5: EPA Reimbursement

Landfill	Total Approved	Past Reimbursements	FY97 Reimbursement	Remainder
Dakhue	\$2,767,500	\$0	\$0	\$2,767,500
Freeway	\$17,000	\$0	\$0	\$17,000
Crosby American	\$18,000	\$0	\$0	\$18,000
East Bethel	\$21,000	\$21,000	\$0	\$0
LaGrande	\$766,000	\$0	\$0	\$766,000
Oak Grove	\$304,000	\$0	\$50,667	\$253,333
Olmsted	\$19,000	\$19,000	\$0	\$0
St Augusta	\$37,500	\$0	\$37,500	\$0
Washington Co.	\$50,000	\$0	\$50,000	\$0
<b>Totals</b>	<b>\$4,000,000</b>	<b>\$40,000</b>	<b>\$138,167</b>	<b>\$3,821,833</b>

The MPCA anticipates making nearly \$7 million in reimbursement payments on December 1, 1997. EPA reimbursement is expected to be approximately \$775,000.

### **FISCAL TRACKING OF LANDFILLS (COST CODES)**

FY97 expenditures for each landfill are itemized in the appendix.

## **INSURANCE RECOVERY EFFORT**

### **INSURANCE STUDY**

Under the Insurance Recovery Act (Minn. Stat. ch. 115B.441 - 115B.445) (Act), the MPCA and the Attorney General's Office have been working cooperatively to gather insurance policy and disposal information regarding businesses which disposed of waste at the 106 qualified landfills. This policy information in conjunction with past, present and future costs estimated by the MPCA and associated with these 106 qualified landfills is being used to achieve settlement agreements with individual insurance carriers.

### **Information Gathering**

The estimated past and future costs at 22 landfills, which represent at least 60 percent of the Program costs, have been targeted by the MPCA in order to gather insurance and disposal information and to fulfill legal requirements. Identification and information gathering regarding these landfills will allow the MPCA and Attorney General's Office to provide "global" settlement offers to insurance carriers at all 106 landfills.

### **Cost Estimation**

The current total estimated amount of environmental response costs incurred and projected to be incurred by the state is identified in one of the following two categories:

1. Landfill-specific "fixed" costs as anticipated in the "Cost Estimates" section of the MPCA 1994 "Landfill Site Assessment Report" – actual remediation costs incurred to date and reimbursement amounts.
2. Anticipated "risk" cost projections based on additional remedies needed to correct environmental problems as discussed in the 1994 MPCA "Landfill Site Assessment Report."



### **Insurance Carrier Allocation and Settlement**

A proposed liability-based method for allocating "fixed" and "risk" costs to insurance carriers has been developed by the MPCA and sent to insurance carriers for comment. Also, "fixed" and "risk" costs estimated at the Oak Grove Landfill have been allocated and offers sent to more than 44 insurance carriers of businesses found to be associated with that landfill. Negotiations are expected to begin with the insurance carriers identified at the Oak Grove Landfill by the end of 1997 with lessons learned from these negotiations being used as the template for all future negotiations with the more than one hundred insurance carriers found to be associated with these landfills.

In addition, the MPCA and Attorney General's Office have adopted a separate approach for bankrupt insurance carrier groups. To date, the MPCA has collected over \$1 million in settlement from one bankrupt insurance carrier but anticipates additional settlements as allocated shares at Oak Grove are negotiated and additional insurance carriers in liquidation begin to settle the state's claims.

### **Natural Resource Damages**

Under the Act, insurance carriers may request that natural resource damages (NRD) be included in any settlement with that insurance carrier. The MPCA, after developing a proposed method to calculate NRD at affected landfills, is currently meeting with the Department of Natural Resources (DNR), the co-trustee of Minnesota's natural resources, regarding DNR's involvement in the NRD calculation and insurance settlement process. It is anticipated that a memorandum of understanding will be developed which memorializes the interaction of the MPCA and DNR regarding the settlement process, as well as collection, deposit and expenditure of any natural resource damage settlements under the Act.

### **Information Dissemination**

The MPCA has placed all information regarding

the Insurance Recovery Effort activities including fact sheets, proposed methods of allocation, and landfill cost identification on its internet site: [www.pca.state.mn.us](http://www.pca.state.mn.us). This enables this information to be reviewed by insurance carriers, consultants and reporters in order to help them to understand the emphasis of the Insurance Recovery Effort as well as remain current regarding MPCA activities in this area.

The MPCA and the Attorney General's Office, either jointly or separately, have issued several press releases notifying businesses and insurance carriers of the Act, their responsibilities under the Act and settlements. This information dissemination is crucial to enabling the business community in Minnesota to realize the benefits the Act provides to them when they provide complete information as well as keeping insurance carriers informed concerning MPCA activities.

### **Future Activities**

Based on the current pace of information gathering activities, it is estimated that the MPCA will receive information concerning an estimated 50,000 - 80,000 general liability and excess insurance policies from more than 5,000 businesses associated with these qualified landfills by the end of 1997. It is anticipated that several insurance carriers, both bankrupt and currently operating, will conclude settlement negotiations and reach settlement agreements with the MPCA during the remainder of fiscal year 1998.

## **1997 LEGISLATIVE SESSION**

### **Solid Waste Management Tax**

Beginning on January 1, 1998, the principal funding source of the Program will switch from a free-standing fee to part of a broader waste-management tax.

This change is contained in a bill (Article 13 of Chapter 231, Regular Session Laws 1997) passed



by the Legislature in May 1997, which was supported by the waste industry and county governments as a means of streamlining the collection and administration of revenues now being collected to pay for the Program and other solid-waste management efforts administered through the MPCA and the Minnesota Office of Environmental Assistance. Taken together, these programs now receive a total of about \$43 million per year through the Solid Waste Generator Assessment Fee and sales taxes on collection of mixed-municipal solid waste (MMSW). The new tax is intended to provide a comparable level of funding for the programs, while consolidating the means of collection into a unified "solid waste management tax." The new legislation:

- Repeals the current 6.5 percent sales tax on MMSW collection and disposal services.
- Repeals the \$2-per-household-per-year fee on households having MMSW collection.
- Repeals the 60-cents-per-cubic-yard fee now levied on trash-container volume at businesses and institutions that generate mixed-municipal solid waste.
- Retains the 60-cents-per-cubic-yard rate on container volume, levied on generators of construction debris, medical-pathological waste and industrial waste.
- Creates a new tax of 9.75 percent on MMSW collection and disposal services at households.
- Creates a new tax of 17 percent on MMSW collection and disposal services at businesses and institutions.

### **Benton County Reimbursement**

In the Environmental Agencies Budget Bill that was passed in the 1997 regular session (Minnesota Session Laws Chapter 216), the Minnesota Legislature directed the MPCA to pay \$85,000 to Benton County from the Solid Waste Fund during FY98. This money is to defray one year of principal payments due on bonds that were issued in 1994 by Benton County to pay the costs of a \$1.475 million settlement by Benton County local governments following a suit by Morrison

County for a share of its cleanup costs at the Greater Morrison Sanitary Landfill. (Proponents of the bill cited the fact that despite urging by Benton County local governments, who had once participated in the management of the landfill but later left the board, the Greater Morrison Sanitary Landfill did not close in 1994 to meet the deadline of entry into the Program. This left parties like Benton County and its cities outside of any reimbursement they otherwise might have been eligible for under the Closed Landfill Program.) A brief Grant Agreement was signed by all parties on October 9, 1997, to reflect the statutory requirements and the \$85,000 payment was finalized.

### **Other Issues**

The 1997 law also required a report by the MPCA, due on January 15, 1998, regarding the estimated impact of including open-permitted mixed-municipal solid waste landfills in the Program, after the landfills close. The report will also provide a brief examination of the old closed dump issue given that subject's continuing discussion. The legislation did not commit to an expansion, nor to offering Solid Waste Fund payments to Benton County after FY98. Barring any changes in legislation, the Program will continue to work on cleanup and O&M of qualified closed landfills and will strive to have signed BAs for all 106 landfills during FY98. In addition, the MPCA will continue to provide information to other states, the federal government and the media as to the accomplishments and successes of the Program.

## **PROGRAM ACTIVITIES**

### **Binding Agreements/Notices of Compliance**

To date, the Program has successfully signed 80 Binding Agreements and issued 72 Notices of Compliance. Table 6 indicates those landfills which had documents executed during FY97.

Note: Some landfills that received Notices of



Table 6: Binding Agreements/Notices of Compliance

Landfill	Binding Agreement	Notice of Compliance
Aitkin Area	*	*
Albert Lea	*	*
Barnesville	*	*
Battle Lake	*	*
Becker Co.	*	*
Big Stone Co.	*	*
Bueckers #1	*	*
Bueckers #2	*	*
Carlton Co. #2	*	*
Carlton Co. South	*	*
Chippewa Co.	*	*
Crosby	*	*
Crosby Am. Prop.	*	*
Dakhue	*	*
Faribault	*	*
French Lake	*	*
Grand Rapids Area	*	*
Hibbing	*	*
Hickory Grove	*	*
Highway 77	*	*
Hopkins	*	*
Iron Range	*	*
Karlstad	*	*
Korf Bros.	*	*
LaGrande	*	*
Lake Co.	*	*
Landfill Investors, Inc.	*	*
Leech Lake	*	*
Mahnomen Co.	*	*
Mankato	*	*
McKinley	*	*
Meeker Co.	*	*
Red Rock	*	*
Redwood Co.	*	*
Rock Co.	*	*
Stevens Co.	*	*
Wabasha Co.	*	*
Wadena	*	*
Washington Co.	*	*
Watonwan Co.	*	*
Yellow Medicine Co.	*	*

Compliance in FY97 signed Binding Agreements in previous years.

### Deletion of Qualified Landfills from the National List of Priorities



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### (NPL) and Permanent List of Priorities (PLP).

To date, the Program has removed eight closed landfills from the NPL (Federal Superfund List). The following "qualified landfills" were deleted from the NPL in FY97:

Oak Grove Sanitary Landfill  
St. Augusta Sanitary Landfill

To date, the Program has removed 32 closed landfills from the PLP (State Superfund List). The following "qualified landfills" were delisted from the PLP in FY97:

Becker County Sanitary Landfill  
Bueckers Sanitary Landfill #1  
Crosby American Demolition Landfill  
Dakhue Sanitary Landfill  
Grand Rapids Area Sanitary Landfill  
Hanson and Mankato Sanitary Landfills  
Hopkins Sanitary Landfill  
Karlstad Sanitary Landfill  
Korf Bros. Sanitary Landfill  
La Grande Sanitary Landfill  
Leech Lake Sanitary Landfill  
Meeker County Sanitary Landfill  
Red Rock Sanitary Landfill  
Redwood County Sanitary Landfill  
Wadena Sanitary Landfill

### Annual Reports

Every fiscal year, the MPCA site teams prepare an annual report for each landfill in the Program. The annual report is divided into three sections: 1) a Site Background contains basic information on the landfill; 2) an Engineering Summary discusses cover maintenance/construction, leachate management and monitoring, and landfill gas management and monitoring; and 3) a Ground Water Monitoring and Remediation Summary. Activities conducted, data gathered and recommendations are noted to provide a continuing "file" on each site that reflects changes over time.

### Construction Activity

Table 7 is a summary of construction activity for FY97.

**Table 7: Construction Activity for FY97**

Landfill	MPCA Classification	Landfill Construction Activities	Design & Oversight Costs	Construction Contractor Costs	Construction Completion Date
Battle Lake	B	Construct 8 acre cover Install passive gas system	\$27,364	\$0	Oct-97
Becker County	A	Construct 20 acre cover Install active gas system Install enclosed flare	\$56,572	\$155,320	Sep-98
Crosby	B	Construct 8 acre cover Install passive gas system	\$59,498	\$320,483	Sep-97
Freeway	B	Construct 158 acre cover Install active gas system	\$900	\$0	Nov-99
French Lake	A	Move farm buildings Construct 7 acre cover Install passive gas system	\$61,834	\$513,200	Nov-96
Hopkins	A	Install active gas system Install enclosed flare	\$15,577	\$204,371	Aug-96
Houston County	B	Construct 6 acre cover Install passive gas system	\$10,866	\$0	Nov-98
Korf Bros.	B	Construct 20 acre cover Install passive gas system	\$125,320	\$1,906,221	Aug-97
Kummer	B	Ground Water Cleanup System Land Purchase	\$67,823	\$87,443	Nov-97
Land Investors	A	Move 25,000 yds. of waste to St. Augusta	\$37,066	\$188,270	Nov-96
Leech Lake	B	Construct 20 acre cover Install passive gas system	\$37,465	\$0	Oct-97
Lindala	B	Construct 13 acre cover Install passive gas system	\$41,560	\$27,136	Oct-98
Mankato	B	Construct 12 acre cover Install passive gas system	\$26,155	\$0	C 1-97
Oak Grove	D	Land Purchase Demolition	\$6,152	\$336,718	Jun-97
Paynesville	A	Construct 13 acre cover Install passive gas system	\$59,412	\$698,922	Oct-96
Pickett	A	Construct 10 acre cover Install passive gas system	\$25,894	\$435,263	Sep-96
Pipestone/Lincoln Counties	B	Move 68,000 cy from Lincoln Co. Construct 10 acre cover Install passive gas system	\$81,924	\$176,252	Sep-96
Red Rock/Adams	A	Move 42,000 cy from Adams Construct 42 acre cover Install passive gas system Land Purchase	\$193,960	\$3,047,768	Jul-97
St. Augusta	B	Construct 45 acre cover Install passive gas system	\$123,440	\$728,832	Nov-97
Wadena	B	Remove barrels Construct 15 acre cover Install passive gas system	\$118,614	\$877,309	Nov-97
Washington County	A	Construct 38 acre cover Install active gas system Install enclosed flare	\$129,979	\$1,992,290	Jun-97
WDE	A	Construct active gas system	\$11,527	\$0	Aug-98
Yellow Medicine County	C	Assist County in closure via contractor oversight	\$17,279	County	Jul-97
<b>Total</b>			<b>\$1,236,181</b>	<b>\$11,682,798</b>	



### Operation & Maintenance (O&M)

Once the MPCA takes responsibility for a site, the general O&M of the facility is contracted. The 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 type work that is requested by the MPCA site team. In addition, there are regional sampling and analytical contracts for monitoring of the sites.

There is also a technical O&M contract in place so that contractors with specific technical expertise maintain and operate complex site-remediation systems. Landfill gas flares, ground water treatment and leachate collection systems are covered by this contract. There are approximately 14 landfills that currently have some type of remediation system requiring technical service.

As more construction projects are completed and the remaining eligible sites are brought into the Program, the amount of O&M work will significantly increase. It is anticipated that by the year 2001, O&M will account for over 50 percent of Program contract expenditures.

### Land Management Plans

As stated in previous Program Annual Reports, the issue of establishing Land Management Plans for landfills has primarily been addressed through conditions and restrictions in the Binding Agreement. As the workload of Binding Agreements and long-range MPCA-wide planning is reduced, work on long-term Program issues such as land management plans will increase.

### Priority List Rescoring

According to the Landfill Cleanup Act, the MPCA must update the priority list each FY to reflect any changes due to monitoring and remediation activities. The classification and score for each landfill in the Program is found in

**Table 8: Rescored Landfills in FY97**

Site Name	Class/Score	Revised Class/Score
Red Rock	A/105	D/88
Oak Grove	A/41	D/13
Hopkins	A/37	B/8
Paynesville	A/34	D/7
French Lake	A/30	D/3
Washington Co.	A/27	D/5
Pickett	A/24	B/3
Isanti/Chisago	A/13	D/11
East Bethel	B/47	D/35
Redwood	B/20	C/8
Mankato	B/19	B/32
Land Investors, Inc.	B/7	C/5
Northwoods	B/5	B/9
Pipestone	C/11	C/8
Fifty Lakes	C/7	B/7
Meeker	D/3	C/13

Appendix 1. Table 8 indicates the sites with revised classifications and scores in FY97.

## LOOKING AHEAD TO 1998

### Proposed New Projects

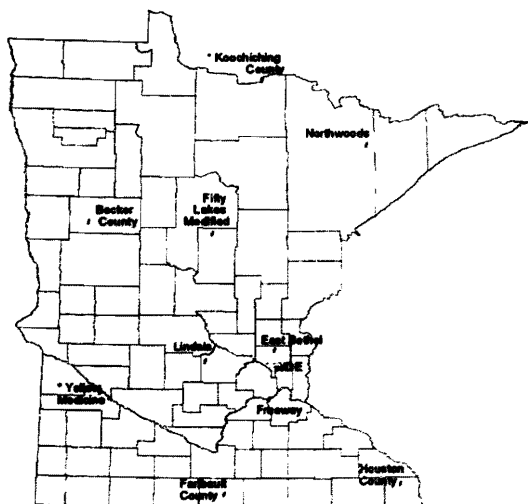
We anticipate the following landfills will have construction projects started during FY98 (see Figure 2):

Becker Co.	(cover enhancement and completion of active-gas system)
East Bethel	(additional cover remediation)
Faribault Co.	(upgraded passive-gas system)
Fifty Lakes	(waste relocation, cover and passive-gas system)
Freeway	(cover and active-gas system)
Houston Co.	(cover and passive-gas system)
Lindala	(waste relocation, cover and passive-gas system)
Northwoods	(waste relocation, cover and passive-gas system)
WDE	(active-gas system)

We anticipate the following landfills will proceed with additional construction work in FY98 after BAs



Figure 2: Construction Site Locations



and county requirements are met:  
 Koochiching Co. (leachate-collection system)  
 Yellow Medicine Co. (cover and vegetation repair)

### Landfill Gas

There are 106 qualified landfills which will eventually enter the Program and they contain approximately 76 million cubic yards of waste. The Program initially defined which landfills needed active-gas systems based on the need to control excessive gas migration or groundwater contamination. Active-gas systems remove large amounts of volatile organic compounds (VOCs) that would otherwise migrate into the groundwater. The landfills that currently have or are required to have active-gas systems to control gas migration or groundwater contamination are listed in Table 9. These 11 landfills contain about 38 million cubic yards of waste or about 50 percent of the waste in the Program.

Table 9: Landfill Gas Systems Installed or Planned

LANDFILL	CUBIC YARDS OF WASTE	STATUS
Flying Cloud**	8.0 million	1994
Anoka**	5.7 million	1990
Freeway **	5.0 million	1999 est.
Woodlake**	3.7 million	1993
Louisville**	3.7 million	1999 est.
Washington Co.	2.6 million	1996
Waste Disposal Eng.	2.5 million	1998 est.
Oak Grove*	2.5 million	1994
Hopkins	1.5 million	1996
Becker Co.	1.4 million	1998 est.
Tellijohn	1.2 million	1994

\* Oak Grove has a small active-gas system on a portion of the landfill. This system may have to be expanded or rebuilt to enable continuing operation. Currently, gas migration is limited and no structures are affected. The system has been shut down to assess the extent of gas migration and the need for an expanded active-gas system.

\*\* Landfills that may need active-gas systems based on U.S. Environmental Protection Agency Emission Guidelines and MPCA rules.

The need to construct additional active-gas systems to reduce contributions to global air emissions from landfills has also been considered. Listed in Table 10 are the additional landfills in the Program that contain over one million cubic yards and where sufficient gas volumes may be generated to allow for construction of an active-gas system. Currently, none of these landfills have active-gas systems.



Table 10: Potential Landfill Gas Systems

LANDFILL	CUBIC YARDS OF WASTE	APPROX. YEARS OF OPERATION	AVERAGE AGE OF WASTE
Olmsted Co *	2.8 million	1972-1993	15 years
Red Rock	1.7 million	1958-1980	28 years
Albert Lea	1.7 million	1965-1993	18 years
Pine Lane	1.6 million	1972-1990	16 years
Dakhue	1.5 million	1971-1988	18 years
Hibbing	1.4 million	1977-1994	12 years
Lindenfelser *	1.3 million	1971-1989	17 years
East Bethel *	1.2 million	1969-1994	16 years
Grand Rapids	1.1 million	1973-1994	14 years
St. Augusta	1.1 million	1966-1985	22 years

\*Olmsted Co., Lindenfelser and East Bethel were demolition landfills during the final years of operation and contain large quantities of demolition waste. This will greatly reduce methane generation.

These additional 10 landfills contain about 15.4 million cubic yards of waste or about 20 percent of the waste in the Program. Therefore, the 21 landfills listed account for 70 percent of the waste in the Program while the other 85 landfills account for about 30 percent of the waste.

To implement an active-gas system, there must be an adequate cover to contain the gas, waste that is in the decomposition phase, and sufficient waste depth to generate gas. An active-gas system costs about \$1-2 million for a one-two million cubic-yard landfill with a flare system. The operation and maintenance cost would be about \$70,000-\$80,000 per year. An energy-recovery system could be considered for landfills over three million cubic yards. Currently, Flying Cloud has an energy-recovery system and energy recovery is being investigated for Woodlake, Freeway and Anoka landfills.

An active-gas system could be constructed at some of the additional 10 landfills listed above to reduce contributions to global air emissions. Construction costs of \$1-2 million per landfill would be needed.

## GOAL 21

The MPCA has undertaken an ambitious strategic plan called Goal 21 which is about to be put into action. The vision of how the MPCA will carry out its mission is shifting from a regulator of bigger point sources to focusing more attention on assisting and facilitating others who protect the environment. Large point sources of pollution are still important to regulate, but smaller non-point sources have become an equal – if not greater – cause for concern. By doing this, the MPCA can leverage the resources of thousands of Minnesota businesses, environmental groups, communities and individuals who want to protect and improve the environment.

The final phase of planning involved teams focused on three major areas of change. 1) different methods by which the MPCA could organize its resources, 2) defining the types of work that staff will need to perform in the MPCA's new way of doing business, and 3) identifying the attributes leaders within the MPCA need to help put Goal 21 into action and a way to place staff within the new structure. These three areas of change reaffirmed the commissioner's decision to make the MPCA a geographically-based organization because it provides the best approach to provide environmental protection to Minnesota in the decades to come. The MPCA will divide the state into three districts – Northern, Metro and Southern. This approach will allow for flexibility when appropriate and consistency when needed to deliver services. Boundaries for the districts are currently being drawn up with decisions based on customer surveys and other information.

How will this impact the Closed Landfill Program? It is not anticipated that there will be major changes in the administration of the Program because of statutory requirements and continuing obligations under Binding Agreements and other Program requirements. MPCA staff





currently working in the Program, will be responsible for assigned sites located within the new districts. One potential change may be in the physical relocation of staff into the new organizational structure.

The MPCA anticipates aligning itself with the new structure next July. Full implementation of the plan is expected to take from three to five years. To keep abreast of the implementation of Goal 21, check the MPCA website at [www.pca.state.mn.us](http://www.pca.state.mn.us). Updates are posted periodically.



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# Appendix



### The 106 Closed Landfills FY97 Financial Summary

Landfill Name	Classification & Size	MPCA Salary & Expenses	AG Salary	Operation & Maintenance	Construction Other than Road	Construction Road Fund	Landfill / Misc Total
Adams	D/0	\$1,878	\$0	\$3,348			\$5,226
Aitkin Area	B/27	\$1,677	\$37	\$6,629			\$8,343
Albert Lea	D/25	\$2,788	\$1,575	\$13,540			\$17,903
Anderson / Sebeka	B/7	\$1,210	\$0	\$4,097			\$5,307
Anoka / Ramsey	D/24	\$6,248	\$6,702	\$1,330			\$14,280
Barnesville	C/1	\$717	\$0	\$3,095			\$3,812
Battle Lake	B/19	\$13,195	\$1,128	\$11,274		\$27,365	\$52,962
Becker Co.	A/29	\$19,109	\$583	\$20,041		\$211,892	\$251,625
Benson	D/3	\$994	\$0	\$10,884			\$11,878
Big Stone Co.	C/22	\$3,514	\$50	\$23,605			\$27,169
Brookston	C/2	\$1,022	\$0	\$5,721			\$6,743
Bueckers 1	D/4	\$2,561	\$1,717	\$12,965		\$9,003	\$26,246
Bueckers 2	D/0	\$203	\$0	\$0			\$203
Carlton Co. S	B/10	\$1,348	\$0	\$4,467			\$5,815
Carlton Co. 2	D/5	\$1,742	\$229	\$7,565			\$9,536
Cass Co. (L-R)	D/5	\$1,302	\$143	\$3,632			\$5,077
Cass Co. (W-H)	D/2	\$513	\$0	\$3,828			\$4,341
Chippewa Co.	D/38	\$3,205	\$81	\$14,882			\$18,168
Cook	C/4	\$997	\$0	\$7,441			\$8,438
Cotton	B/4	\$1,207	\$0	\$5,785			\$6,992
Crosby	B/16	\$17,949	\$713	\$16,053		\$379,981	\$414,696
Crosby-American	D/25	\$6,727	\$2,840	\$24,269			\$33,836
Daknuc	D/8	\$3,361	\$750	\$21,976			\$26,087
Dodge Co.	D/30	\$3,161	\$180	\$0			\$3,341
East Bethel	D/35	\$8,459	\$707	\$233,581			\$242,747
East Mesaba	D/18	\$3,050	\$205	\$18,155			\$21,410
Eighty Acre	B/15	\$611	\$0	\$5,648			\$6,259
Faribault Co.	B/43	\$2,749	\$0	\$17,874			\$20,623
Fifty Lakes	B/7	\$1,521	\$744	\$5,486			\$7,751
Floodwood	C/5	\$577	\$0	\$5,569			\$6,146
Flying Cloud	C/12	\$7,872	\$19,468	\$0			\$27,340
Freeway	B/100	\$8,810	\$2,592	\$0	\$900		\$12,302
French Lake	D/3	\$9,723	\$211	\$16,585		\$575,034	\$601,553
Geislars	B/7	\$643	\$112	\$4,161			\$4,916
Gofer	C/17	\$1,954	\$756	\$14,281			\$16,991
Goodhue Coop	C/11	\$605	\$0	\$5,082			\$5,687
Grand Rapids	D/5	\$3,864	\$329	\$17,330			\$21,523
Greenbush	B/5	\$2,245	\$0	\$16	\$24,469		\$26,730
Hansen	C/14	\$1,317	\$0	\$12,017			\$13,334
Hibbing	D/7	\$5,097	\$0	\$39,441			\$44,538
Hickory Grove	C/3	\$587	\$0	\$4,556			\$5,143
Highway 77	C/2	\$746	\$0	\$6,259			\$7,005
Hopkins	B/8	\$12,120	\$3,844	\$80,890		\$219,948	\$316,802



Landfill Name	Classification & Score	MPCA Salary & Expenses	AG Salary	Operation & Maintenance	Construction Other than Road	Construction Road Fund	Landfill / Site Total
Houston Co.	B/29	\$9,244	\$1,128	\$10,209	\$10,866		\$31,447
Hoyt Lakes	C/3	\$651	\$0	\$5,547			\$6,198
Hudson	C/5	\$749	\$0	\$6,084			\$6,833
Iron Range	C/4	\$1,547	\$0	\$5,076			\$6,623
Ironwood	C/14	\$6,258	\$5,078	\$12,484			\$23,820
Isanti-Chisago	D/11	\$14,063	\$19	\$76,897			\$90,979
Jackson Co.	C/6	\$757	\$0	\$7,163			\$7,920
Johnson Bros.	C/11	\$721	\$0	\$11,144			\$11,865
Karlstad	C/4	\$1,170	\$0	\$9,028			\$10,198
Killian	B/5	\$1,483	\$0	\$6,680			\$8,163
Kluver	B/15	\$1,991	\$0	\$13,771			\$15,762
Koochiching	B/24	\$5,007	\$1,928	\$2,028			\$8,963
Korf Bros.	B/21	\$18,248	\$431	\$8,554	\$2,031,541		\$2,058,774
Kummer	B/16	\$18,586	\$217	\$21,257	\$155,266		\$195,326
LaGrande	C/6	\$1,569	\$1,042	\$10,256			\$12,867
Lake County	C/15	\$2,062	\$198	\$0			\$2,260
Lake Of Wood	C/8	\$1,927	\$0	\$8,819			\$10,746
Land Investors	C/5	\$10,414	\$1,277	\$9,828		\$225,336	\$246,855
Leech Lake	B/19	\$10,311	\$1,358	\$7,525		\$37,465	\$56,659
Lincoln Co.	D/2	\$7,918	\$0	\$3,336		\$258,177	\$269,431
Lindala	B/35	\$16,897	\$7,393	\$81,704	\$68,696		\$174,690
Lindenfelser	B/19	\$1,052	\$595	\$8,782			\$10,429
Long Prairie	D/7	\$1,378	\$0	\$5,780			\$7,158
Louisville	B/40	\$2,141	\$248	\$0			\$2,389
Mahnomen Co.	C/10	\$1,078	\$0	\$7,077			\$8,155
Mankato	B/32	\$13,291	\$0	\$9,597		\$26,155	\$49,043
Maple	D/28	\$763	\$0	\$0			\$763
McKinley	C/4	\$704	\$316	\$3,638			\$4,658
Meeker Co.	C/13	\$2,175	\$31	\$27,157			\$29,363
Mille Lacs Co.	B/12	\$290	\$180	\$4,131			\$4,601
MN Sanitation	B/20	\$116	\$0	\$2,748			\$2,864
Murray Co.	C/103	\$1,216	\$0	\$10,025			\$11,241
Northome	D/3	\$981	\$124	\$0			\$1,105
Northwest Angle	B/2	\$924	\$0	\$4,592			\$5,516
Northwoods	B/9	\$3,652	\$0	\$9,770			\$13,422
Oak Grove	D/13	\$22,272	\$9,443	\$60,687	\$342,870		\$435,272
Olmsted Co.	C/13	\$7,220	\$304	\$47,972			\$55,496
Orr	B/5	\$222	\$0	\$0			\$222
Paynesville	D/7	\$9,860	\$1,755	\$12,750		\$758,334	\$782,699
Pickett	B/3	\$8,043	\$459	\$15,841		\$461,157	\$485,500
Pine Lane	B/20	\$2,172	\$713	\$8,350			\$11,235
Pipestone Co	C/8	\$11,292	\$5,505	\$8,685			\$25,482
Portage Mod.	D/0	\$12	\$0	\$0			\$12



Landfill Name	Classification & Score	MPCA Salary & Expenses	AG Salary	Operation & Maintenance	Construction Other than Bond	Construction Bond Fund	Landfill / Site Total
Red Rock	D/88	\$24,987	\$1,240	\$26,682	\$67,040	\$3,107,688	\$3,227,637
Redwood Co	C/8	\$3,646	\$0	\$28,632			\$32,278
Rock Co.	C/16	\$2,494	\$105	\$6,947			\$9,546
St. Augusta	B/22	\$28,997	\$7,285	\$20,319		\$852,272	\$908,873
Salol / Roseau	B/26	\$2,847	\$25	\$0			\$2,872
Sauk Center	C/8	\$1,795	\$0	\$15,048			\$16,843
Sibley Co.	C/7	\$1,021	\$0	\$20,420			\$21,441
Stevens Co.	B/30	\$1,062	\$161	\$7,343			\$8,566
Sun Prairie	D/22	\$1,192	\$434	\$0			\$1,626
Tellijohn	B/34	\$1,730	\$1,060	\$1,680			\$4,470
Vermillion Dam	D/0	\$12	\$0	\$0			\$12
Vermillion Mod.	C/3	\$712	\$0	\$7,129			\$7,841
Wabasha Co.	B/14	\$4,110	\$2,313	\$0			\$6,423
Wadena	B/25	\$24,976	\$2,697	\$4,673		\$995,923	\$1,028,269
Waseca Co.	D/10	\$2,965	\$19	\$30,637			\$33,621
Washington Co.	D/5	\$24,797	\$372	\$87,566		\$2,122,269	\$2,235,004
WDE	B/117	\$17,714	\$2,554	\$414,224	\$11,527		\$446,019
Watsonwan Co.	C/50	\$936	\$211	\$4,488			\$5,635
Woodlake	C/8	\$3,183	\$0	\$0			\$3,183
Yellow Medicine	C/2	\$4,606	\$0	\$7,462	\$17,279		\$29,347
<b>FY97 TOTALS</b>		<b>\$545,387</b>	<b>\$103,914</b>	<b>\$1,961,580</b>	<b>\$2,730,454</b>	<b>\$10,267,999</b>	<b>\$15,609,334</b>

General administrative, legal, reimbursement and miscellaneous bond costs are not included in this Appendix because they are not site specific.

O&M consists of the following:

1. Electric
2. MCES discharge fees
3. Local discharge fees
4. Snow plowing
5. Groundwater sampling & analytical
6. Waste sampling & analytical
7. Surveying
8. Abstracts
9. Drilling
10. Mowing
11. Phone
12. On-site security systems



Landfill Report 1997

Minnesota Pollution Control Agency