



Minnesota Closed Landfill Program

**2002 ANNUAL REPORT TO THE
MINNESOTA STATE LEGISLATURE**



Minnesota Pollution Control Agency

December 2002

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Minnesota Closed Landfill Program

Executive Summary

1994 Landfill Cleanup Act (Act) created Minnesota's Closed Landfill Program (CLP). The CLP is an alternative to Superfund for closed landfills and the first program of its kind in the nation.

The Act (Minn. Stat. § 115B.412, subd. 10) requires the Minnesota Pollution Control Agency (MPCA) 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 2002 (FY02), which was from July 1, 2001, to June 30, 2002.

Program Overview

The MPCA is authorized under the Act to initiate cleanup actions, complete closures, take over long-term operation and maintenance, and reimburse eligible parties for past cleanup costs at 106 qualified closed state-permitted landfills. Before the landfills are accepted into the CLP, the requirements of a Binding Agreement (BA) must be met.

In 2000, the legislature enacted amendments to the Act which changed CLP entry qualifications to allow for additional landfills to enter the CLP. Based on these legislative changes, MPCA staff anticipates that two or three additional landfills will enter the CLP in FY03. Through June 30, 2002, 106 landfills have signed a BA and 105 have received a Notice of Compliance (NOC), the final administrative step before the state typically takes over landfill operations and maintenance.



Achievements 2002

The CLP is in its eighth year and a significant amount of construction activity has taken place. The goal of the CLP is to bring each landfill in the program up to standards which should be protective of public health and the environment. The CLP is over half way toward reaching that goal. During FY02 the following accomplishments were realized:

- 14 construction projects underway/completed;
- 6 percent further reduction to date in the total amount of leachate that can be controlled flowing to ground water due to the placement of adequate covers;
- 2 percent more of the landfill gas generated by CLP landfills that was economically feasible to be captured, was destroyed prior to being released into the atmosphere;
- 2 Binding Agreements signed; and
- 3 Notices of Compliance issued.

Program Accomplishments

The following list summarizes accomplishments from the establishment of the CLP through FY02:

- 106 Binding Agreements signed;
- 105 Notices of Compliance issued;
- All reimbursements to landfill owners/operators and responsible parties have been completed totaling \$37,883,128;
- Environmental Protection Agency (EPA) reimbursements have been completed totaling \$4,006,550;
- 54 construction projects underway/completed;
- 70.3 percent total reduction in the amount of controllable leachate flowing to ground water due to the placement of adequate covers; and
- 52.1 percent of the landfill gas generated by CLP landfills that was economically feasible to be captured, was destroyed prior to being released into the atmosphere.

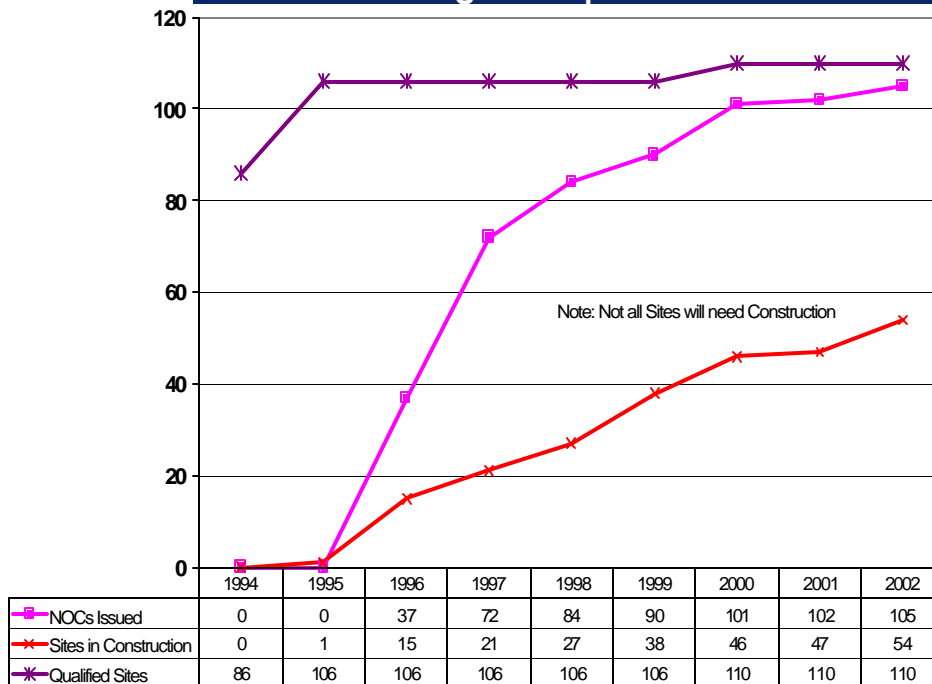
Graph 1 below shows the progress achieved in the CLP over the past eight years. Over the past eight years of the program, construction has been completed at 54 eligible sites. MPCA estimates that 33 additional landfills in the program may need construction of a cover, leachate collection, gas extraction, and/or monitoring systems.

Funding

Funding for the Program continues to come from four sources of revenue:

- The Solid Waste Management Tax (SWMT) and associated fees (which also fund other ground water and solid-waste-related activities);
- General obligation bonds;
- Funds transferred from financial assurance accounts of closed landfills entering the program; and
- Settlements from landfill-related insurance coverage.

**Graph 1: Closed Landfill Program
Cumulative Progress Report**



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During the 2002 legislative session, several changes were debated that bore upon sources of funding for the CLP. MPCA monitored these closely. By the end of the session, the MPCA's position was that, considering the changes made, sufficient funding remained available for the CLP as well as other biennial appropriations for certain MPCA environmental programs.

Solid Waste Management Tax and Associated Fees

Half the revenues from the Solid Waste Management Tax (SWMT) now go to the Solid Waste Fund. The tax is composed of a 9.75 percent charge on residential-waste- collection bills; a 17 percent charge on commercial-municipal- waste-collection bills; and 60 cents per cubic yard of container capacity on industrial, demolition/construction and medical waste. Half of the SWMT and solid waste assessment (as it was called prior to January 1, 1998) collections going into the Solid Waste Fund in FY02 totaled \$27,739,341.

Bond Dollars

The original legislative authorization was for \$90 million in 1994. These monies are to be used for construction of remedial systems at publicly owned closed landfills. However, Minn. Stat. 16A.642 revokes all state bonding authorizations more than four years old, regardless of program need or original legislative intent. This resulted in approximately \$56 million of bonding authority being canceled. In 2001, the Legislature re-authorized \$20.5 million and in the 2002 legislative session, the Legislature authorized an additional \$10 million in general obligation bonds. At the present time, the total amount of bond authorization is about \$64 million. It is anticipated that the MPCA will be working with the Legislature in 2004 for re-authorization of the balance (about \$26 million) of the original \$90 million.

Financial Assurance

No financial assurance was received from any landfill owners or operators in FY02 since none of the sites entering the Program in FY02 had financial assurance balances to give to the State. Since the inception of the CLP, the owners or operators of 22 landfills have submitted a total of \$9,832,368 for deposit in the Solid Waste Fund.

As identified in Appendix A and per state statutes, a total of \$5,715,197 financial assurance dollars have been spent on site operations and maintenance (O&M) and non-bond dollar, construction-related contractual activities.



During the 2002 legislative session, several changes were debated that bore upon sources of funding for the Closed Landfill Program.



Landfill Gas and Global Climate Change

As organic waste degrades in old landfills, it creates landfill gas. It contains greenhouse gases, including methane (a greenhouse gas 21 times more potent than carbon dioxide) and volatile organic compounds.

In 2001, active landfill gas extraction systems removed and destroyed an estimated 32 million pounds of methane from CLP landfills, as well as 336,000 in other organic compounds. According to MPCA staff, this amounts to a 15 percent decrease in methane over approximately 10 years.

Active gas extraction systems will begin operation at six additional CLP landfills in 2003.

Insurance Recovery

In FY02, the State entered settlements with seven insurance carriers resulting in the payment of \$6.8 million by settling insurance carriers into the Solid Waste Fund. Through FY02, a total of approximately \$33.1 million has been paid into the Solid Waste Fund from settlements entered into pursuant to the Insurance Recovery Effort.

Expenditures

General CLP Expenditures

CLP expenditures are primarily for design, construction, operation and maintenance of landfills, reimbursements and administration (see Table 1 on page 7). It is important to note that design/construction expenditures in FY02 were almost five times more than last year, resulting in the completion (or near completion) of several large construction projects.

Operations and maintenance costs increased, attributable in part to additional sites with remediation systems moving into the operation and maintenance phase following construction completion and purchase of adjacent properties.

Insurance Recovery Effort

Background

The Landfill Cleanup Act authorizes the MPCA and the Attorney General's Office to seek to recover a fair share of the State's landfill cleanup costs from insurance carriers based upon insurance policies issued to responsible persons who are liable for cleanup costs under the State Superfund Law. This would include insurance policyholders that owned or operated the landfills, hauled waste containing hazardous substances to the landfills, or arranged for the disposal of waste containing hazardous substances at the landfills. Under the Act, the MPCA and Attorney General may negotiate coverage settlements directly with insurance carriers. If a carrier has had an opportunity to settle with the State and fails to do so, the State may sue the carrier directly to recover cleanup costs to the extent of the insurance coverage issued to the responsible persons.

FY02 Activities

In FY02, the state continued to pursue litigation that was commenced by the State in Hennepin County District Court in February 2000. The State is

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Table 1: FY02 Closed Landfill Program Expenditures

Expenditures	FY02	Cumulative
Closed Landfill Program Administration*	\$ 1,270,845	\$ 10,680,096
Design and Construction (1)**	\$11,061,779	\$ 61,912,499
Operation and Maintenance	\$ 5,168,085	\$ 18,411,286
Attorney General CLP Legal Counsel	\$ 163,677	\$ 1,953,508
Insurance Recovery (MPCA & AG)	\$ 290,340	\$ 3,235,695
EPA Reimbursement	\$ 1,538,283	\$ 4,006,550
Responsible Party Reimbursements	\$ 0	\$ 37,883,128
Total	\$ 19,493,008	\$138,082,761

Expenditure information is based on MAPS data dated 9/7/02.

(1) These activities include both bond and non-bond expenditures.

* Does not include administrative support costs associated with program implementation.

** \$163,200 was spent on a disputed claim from FY98.

represented in this case by Covington & Burling, Special Attorneys appointed by the Attorney General for the landfill insurance recovery effort. The lawsuit seeks to recover the State's environmental response costs for two (2) landfills located in Anoka County (the Oak Grove and East Bethel Landfills), which were the subject of earlier settlement offers by the State. In June 2001, the court denied summary judgment to the insurance carriers on a number of constitutional challenges to the Landfill Cleanup Act (LCA) including claims under the United States and Minnesota Constitutions for impairment of contract, violation of equal protection of the laws, interference with interstate commerce, and preemption by the federal Superfund law. The court found that the carriers had not shown sufficient facts to support their impairment of contract and interstate commerce claims, and held against the carriers as a matter of law on their other constitutional claims.

As of September 2001, all but four (4) of the 17 insurance carriers that the State sued in the coverage lawsuit had entered global settlements with the State in which they settled all of their liability under the LCA. On September 5, 2001, the court granted a motion by the four remaining carriers (Employers Insurance of Wausau, Home Insurance Company, and

two affiliates of Travelers Insurance [Travelers Casualty & Surety Company and Travelers Indemnity Company]) and dismissed the State's coverage lawsuit on the grounds that the State's claims were time-barred under the statutes of limitation applicable to recovery of environmental response costs under the State Superfund Law (MERLA) and the LCA. The State appealed the statute of limitations decision to the Minnesota Court of Appeals, and the insurance carriers cross-appealed from the denial of their summary judgment motions challenging the constitutionality of the LCA.



Design/
construction
expenditures in
FY02 were
almost five
times more
than last year.



In June 2001, the court denied summary judgment to the insurance carriers on a number of constitutional challenges to the Landfill Cleanup Act

On May 24, 2002, the Court of Appeals issued a decision reversing the trial court and holding in favor of the State on the statute of limitation issue. In addition, the Court of Appeals affirmed the trial court's decision rejecting the carriers' constitutional challenges. On August 6, 2002, the Minnesota Supreme Court denied the carriers' petition for review of the Court of Appeals decision, thus sending the coverage lawsuit back to the trial court.

The State issued two new global settlement offers in FY02 to other insurance carriers who are not defendants in the coverage lawsuit. The State reached global settlements with a total of seven insurance carriers in FY02, including both defendants and non-defendants, resulting in a deposit of a total of \$6,775,919 in the Solid Waste Fund in FY02. Settlements are negotiated by the State's

Special Attorneys, subject to the approval of the Attorney General and the Commissioner of the MPCA.

Future Activities

The State will continue to pursue the coverage litigation in Hennepin County District Court against the carriers that have not yet settled. At the time of the drafting of this report, one additional carrier defendant (Home Insurance) had settled with the State, leaving only Employers Insurance of Wausau and two affiliates of Travelers Insurance as defendants in the lawsuit. The lawsuit is, at present, set for trial beginning in April 2003.

The State continues to negotiate settlements with other carriers who have been issued global settlement offers, and expects to achieve additional settlements in FY03. The State retains the right to commence litigation against these carriers if they fail to settle.

Natural Resource Damages

Under the LCA, insurance carriers may request that the State's claims for natural resource damages (NRD) at any of the landfills in the CLP be included in settlements with the State. NRD payments received in FY 02 as a result of settlements amounted to \$648,049. Total NRD settlements received through June 30, 2002 equal \$3,545,279.

The MPCA and the Minnesota Department of Natural Resources (DNR) are the State's co-trustees regarding the State's NRD claims. It is the DNR Commissioner's responsibility to rehabilitate, restore or acquire natural resources to remedy injuries or losses to natural resources resulting from a release of a hazardous substance. The DNR must, however, provide written notice to the legislature on how it plans to spend this money.

All money recovered by the State for NRD must be credited to the environmental response, compensation, and compliance account (MERLA account) pursuant to Minn. Stat. § 115B.20, Subd. 1, where it becomes available to the DNR to carry out

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its restoration duties. However, since all proceeds from settlements with insurance carriers, including those for NRD, are deposited into the Solid Waste Fund (Minn. Stat. § 115B.445), the NRD payments must be transferred to the MERLA account to be made available to the DNR. NRD recoveries totaling \$2,310,903 were transferred in FY02. The remainder of NRD recoveries paid to the State up through June 30, 2002 will be transferred in FY03.

Information Dissemination

The MPCA continues to include information concerning the insurance recovery effort on its Internet site at www.pca.state.mn.us/cleanup/landfill-closed.html.

This allows for information to be reviewed quickly by various interested parties, including insurance carriers from around the world, consultants, attorneys and the general public.

The MPCA is convinced that the dissemination of information is critical to enabling the business community to realize the benefits the LCA provides them when they provide complete disposal and insurance policy information. The dissemination of information also keeps insurance carriers informed of activities conducted by the MPCA and the Attorney General's Office.



The State reached global settlements with a total of seven insurance carriers in FY02.

Program Activities

Binding Agreements/Notices of Compliance

Through June 30, 2002, the Program has successfully signed 106 BAs and issued 105 NOC. However, the Freeway Landfill BA is not fully in effect, pending the resolution of several actions. Northeast Otter Tail, Cook County, and WLSSD landfills are all expected to enter the program some time in FY03. Table 2 below indicates those landfills which had documents executed during FY02.

Table 2: FY02 Binding Agreements/ Notices of Compliance

Landfill	Binding Agreement	Notice of Compliance
Pine Lane	Dec-01	Apr-02
Ironwood	Jan-01	Sep-01
Johnson Bros.	Jun-02	Jun-02
FY02 Totals	2	3

FY02 CLP Design, Oversight and Construction Activity

Table 3 on the following page is a summary of CLP design, oversight and construction activity for FY02. Note the definitions below for each landfill class designation. The definitions indicate the potential health/environmental risks associated with the sites.

- Class A: Immediate public health and/or environmental concerns
- Class B: Pose no immediate public health and/or environmental threat, but require remediation to control gas migration, ground water contamination, and/or correct severely inadequate or nonexistent cover
- Class C: Pose no immediate public health and/or environmental threat, but lack a cover that meets current MPCA standards.
- Class D: Pose no threat to public health or the environment and, in most cases, meeting current standards for closure.

Table 3: FY02 CLP Design, Oversight, and Construction Activity*

Landfill	Class	Landfill Construction Activities	Design, Oversight, and Construction Costs	Construction Completion Date
Albert Lea	B	Design active gas extraction system and cover settlement repairs.	\$23,191.84	
Anoka/Ramsey	B	Modifications to the ground water treatment system - force main project.	\$36,186.16	Jun-02
Becker County	A	Complete ground water treatment system design and begin construction in FY03.	\$77,631.33	
Big Stone County	D	Complete cover system upgrade/re-grade and improve various other LF features.	\$77,439.80	Sep-01
Cotton	D	Construction of a new cover system with liner and passive gas vents.	\$425,465.98	May-02
Eighty Acres	B	Complete the design of a cover system.	\$39,465.68	
Grand Rapids	B	Design active gas extraction system and complete ground water investigation.	\$10,438.28	
Hopkins	A	Installation of parameter fencing.	\$797.30	Oct-01
Ironwood	B	Design new cover and pump out system upgrade.	\$71,638.33	
Kluver	B	Complete enhanced gas system collection investigation.	\$10,760.19	
Kummer	B	Construction of gas monitoring points and monitoring well.	\$11,362.10	May-02
Leech Lake	B	Complete gas and erosion control system designs. Begin construction in FY03.	\$5,655.38	
Lindenfelser	B	Ongoing construction of cover and active gas extraction system.	\$2,618,180.29	
Louisville	B	Ongoing construction of cover and active gas extraction system.	\$4,212,822.06	
Murray County	D	Complete cover system upgrade/re-grade and improve various other LF features.	\$376,879.77	Nov-01
Oak Grove	B	Design an active gas extraction system	\$211,389.42	
Pickett	B	Construction of gas monitoring points.	\$5,081.22	Jun-02
Pine Lane	A	Design an active gas extraction system	\$50,694.30	
Rock County	C	Complete design of cover and gas venting system; begin construction 6/15/02.	\$18,588.51	
St. Augusta	B	Design an active gas extraction system.	\$33,225.70	
Tellijohn	B	Ongoing installation of an active gas extraction system.	\$150,679.68	
Vermillion Modified	D	Completion of new cover and leachate control improvements.	\$7,780.16	May-02
Waseca County	B	Oversight of contamination source identification study.	\$51,449.06	
Washington County	D	Design a cascade system.	\$13,789.54	
Watowan County	D	Construction of a cover and active gas extraction system.	\$2,375,470.70	
Woodlake	C	Cover/gas upgrade investigation.	\$87,629.83	
Yellow Medicine County	D	Complete cover system upgrade/re-grade and improve various other LF features.	\$58,086.01	Aug-01
TOTALS			\$ 11,061,778.62	9

*The costs shown in this Table are for invoices paid in FY02 and not total project costs.

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Priority List Rescoring

According to the Landfill Cleanup Act, “[t]he commissioner shall establish a priority list for preventing or responding to releases of hazardous substances, pollutants and contaminants, or decomposition gases at qualified facilities. The commissioner shall periodically revise the list to reflect changing conditions at facilities that affect priority for response actions.” Table 4 lists the sites with revised classifications and scores in FY02. The classification and score for each landfill in the CLP can be found in the FY02 Financial Summary (see Appendix B).

Table 5 illustrates how CLP activities have resulted in an overall reduction in relative risk to human health and the environment over the past eight years. Sites with an “A” classification should represent the highest risk to public health and the environment. As those risks are reduced through remediation and/or developing a better understanding of the site using more comprehensive and accurate data, the sites should be rescored into lower classifications which more accurately reflect their potential risks to the public.

Table 4: FY02 Rescored Landfills

Site Name	Class/Score	Revised Class/Score	Comments
Aitkin County	B/27	D/26	Monitoring data indicated a need for a classification and score reduction
Cotton	B/4	D/5	Construction remedy completed
Chippewa County	D/38	D/11	Monitoring data indicated a need for a score reduction
Murray County	C/103	D/105	Construction remedy completed
Sauk Centre	C/8	B/22	Monitoring data indicates need for remediation
WDE	D/117	D/123	Ground water contamination
Watsonwan County	C/50	D/6	Construction remedy completed
Yellow Medicine County	C/2	D/20	Construction remedy completed

In FY02, the Sauk Centre Landfill was reclassified to a higher priority due to development of adjacent property and the installation of a high capacity well. Both of these actions increase the potential for human exposure to landfill contaminants and are reflected in a higher classification and score. Various public health and/or environmental issues, such as landfill gas concerns and potential contaminant migration will continually reoccur. This means some landfills may need to be reclassified upward in the future to address these concerns.

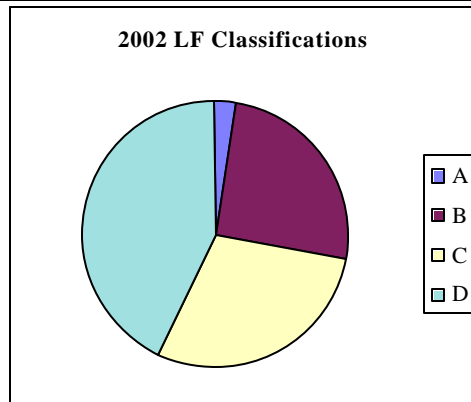
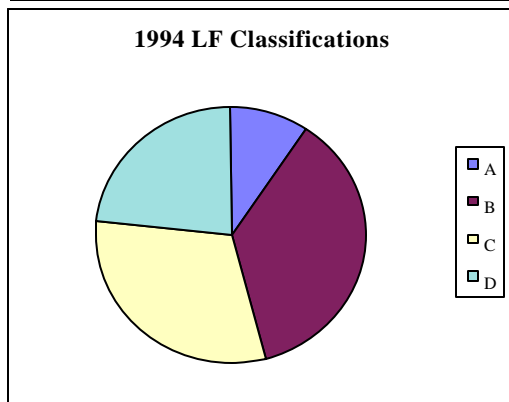
Five landfills were downgraded to a lower classification based on remedy construction being either completed or substantially completed or because monitoring data indicated a need for a classification and/or score reduction. One landfill remained in the same classification, but was rescored to a lower score because monitoring results warranted such a change. A significant number of sites should be reclassified lower based on anticipated construction work completion in FY03.

The CLP has significantly decreased the relative risk at many landfills in the program. Sites with an “A” or “B” classification are considered to have the highest potential public health or environmental risk. In 1994, almost half of the landfills in the CLP were classified as either “A” or “B” sites. By the end of FY02, that number had decreased to about a quarter of the sites and the number of eligible sites has increased from 94 up to 107.

The number of sites classified in the lowest risk class “D” has increased from less than 25 percent in 1994 to almost 50 percent in 2002. Landfills in the two lowest risk classes have increased from a little over 50 percent to almost 75 percent. These shifts reflect the improvements, modifications and maintenance that have made the landfills safer and less environmentally damaging as a result of MPCA efforts during the past eight years.

Table 5: Annual Changes to the Closed Landfill Priority List

Classification	1994	1995	1996	1997	1998	1999	2000	2001	2002
A	9	9	9	1	2	3	4	3	3
B	34	39	38	38	35	33	25	28	27
C	29	34	34	36	34	34	34	35	31
D	22	24	25	31	35	36	43	41	46
Total Landfills	94	106	106	106	106	106	106	107	107



Deletion of Qualified Landfills from the National Priorities List (NPL), Permanent List of Priorities (PLP)

The EPA, under an agreement with the MPCA, has removed eight closed landfills from the NPL (Federal Superfund List). Only one closed landfill, Freeway, remains on the NPL. A Binding Agreement was signed for this site during FY01, but is not currently in effect due to pending development of an amphitheater at the landfill. Before the Freeway Landfill is eligible to be delisted from the NPL, it must first receive a NOC.

Since its inception, the programmatic responsibility for remediation and control of 47 landfills has been transferred from the State Superfund program to the CLP for negotiations of a BA, issuance of a NOC, site investigations, design work, construction, and finally movement into the O&M phase. Once all of that work has been completed, they are cleared for the removal from the PLP (State Superfund List). Ironwood and Pine Lane Landfills were “qualified

landfills” delisted from the PLP in FY02. At the close of FY02, only three CLP qualified landfills remained on the PLP: Freeway, Killian, and Western Lake Superior Sanitary District.

Site Annual Reports

Every year, the MPCA site teams (comprised of an assigned project leader, an engineer, a hydrologist and an on-site inspector) prepare an annual report for each landfill in the CLP. The annual report is divided into three major sections:

- Site Background contains basic information on the landfill;
- Site Engineering Summary discusses cover maintenance/construction, leachate management and monitoring, and landfill gas management and monitoring; and
- Site Environmental Monitoring Summary discusses ground water monitoring, surface water monitoring and ground water remediation system management and maintenance.

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The purpose of the landfill-specific annual report is to reflect current staff assignments, to describe landfill reclassification/rescoring up or down in priority, and to summarize recommendations for the future. These landfill reports are provided to local government groups and private property owners for their information and pursuant to state law. The site annual reports for landfills located in the Metro area also are available on the MPCA's web site at www.pca.state.mn.us/cleanup/landfill-closed.html. Some Greater Minnesota site annual reports were also added to the Web site during FY02.

State Ownership of Landfills and Adjacent Property

The MPCA has accepted ownership of 26 landfills across the State as part of the site's entry into the CLP. This has been done in those cases where State ownership provided the best method of controlling access, managing the facility and providing the greatest possible environmental and health safety for the citizens living near the facility. In addition, as a part of providing for adequate human health and safety, adjacent property was acquired at several landfills in FY02. For a detailed accounting of all state-owned landfills and adjacent property, refer to Appendix C at the end of this report.

Environmental Indicators

The CLP has begun using environmental indicators to help evaluate the program and measure the progress being made. The two media most affected by discharges from landfills are ground water and air. The CLP is using environmental indicators as a measure of improvement to the environment. One of those measures is the reduction of leachate generated and discharged into the ground water. The other measure is the reduction in the volume of landfill gas that is escaping to the air. Both leachate and landfill gas have the potential to cause significant risk to public health and environmental damage.

The CLP is tracking each year how well the program is doing at reducing, to the extent possible, the

generation of leachate for landfills in the program. Totally eliminating leachate generation is impossible given current technology, knowledge and economics. However, several things can be done to reduce the amount of leachate each landfill generates. Installing better covers, installing leachate extraction systems, and improving ground water monitoring are some of the remedies staff can use to minimize and understand the potential damage leachate can cause to the State's ground water.

Similarly, the total elimination of landfill gas escaping to the environment is not currently feasible. However, by installing active gas extraction systems at larger sites, significant reductions in landfill gas emissions can be achieved. The benefits of these systems are described in greater detail in the "Emerging Issues: Landfill Gas to Energy" section on page 16.

Environmental Data Management System (EDMS) Database

The Environmental Data Management System (EDMS) is a database designed to store relevant data for all of the landfills currently in an active status in the CLP. The EDMS is designed specifically for the CLP. Development of EDMS became crucial due to the enormous volume of data coming into the staff and the need to insure the integrity of the massive volume of environmental monitoring data.

In addition to all of the data MPCA staff originally had on each of the landfills in the CLP when they come into the program, data are continuously being collected to monitor various aspects of each landfill and its impacts on the environment. Many landfills are monitored on a quarterly basis to assess potential ground water impacts, check for gas generation and composition, possible surface water impacts, and at a few LFs adjacent wells may be monitored for possible LF impacts. All of these data must be collected from various contractors, made available to the site team, analyzed, and then stored for future use.

The system is also linked to a common geographic software package called ArcView so that Geographic Information System (GIS) projects can be viewed for all features on and surrounding the landfill including, but not limited to, appurtenances, landfill boundaries and roads. Queries of EDMS can be performed to produce Discharge Reports, DNR water use reports, trend reports, plume maps and to gather other needed information for each site Annual Reports.

Program Contracts

Land Management Plans

The Landfill Cleanup Act (LCA) requires the MPCA to develop a Land Management Plan for each landfill in the CLP. The LCA also requires local governments to make their local land-use plans consistent with the plan developed by the MPCA. The purpose of each Land Management Plan is to:

- Protect the integrity of the landfill's remediation systems;
- Protect human health and the environment at, and in the vicinity of, the landfill;
- Ensure that the cleanup and future operation and maintenance of the remediation systems at the landfills are successful; and
- Accommodate local government needs and desires for use of land where health and safety requirements can be met.

This can be accomplished not only through the State's cleanup efforts but also through the adoption and implementation of a site-specific Land Management Plan through local zoning and other land-use measures consistent with public health and safety needs.

During FY02, the MPCA, with assistance from the Metropolitan Council, sent out a Request for Proposal and subsequently selected two contractors to develop pilot Land Management Plans - one for the Dakhue Landfill in Dakota County and the other for the WDE Landfill in Anoka County.

The pilot projects will allow the MPCA to test and possibly modify the process by which future Land Management Plans will be developed and to ensure that an effective product is created. The MPCA anticipates developing a subsequent Request for Proposal in FY04 to select contractors to develop Land Management Plans at the remaining qualified facilities.

Other Contracts and Property Purchases

Once the MPCA issues a NOC at a site, all operation and maintenance activities become the state's responsibility. The MPCA enters into contracts to provide various services needed for general maintenance, to address technical issues or problems that may arise, such as well drilling, spills, sample collection, monitoring and analytical work. The purchase of adjacent property also falls into this category because it is considered an O&M activity.

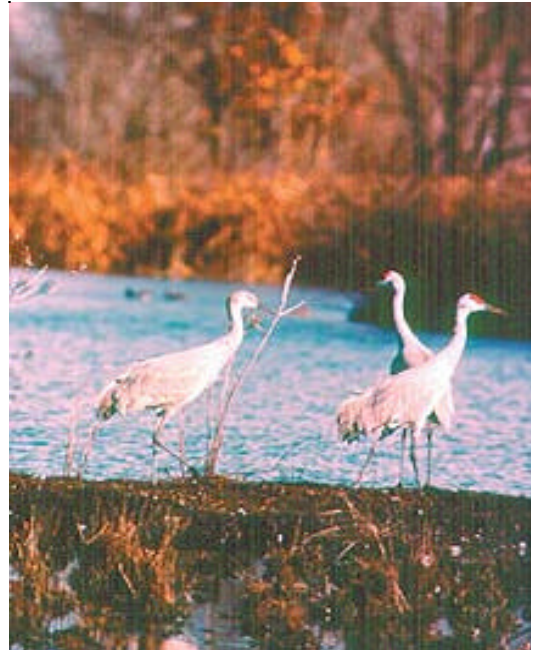
In FY02, the CLP spent \$1,388,660 to acquire property at or adjacent to the Anoka/Ramsey and Pine Lane landfills. The state also received at no cost a 5.5 acres parcel at the WDE Landfill. In FY02, a total of approximately \$5.2 million dollars were spent on contracts and property purchases.

Looking Ahead to FY03

Proposed New Projects

MPCA staff anticipate the CLP will have design and/or construction projects started or completed at the following landfills during FY03:

- Albert Lea: Design and complete repairs to major settlement area. Design and begin construction of an active gas extraction system.
- Becker Co: Complete installation of a ground water remediation system.
- Dakhue: Design active gas extraction system.
- Eighty Acre: Complete installation of a new cover system.
- Faribault Co, Minnesota Sanitation, and Red Rock: Complete design and construction of repairs to address settlement and erosion problems.
- Grand Rapids: Complete installation of an active gas extraction system.
- Ironwood: Complete construction of a new cover system, gas control system and upgrade the ground water pump out system.
- Kluver: Purchase land around the Landfill or install an active gas extraction system.
- Koochiching Co.: Begin installation of cover and active gas extraction system with completion in FY04.
- Leech Lake: Expand a passive gas venting system.
- Lindenfelser: Complete construction on a cover and an active gas extraction system.
- Louisville: Complete construction on a cover and an active gas extraction system.
- Oak Grove: Complete construction of an active gas extraction system.
- Olmsted: Complete design of active gas extraction system and upgrade cover system.
- Pine Lane: Begin construction of an active gas extraction system.
- Pipestone Co.: Design and complete drainage improvements; fencing/access controls.
- Redwood Co.: Complete design and begin construction of a cover system to current standards.
- Rock Co: Complete construction of a cover and passive gas venting system.



The Land Management Plan for the East Bethel Landfill calls for the closed landfill to become part of the Sandhill Crane Natural Area, consisting of 530 acres in Anoka County.

- Sauk Centre: Complete design and begin installation of a new cover system with completion in FY04.
- St. Augusta: Complete the installation of an active gas extraction system.
- Tellijohn: Complete construction of an expanded active gas extraction system.
- Waseca Co: Complete an investigation of ground water contamination and design corrective action.
- Washington Co.: Begin a ground water study.
- Watsonwan Co: Complete construction of a new cover and active gas extraction system.
- Woodlake: Complete investigation and begin design of a new cover and an active gas extraction system.

- Greenhouse gas reduction,
- Reduction of volatile organic compounds migrating to ground water,
- As a potential electrical power generation, and
- As a potential alternative fuel or fuel supplement for industry.

The amount of energy any one of the CLP landfills can generate is relatively small, but as a group, these landfills can make a difference. In addition to the landfills currently collecting and burning landfill gas, several more large CLP sites will soon have gas collection and energy generating capability. The MPCA will work with the Minnesota Department of Commerce and the power generating industry to find ways to factor in this potential energy resource resulting in reducing the need to build large coal-fired power generating plants which discharge large quantities of pollutants into the environment.

Active gas extraction systems were designed for Albert Lea, Grand Rapids, Oak Grove, Pine Lane, and St. Augusta in FY02. Construction will be completed in FY03 on active gas extraction systems at Lindenfelser, Louisville and Tellijohn.

Emerging Issues

Landfill Gas to Energy

Landfill gas was discussed in the 1997 annual report as an emerging issue for the CLP. Currently, most landfills in the CLP have some type of passive gas venting system. Nine landfills currently have an active gas extraction system. Another 13 landfills have been identified as having a large enough volume of waste to support an active gas extraction system.

Active landfill gas extraction systems are increasingly being considered for the following beneficial uses:

- Reduction in methane migration which can cause explosive conditions in confined spaces and vegetative loss,

Table 6 shows the amount of methane and non-methane organic compounds (NMOC) destroyed at CLP sites which have active gas extraction systems.

Table 6: FY02 Landfill Gas Data for the CLP				
Landfill	Gas Flow (cfm)	Methane Destroyed (Pounds)	NMOC's Destroyed (Pounds)	Comments
Wash Co	133	1,217,738	7,709	
WDE	213	2,354,219	9,461	
Becker Co	72	708,120	498	NMOC's/CRA data
Hopkins	66	550,198	1752	
Woodlake	681	6,681,692	35,390	
Anoka	634	7,571,550	30,134	
Watsonwan Co		-		no data to date
Tellijohn				no data to date
Flying Cloud				no data to date
Total (lbs/yr)		19,083,518	84,944	

Minnesota Pollution Control Agency

Post 9-11: Potential CLP Involvement

Closed Landfill Program (CLP) staff worked with the Emergency Response Team (ERT) staff as they developed an Agency position to deal with possible terrorist scenarios. CLP staff attended brain storming and planning sessions with ERT staff, the National Guard and First Responders from around the state as they discussed primary and secondary roles when dealing with a variety of terrorist scenarios.

CLP staff developed an Arcview file that will allow ERT staff to quickly assess the suitability of the CLP sites for the storage and or disposal of debris associated with various terrorist scenarios. In

conjunction with the terrorist scenarios, the CLP staff have worked with ERT staff regarding the disposal of materials associated with biological emergencies such as Foot and Mouth Disease and Chronic Wasting Disease.

A preliminary assessment of site suitability, however, indicates that many sites are not good candidates for assistance given their location, size, ownership, etc. CLP staff is available to work with ERT staff to keep this file current and assist in site evaluation as appropriate.

Appendix A: Financial Assurance

Site Name	Financial Assurance Received	Amount Spent in FY02	Total Amount Spent	Financial Assurance Balance
Anoka-Ramsey*	\$1,781,489	\$0	\$1,781,489	\$0
Cass Co. (L-R)	\$84,497	\$4,321	\$23,178	\$61,319
Cass Co. (W-H)	\$84,497	\$8,985	\$33,197	\$51,301
Chippewa County	\$362,516	\$13,168	\$73,673	\$288,843
Dakhue	\$150,411	\$11,187	\$150,411	\$0
Dodge County	\$1,189,672	\$6,192	\$111,200	\$1,078,472
East Mesaba	\$696,244	\$25,604	\$199,056	\$497,188
French Lake	\$14,931	\$0	\$14,931	\$0
Grand Rapids	\$1,750,000	\$122,914	\$332,672	\$1,417,328
Hibbing	\$468,020	\$8,719	\$102,860	\$365,160
Isanti-Chisago	\$333,839	\$0	\$333,839	\$0
Lindenfelser	\$400,827	\$0	\$400,827	\$0
Long Prairie	\$72,973	\$4,753	\$48,728	\$24,245
Louisville	\$337,130	\$228,657	\$337,130	\$0
Meeker County	\$378,002	\$14,198	\$119,501	\$258,501
Paynesville	\$111,641	\$0	\$111,641	\$0
Pipestone County	\$16,622	\$0	\$16,622	\$0
Redwood County	\$81,689	\$0	\$81,689	\$0
Sun Prairie	\$10,725	\$0	\$10,725	\$0
Tellijohn	\$351,406	\$203,581	\$330,193	\$21,213
Winona	\$1,586,726	\$64,510	\$86,829	\$1,499,897
Woodlake	\$1,350,000	\$502,785	\$1,014,797	\$335,203
Total	\$9,832,368	\$1,219,574	\$3,933,698	\$5,898,669

*An additional \$1,781,489 that would have been collected from Waste Management of Minnesota, Inc., (Anoka-Ramsey Municipal Sanitary Landfill) was waived because Anoka-Ramsey Municipal Sanitary Landfill agreed to waive its reimbursement claim from MPCA in an equal amount.

Appendix B: FY02 Financial Summary

Landfill Name	Class & Score	MPCA Salary & Expenses	Attorney General Support	Operation & Maintenance	Design/ Construction Non-Bond	Design/ Construction Bond	Landfill Totals
ADAMS	D/0	\$2,910					\$2,910
AITKIN AREA	D/26	\$1,225		\$14,548			\$15,773
ALBERT LEA	B/25	\$5,157		\$21,784		\$23,192	\$50,133
ANDERSON-SEBEKA	D/2	\$581		\$3,473			\$4,053
ANOKA-RAMSEY	B/16	\$24,111	\$26,700	\$1,469,408		\$36,186	\$1,556,405
BARNESVILLE	C/1	\$1,188		\$4,496			\$5,684
BATTLE LAKE	D/1	\$2,141		\$5,763			\$7,905
BECKER COUNTY	A/29	\$10,187	\$18	\$133,948		\$77,631	\$221,785
BENSON	D/3	\$741		\$7,056			\$7,797
BIG STONE COUNTY	D/2	\$11,808	\$18	\$14,214		\$77,440	\$103,480
BROOKSTON AREA	C/2	\$845		\$5,112			\$5,956
BUECKERS #1	D/4	\$2,123		\$8,945			\$11,068
BUECKERS #2	D/10	\$0					\$0
CARLTON COUNTY #2	B/10	\$988	\$9	\$10,361			\$11,359
CARLTON COUNTY SOUTH	D/5	\$666		\$13,178			\$13,844
CASS COUNTY (L-R)	D/5	\$765		\$4,321			\$5,086
CASS COUNTY (W-H)	D/2	\$879	\$18	\$8,985			\$9,881
CHIPPEWA COUNTY	D/11	\$1,369		\$13,168			\$14,537
COOK (AREA)*	C/4	\$505		\$5,893			\$6,398
COOK COUNTY	NEW	\$128					\$128
COTTON	D/5	\$6,742		\$6,007		\$425,466	\$438,215
CROSBY	D/2	\$834	\$80	\$2,999			\$3,913
CROSBY AMERICAN PROPERTY	B/7	\$2,948	\$45	\$18,649			\$21,642
CROW WING COUNTY	NEW	\$128					\$128
DAKHUE	B/11	\$2,081	\$312	\$18,871			\$21,264
DODGE COUNTY	D/30	\$2,114		\$6,192			\$8,306
EAST BETHEL	B/40	\$14,416	\$623	\$146,761			\$161,800
EAST MESABA	C/18	\$815		\$25,604			\$26,419
EIGHTY ACRE	B/15	\$5,521	\$196	\$4,517		\$39,466	\$49,700
FARIBAUT COUNTY	C/15	\$4,179		\$20,834			\$25,013
FIFTY LAKES	D/4	\$675		\$5,162			\$5,837
FLOODWOOD	C/5	\$719		\$5,655			\$6,374
FLYING CLOUD	C/12	\$3,957		\$48,671			\$52,628
FREEWAY	B/100	\$974	\$1,246	\$0			\$2,220
FRENCH LAKE	D/3	\$2,571		\$13,956			\$16,527
GEISLERS	D/2	\$572		\$3,860			\$4,433
GOFER	C/17	\$1,059		\$8,863			\$9,922
GOODHUE COOP	C/11	\$613		\$4,634			\$5,247
GRAND RAPIDS	B/36	\$8,481	\$899	\$122,914	** -\$100	\$10,538	\$142,732
GREENBUSH	D/0	\$85					\$85
HANSEN	C/14	\$869		\$4,810			\$5,679
HIBBING	D/7	\$459		\$8,719			\$9,178
HICKORY GROVE	D/2	\$455		\$5,187			\$5,642
HIGHWAY 77	C/2	\$178		\$3,869			\$4,047
HOPKINS	B/22	\$5,962	\$276	\$111,748		\$797	\$118,783
HOUSTON COUNTY	D/25	\$1,284		\$12,081			\$13,365
HOYT LAKES	C/3	\$412		\$4,303			\$4,715
HUDSON	C/5	\$366		\$5,600			\$5,967

Minnesota Pollution Control Agency

Landfill Name	Class & Score	MPCA Salary & Expenses	Attorney General Support	Operation & Maintenance	Design/ Construction Non-Bond	Design/ Construction Bond	Landfill Totals
IRON RANGE	C/4	\$423		\$5,220			\$5,643
IRONWOOD	B/25	\$26,395	\$440	\$74,445	\$71,638		\$172,918
ISANTI-CHISAGO	D/11	\$4,637		\$78,092			\$82,729
JACKSON COUNTY	C/6	\$427		\$5,531			\$5,958
JOHNSON BROS.	C/11	\$855	\$783				\$1,638
KARLSTAD	C/4	\$1,613		\$5,712			\$7,325
KILLIAN	B/5	\$1,357	\$650				\$2,006
KLUVER	B/15	\$4,577	\$418	\$12,958	\$10,760		\$28,714
KOOCHICHING COUNTY	B/24	\$6,357	\$748	\$121,256			\$128,360
KORF BROS.	D/15	\$868		\$5,271			\$6,139
KUMMER	B/16	\$2,666	\$134	\$42,557	\$11,362		\$56,718
LAGRAND	C/6	\$1,006		\$14,290			\$15,295
LAKE COUNTY*	C/15	\$2,147		\$6,896			\$9,043
LAKE OF THE WOODS COUNTY	C/8	\$2,347		\$6,869			\$9,216
LANDFILL INVEST, INC.	C/5	\$1,174		\$2,532			\$3,706
LEECH LAKE	B/13	\$3,806		\$10,740		\$5,655	\$20,201
Leslie Benson Dump	NEW	\$0					\$0
LINCOLN COUNTY	D/2	\$199					\$199
LINDALA	D/11	\$2,791		\$10,282			\$13,073
LINDENFELSER	A/28	\$40,956	\$1,469	\$23,695		\$2,618,180	\$2,684,301
LONG PRAIRIE	D/7	\$1,380	\$9	\$4,753			\$6,142
LOUISVILLE	B/40	\$51,760	\$3,329	\$64,540	\$4,212,822		\$4,332,451
MAHNOMEN COUNTY	C/10	\$1,248		\$4,699			\$5,947
MANKATO	D/23	\$787		\$2,467			\$3,254
MAPLE	D/23	\$1,106		\$4,249			\$5,355
MCKINLEY	C/4	\$375		\$3,459			\$3,834
MEEKER COUNTY	C/13	\$1,158		\$14,198			\$15,356
MILLE LACS COUNTY	B/12	\$1,105		\$3,617			\$4,721
MN SANITATION	D/7	\$3,213		\$21,676			\$24,889
MURRAY COUNTY	D/105	\$13,399		\$17,358		\$376,880	\$407,637
NE OTTER TAIL	NEW	\$1,364	\$1,157				\$2,521
NORTHOME	D/3	\$741		\$2,968			\$3,709
NORTHWEST ANGLE	B/2	\$1,429		\$3,692			\$5,120
NORTHWOODS	D/9	\$1,271		\$2,973			\$4,244
OAK GROVE	B/16	\$21,510		\$18,622		\$211,389	\$251,521
OLMSTED COUNTY	C/13	\$6,280	\$2,127	\$63,525			\$71,932
ORR	B/5	\$7					\$7
PAYNESVILLE	D/7	\$2,705		\$7,076			\$9,780
PICKETT	B/3	\$2,881	\$18	\$23,620	\$5,081		\$31,601
PINE LANE	A/20	\$20,712	\$19,054	\$191,606		\$50,694	\$282,066
PIPESTONE COUNTY	C/8	\$2,127		\$11,734			\$13,862
PORTAGE MOD.	D/0	\$13					\$13
RED ROCK	D/26	\$3,629		\$37,079			\$40,708
REDWOOD COUNTY	C/8	\$1,262		\$11,804			\$13,066
ROCK COUNTY	C/16	\$20,175	\$356	\$11,450		\$18,589	\$50,570
SALOL/ROSEAU	D/4	\$1,352		\$8,352			\$9,704
SAUK CENTRE	B/22	\$1,911		\$10,328			\$12,239
SIBLEY COUNTY	C/7	\$1,002		\$6,859			\$7,861
ST. AUGUSTA	B/21	\$16,637	\$125	\$12,741		\$33,226	\$62,729
STEVENS COUNTY	B/30	\$3,327		\$12,177			\$15,504

**Minnesota Closed Landfill Program
2002 Annual Report**

Landfill Name	Class & Score	MPCA Salary & Expenses	Attorney General Support	Operation & Maintenance	Design/ Construction Non-Bond	Design/ Construction Bond	Landfill Totals
SUN PRAIRIE	D/22	\$2,324	\$134	\$10,039			\$12,497
TELLIJOHN	B/34	\$15,455		\$52,901	\$150,680		\$219,036
VERMILLION DAM	D/0	\$30					\$30
VERMILLION MOD.	D/11	\$1,897		\$10,779		\$7,780	\$20,456
WABASHA COUNTY	D/11	\$2,901	\$481	\$18,938			\$22,320
WADENA	D/5	\$1,254	\$80	\$15,808			\$17,142
WASECA COUNTY	B/20	\$9,924		\$27,502	\$51,449		\$88,876
WASHINGTON COUNTY	D/5	\$9,448		\$153,680		\$13,790	\$176,918
WATONWAN COUNTY	C/50	\$31,248		\$10,277		\$2,375,471	\$2,416,996
WDE	D/123	\$11,037	\$17,921	\$276,401			\$305,358
WINONA COUNTY	C/23	\$3,332		\$64,510			\$67,842
WLSSD	NEW	\$7,657	\$267				\$7,924
WOODLAKE	C/8	\$18,549	\$107	\$437,816	\$64,969	\$22,661	\$544,101
YELLOW MEDICINE COUNTY	D/20	\$5,981		\$11,766		\$58,086	\$75,833
Non-site specific charges		\$147,540	\$247,954	\$708,579			\$1,678,087
GRAND TOTALS		\$696,831	*\$328,196	\$5,168,085	\$4,578,661	\$6,483,117	\$17,828,905

* Does not include administrative and regulatory support costs associated with program implementation.

** Refund of overpayment.

Appendix C: CLP State Ownership of Landfills and Adjacent Property

SITE NAME*	County	Landfill (Acres)	Adj Property (Acres)	Donated (Y/N)	When Acquired
ANDERSON/SEBEKA	WADENA	27		Y	in process
ANOKA/RAMSEY	ANOKA	320		Y	6/30/98
Anoka/Ramsey Buffer	ANOKA		23.26	N	12/7/01
BUECKERS #1	STEARNS	17	13	Y	9/23/94
DAKHUE	DAKOTA	40		Y	11/1/96
EAST BETHEL	ANOKA	60		Y	7/22/99
EAST MESABA	ST LOUIS	128		Y	12/31/96
FRENCH LAKE	WRIGHT	11		N	8/16/96
French Lake Buffer	WRIGHT		69	N	5/24/96
ISANTI/CHISAGO	ISANTI	40		Y	8/25/97
Kummer Buffer	BELTRAMI		7.45	N	12/3/96
LA GRANDE	DOUGLAS	80		Y	6/25/97
LAND INVESTORS	BENTON	8.6		Y	6/30/98
LEECH LAKE	HUBBARD	60		Y	6/17/97
LINDALA	WRIGHT	60		Y	3/6/00
Lindala Buffer	WRIGHT		23	Y	5/28/99
LINDENFELSER	WRIGHT	60		Y	4/12/00
Lindenfelser Buffer	WRIGHT		10.8	N	4/12/00
OAK GROVE	ANOKA	160		Y	1/27/00
Oak Grove Buffer (3 properties)	ANOKA		5.71	N	9/26/96
OLMSTED	OLMSTED	290		Y	2/27/96
PAYNESVILLE	STEARNS	56		Y	in process
PICKETT	HUBBARD	16.17		Y	5/31/02
PINE LANE	CHISAGO	44.3		Y	12/20/01
PIPESTONE	PIPESTONE	40		Y	9/13/96
RED ROCK	MOWER	80		Y	12/26/96
Red Rock Buffer	MOWER		80.52	N	6/18/97
SALOL	ROSEAU	101.5		Y	12/23/96
ST AUGUSTA	STEARNS	48		Y	6/30/98
St. Aug. Buffer/McConnell	STEARNS		35	N	12/21/96
SUN PRAIRIE	LE SUEUR	80		Y	6/30/98
WABASHA COUNTY	WABASHA	29		Y	in process
Washington Co. Buffer	WASHINGTON		20	N	in process
WDE Buffer/Hupp Property	ANOKA		5.5	N	1/2/02
WOODLAKE	HENNEPIN	85		Y	5/11/00
Woodlake Buffer	HENNEPIN		110	Y	5/17/00
TOTALS:		1,941.6	403.2		

*(Site names in upper case include landfill permitted areas. Site names in lower case are buffer areas surrounding the landfill.)



Minnesota Pollution Control Agency

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