



# Minnesota Closed Landfill Program

---

2005 Annual Report  
to the Legislature

---

December 2005



[Minnesota Pollution Control Agency](http://www.mn.gov)

# *2005 Annual Report to the Minnesota Legislature on the Minnesota Closed Landfill Program*

---

## **Table of Contents**

---

◆ Executive Summary	1
◆ Program Overview	2
◆ FY 05 Program Accomplishments	3
◆ Funding	3
◆ Expenditures	4
◆ Program Activities	4
◆ Insurance Recovery	11
◆ Emerging Issues	12
◆ Looking Ahead to FY 06	14
◆ Appendices	16

 Minnesota Pollution Control Agency  
520 Lafayette Road North  
St. Paul, Minnesota 55155

*This publication can be made available in other formats, such as Braille, large type, computer disk or audiotape, upon request.*

*Printed on paper with at least 30 percent postconsumer waste content.*

Cover photo: Closure activities at the Winona County Landfill, Fall 2005  
MPCA Staff Photo

*The costs of preparing and printing this report were \$5,000.*

*December 2005*

**Report Team:** *Shawn Ruotsinoja (primary author), Doug Day, Joe Julik, Ingrid Verhagen, Jeff Lewis, Peter Tiffany, Thomas Newman, Fardin Oliaei, Alan Williams, Mike Rafferty, Peggy Hicks*

## *2005 Minnesota Closed Landfill Program Annual Report to the Legislature*

### **Executive Summary**

The 1994 Landfill Cleanup Act (LCA) created Minnesota's Closed Landfill Program (CLP or Program). The CLP is an alternative to Superfund designed to clean up and maintain closed landfills. It is the first such program of its kind in the nation.

The LCA (Minn. Stat. § 115B.412, subd. 10) requires the Minnesota Pollution Control Agency (MPCA) to provide a report to the Minnesota Legislature about the previous fiscal year's activities and anticipated work. This report covers Fiscal Year (FY) 05 (July 1, 2004 to June 30, 2005) activities and looks ahead to FY 06 (July 1, 2005 to June 30, 2006) priorities.

This report provides an overview of the Program, a description of funding sources for the Program, a report about FY 05 expenditures, an update of the Insurance Recovery Effort, a discussion of other Program activities as well as emerging issues, and a look ahead to FY 06.

### **Program Highlights**

Program highlights for FY 05 include:

- implementing response actions at 17 sites at a cost of \$5,939,939;
- a further reduction of one percent in leachate generation that impacts ground-water quality;

- an additional one percent capture and destruction of landfill gas;
- entry of the Western Lake Superior Sanitary District (WLSSD) Landfill into the Program (109 total sites);
- legislative authorization of \$10 million in general obligation bonds to pay for construction at publicly-owned landfills;
- receipt of \$14,821,373 in insurance settlement payments from insurance carriers;
- updates to the MPCA Web page;
- declaration of a drinking water emergency near the Washington County Landfill based on the presence of perfluorochemicals (PFCs) that resulted in the delivery of bottled water and the installation of granular-activated carbon filters at 12 households; and
- progress toward implementation of gas-to-energy at the Waste Disposal Engineering (WDE) Landfill.

Future activities for the CLP will include design and construction of improved covers and landfill gas management systems at approximately 39 sites, completion of additional site Land Use Plans, continued assessment of PFC presence near the landfills, exploration of additional landfill gas to energy opportunities, pursuit of additional settlements with insurance companies, and continued operation and maintenance at all CLP landfills.

## Program Overview

The LCA gives the MPCA the authority to initiate cleanup actions, complete closures, and take over long-term operation and maintenance at qualified closed, state-permitted landfills. The LCA also authorizes the MPCA to reimburse eligible parties for past cleanup costs after actions have been completed. Before landfills are accepted into the CLP, certain requirements in a Landfill Cleanup Agreement or Binding Agreement (BA) (executed between landfill owners/operators and the state) must be met.

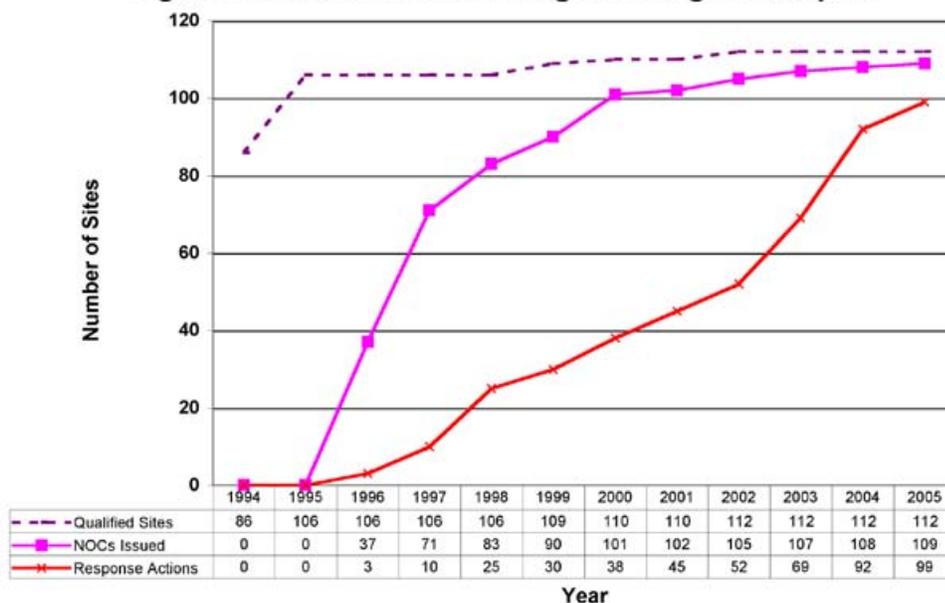
In 1999 and 2000, the Legislature enacted amendments to the LCA changing the CLP entry qualifications to allow additional landfills to enter the CLP. Based in part on these legislative changes, one additional landfill entered the CLP in FY 05. Three more landfills are qualified for the CLP and are expected to enter the Program in the near future.

Through June 30, 2005, 109 landfill owners/operators had executed a Landfill Cleanup Agreement and received a Notice of Compliance (NOC) - the final administrative step before a site enters the Program and the state takes over responsibility for a landfill.

The CLP is in its eleventh year and a significant amount of construction has taken place since the Program's inception. One of the goals of the CLP is to bring each landfill in the Program up to standards that are protective of public health and the environment. The CLP is close to reaching this goal.

The following list summarizes CLP accomplishments from its creation through FY 05:

**Figure 1: Closed Landfill Program Progress Report**



- 109 Landfill Cleanup Agreements executed;
- 109 Notices of Compliance issued;
- All reimbursements to landfill owners/operators and responsible parties completed, totaling \$37,883,128;
- U.S. Environmental Protection Agency (EPA) reimbursements totaling \$4,014,550;
- 99 major response actions have been completed;
- 80 percent of the Program's goal to limit, to the greatest extent possible, leachate generation and infiltration to ground water, has been achieved; and
- 80 percent of the Program's goal to limit landfill gas generated by CLP qualified facilities, that was economically feasible to capture and destroy, has been achieved.

Figure 1 shows the progress achieved in the CLP in terms of sites entering the Program and response actions taken during the past 11 years. The MPCA will need to complete additional response actions involving such activities as placement of final covers

as well as construction of leachate collection and/or gas-extraction systems at a few remaining landfills. A majority of that work has already been completed. When adequate funding for all remaining known response actions is available and the funded work has been completed, the CLP anticipates transitioning into more of an operation and maintenance (O&M) mode.

## FY 05 Program Accomplishments

During FY 05, the CLP achieved the following accomplishments:

- 17 response actions were implemented totaling \$5,939,939;
- one percent further reduction in the total amount of leachate generated that could potentially reach ground water was achieved through placement of adequate covers and reduction of waste footprints;
- an additional one percent of landfill gas generated by CLP landfills that was economically feasible to capture was destroyed prior to release into the atmosphere;
- a Landfill Cleanup Agreement was executed and a Notice of Compliance was issued for the WLSSD Landfill;
- legislative authorization of \$10 million in general obligation bonds to pay for construction at publicly-owned landfills;
- receipt of \$14,821,373 in insurance settlement payments from insurance carriers;
- declaration of a drinking water emergency for residential wells near the Washington County Landfill that have been impacted by PFCs; and bottled water delivery and granular-activated carbon filter installation at 12 households where concentrations exceeded the Minnesota Department of Health's health-based values for two specific PFC types.

## Funding

Funding for the CLP in FY 05 came from five sources:

- the solid waste management tax and associated fees (which also fund other MPCA ground-water and solid-waste-related activities);
- new general obligation bonds authorized in May 2005 totaling \$10 million;
- remaining general obligation bonds from FY 01 and FY 02 appropriations;
- funds transferred from financial assurance accounts of closed landfills entering the Program; and
- settlements from landfill-related insurance coverage.

## Solid Waste Management Tax and Associated Fees

Half of the revenues from the Solid Waste Management Tax (SWMT) are deposited into the Environmental 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 most industrial, demolition/construction and medical waste. The SWMT collections deposited in the Environmental Fund in FY 05 totaled approximately \$29.8 million. A portion of these funds are then transferred to the Remediation Fund for use at CLP sites and for other remediation programs.

## General Obligation Bonds

In 1994, the Legislature authorized \$90 million in general obligation bonds to be appropriated over 10 years. This money was to be used for construction of remedial systems at publicly-owned, closed landfills. However, in 2000, Minn. Stat. §16A.642 cancelled all unused bonds more than four years old, regardless of program need or original legislative intent. This

**Table 1: FY 05 CLP Expenditures**

<b>Expenditures</b>	<b>FY05</b>	<b>Cumulative</b>
Closed Landfill Program Administration & Support	\$3,062,316	\$22,966,393
Design, Construction, Investigations*	\$6,642,381	\$94,362,729
Operation and Maintenance	\$4,032,943	\$30,623,220
CLP Legal Counsel (Attorney General)	\$148,860	\$1,880,297
Insurance Recovery Legal Counsel (Attorney General)	\$123,206	\$2,439,784
Insurance Recovery Legal Counsel (Special Attorneys)	\$6,946,243	\$29,461,969
EPA Reimbursement	\$0	\$4,014,550
Responsible Party Reimbursement	\$0	\$37,107,759
<b>Total</b>	<b>\$20,955,949</b>	<b>\$222,856,702</b>
Expenditure information is based on MAPS data dated 10/5/05 for the time period of July 1, 2004 to June 30, 2005.		
* These activities include both bond and non-bond expenditures through 6/30/05.		

resulted in the cancellation of approximately \$56 million in bonding authority.

In 2001, the Legislature authorized \$20.5 million in general obligation bonds. In both the 2002 and 2005 sessions, the Legislature authorized an additional \$10 million in bonds in each of those years. The total of all bond authorizations to date is \$74.5 million. The MPCA estimates that an additional \$33.5 million in bond funding is needed to complete the remaining known construction projects at publicly-owned facilities.

### **Financial Assurance**

From inception of the CLP through FY 05, the state has received a total of \$15,406,837 in financial assurance payments from owners or operators of 26 closed landfills. In FY 05, \$4,338,747 in financial assurance was received for the WLSSD Landfill. An additional \$1,781,489 that would have been collected from Waste Management of Minnesota, Inc. for the Anoka-Ramsey Landfill was waived because Waste Management of Minnesota, Inc. agreed to waive its reimbursement claim by an equal amount.

### **Insurance Recovery**

The State and attorneys representing the State continued pursuit of financial settlements with

insurance carriers that wrote policies for owners and operators of, as well as for generators of waste brought to, the CLP landfills. In FY 05, the State received \$14,821,373 in insurance settlement payments. These payments were divided and deposited equally in the Remediation Fund and the Closed Landfill Investment Fund.

## **Expenditures**

Program expenditures are primarily for investigation, design, construction, operation and maintenance, reimbursements, administration, and insurance recovery. Expenditures in FY 05 totaled \$20,955,949. A summary of expenditures can be found in Table 1 (as shown above). Expenditures for each landfill in FY 05 are itemized in Appendix B.

## **Program Activities in FY 05**

### **Landfill Cleanup Agreements and Notices of Compliance**

Through June 30, 2005, the Program has successfully executed 109 Landfill Cleanup Agreements and issued an equal number of Notices of Compliance. In FY 05, the WLSSD landfill executed both a Landfill Cleanup Agreement and Notice of Compliance.

## Priority List Rescoring

According to the LCA, the MPCA must update the priority list each fiscal year to reflect any changes due to monitoring and remediation activities. A site's priority or need for remedial measures is reflected in the site's classification and score. Classifications are A through D with an A classification signifying the highest priority and D signifying the lowest. Within each classification, sites are given a score. Landfills with higher numbers are a higher priority than landfills with lower numbers. The classification and score for each landfill in the Program can be found in Appendix B.

Classification and scores for particular sites are not static. When landfills are improved by constructing remedies, such as a new cover system or an active-gas system, sites are given a lower classification and/or score. In addition, if monitoring at a landfill indicates there is a reduced threat to human health and the environment, the classification and/or score can be reduced to reflect a lower priority. Conversely, when public health or environmental issues arise as a result of problems at a landfill, the classification and/or score is upgraded to reflect a higher priority. In FY 05, two landfills were downgraded to a lower classification, while four landfills were upgraded to a higher classification. In addition, two landfills were scored for the first time as they became qualified facilities for the CLP last year and sufficient information to score the sites was obtained.

Table 2 (below) shows the rationale for classification and/or scoring changes to the FY 04 classifications and scores. Table 3 and Figures 2 and 3 (page 6)

illustrate how CLP activities have resulted in an overall reduction in relative risk to human health and the environment during the past 11 years.

## Design and Construction Activity

Table 4 (page 7) summarizes the design, construction, and investigation activity that occurred in FY 05. This table reports the type of response actions taken at 17 landfills to reflect how nearly \$6 million dollars were spent in FY 05. It should be noted that the number of response actions in FY 05, and the costs associated with them, are significantly less than those reported in FY 04 and FY 03. This reduction is the result of staff reductions, the lack of a bonding bill in 2004, unresolved legal and property issues at many sites, preparation for a possible state government shutdown, and efforts associated with extending or renewing contracts and dealing with other contractual issues.

## Deletion of Landfills from the National Priority List (NPL) and 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. Since its inception, the CLP has also cleared the way for the removal of 49 closed landfills from the PLP (state Superfund list). At the close of FY 05, only two closed landfills remain on the PLP; Freeway and WLSSD. Now that the WLSSD Landfill has entered the CLP, its removal from the PLP is slated for FY 06.

**Table 2: FY 05 Scored and Revised Scores for Landfills**

Site Name	Class/Score	Revised Class/Score	Comments
Becker County	A / 29	B / 13	Improved groundwater controls
Isanti/Chisago	D / 11	B / 22	Landfill gas migration off site
Koochiching County	B / 24	C / 11	Gas extraction system installed
La Crescent	-	C / 1	Newly scored
Leslie Benson	-	C / 1	Newly scored
Washington County	B / 6	A / 24	Drinking water contamination from perfluorochemicals
Winona County	C / 23	B / 22	Deterioration of cover
Woodlake	C / 8	B / 34	Landfill gas migration off site, inadequate cover

**Table 3: Annual Changes to the Closed Landfill Priority List**

Classification	1994		Classification	2005
A	9		A	1
B	34		B	21
C	29		C	29
D	22		D	61
<b>Total Landfills</b>	<b>94</b>		<b>Total Landfills</b>	<b>112</b>

Annual reports also fulfill the MPCA's requirement pursuant to Minn. Stat. §115B.412, Subd. 4(a) to provide affected local units of government with site information including a description of the types, locations, and potential movement of hazardous substances, pollutants and contaminants, or decomposition gases related to the landfill. Further, Minn. Stat.

§115B.412, Subd. 4(b) requires local units of government to notify persons applying for a permit to develop affected property of the existence of this information and, upon request, to provide a copy of the information.

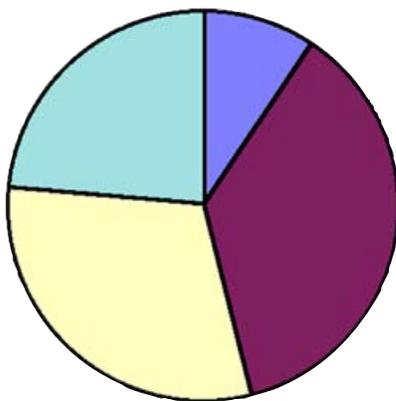
These reports serve as an information source that local units of government can utilize to prudently plan land use in the vicinity of the landfill that may be affected by off-site contamination and/or landfill gas. Depending upon the extent and magnitude of these problems, the MPCA will, in the site annual report, recommend to local units of government that they consider these conditions in their land-use planning efforts.

Site annual reports are being placed on the MPCA's Web site at [www.pca.state.mn.us/cleanup/landfill-closed.html](http://www.pca.state.mn.us/cleanup/landfill-closed.html). Staff will continue to post the most recent annual report for all sites on the CLP Web site.

## State Ownership of Landfills and Adjacent Property

The MPCA has finalized ownership of 25 landfills across Minnesota as part of the landfill's entry into the CLP or via tax forfeiture (see Appendix C for a complete list of properties owned by the State). This has been done in cases where state ownership provided the best method of controlling access, managing the facility, and providing the best possible environmental protection and safety for the citizens living near the facility. The MPCA can accept ownership of a landfill when a landfill's past owner(s) do not have the resources to adequately maintain the landfill. In addition to the landfill property itself, the MPCA has acquired 22 adjacent properties as a measure to protect human health and safety.

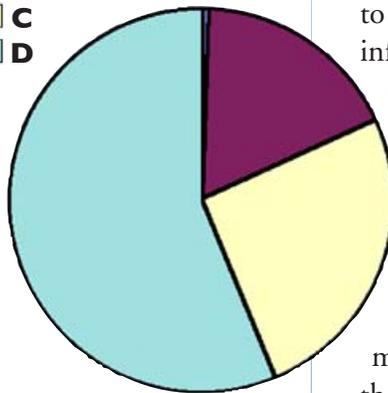
**Figure 2**



1994 Classifications

■ A  
■ B  
■ C  
■ D

**Figure 3**



2005 Classifications

## Site Annual Reports

The CLP is required each year to develop an annual report for each landfill in the Program if significant changes at the site have occurred. The annual report serves to provide information including:

- basic information about the landfill and certain site characteristics;
- a summary of landfill cover maintenance and construction;
- landfill gas management and monitoring;
- ground-water and surface-water monitoring as well as ground-water remediation system management and maintenance;
- a description of the landfill's reclassification and/or rescoring;
- staff contacts; and
- recommendations for the future.

**Table 4: FY 05 CLP Design, Oversight, Construction, and Other Activity\***

Landfill	Class	Design, Oversight, Construction, and Other Activities	FY 05 Costs	Completion Date
Anoka/Ramsey	D	Completed installation of new flare	\$ 47,220	Dec-04
Cook County	D	Ongoing installation of leachate line	\$ 17,000	Jul-05
Dakhue	B	Completed installation of an active gas extraction system and flare.	\$ 707,397	Jul-04
East Bethel	B	Completed design of active gas system, upgrade of ground-water treatment system	\$ 180,822	Aug-05
East Mesaba	C	Completed groundwater investigation	\$ 25,440	May-05
Gofer	C	Ongoing construction of new cover and passive gas system	\$ 2,000,904	Jul-05
Hopkins	B	Ongoing design and construction of active gas extraction expansion	\$ 14,119	Est. Dec-05
Karlstad	C	Completed work on a phytoremediation cover.	\$ 26,560	Jun-05
Kluver	B	Completed conceptual enhanced gas venting design	\$ 6,389	Jun-05
Koochiching County	C	Ongoing installation of a new cover, active gas extraction system and flare.	\$ 98,067	Est. Oct-05
La Grand	B	Completed new cover design	\$ 51,575	Jun-05
Meeker County	C	Completed waste consolidation, constructed new cover, upgraded passive gas system	\$ 940,714	Nov-04
Minnesota Sanitation	D	Completed re-design of surface water controls	\$ 23,237	Feb-05
Paynesville	D	Completed cover investigation	\$ 12,331	Oct-05
Pine Lane	D	Completed installation of active gas extraction system	\$ 243,823	Dec-04
St. Augusta	C	Completed gas header investigation	\$ 44,756	Oct-04
Washington County	A	Completed upgrades to groundwater pumpout system and feasibility study	\$ 110,162	Jun-05
WDE	B	Completed installation of treatment pond and pumpout well	\$ 1,212,960	Apr-05
Winona County	B	Completed design of active gas extraction system, new lined cell, and new cover	\$ 85,279	Jun-05
WLSSD	B	Ongoing groundwater investigation	\$ 51,085	Est. Dec-05
Woodlake	B	Ongoing design of new cover, upgrade of leachate collection and active gas systems	\$ 40,099	Est. Jun-07
<b>Total</b>			<b>\$ 5,939,939</b>	<b>17</b>

\*The costs shown in this Table are for invoices paid in FY 05, not total project costs. Invoices paid in FY 05 for work completed in FY 04 are not included in this table.

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 to correct a 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, meet current standards for closure.

Class NS = Not Scored.

The CLP is in the process of acquiring four additional landfills (Long Prairie, Sauk Centre, WDE, and WLSSD) with two pending (Crosby American Properties and Gofer). In addition, the CLP is currently working on acquisition of property adjacent to the Kluver Landfill due to past waste disposal as well as ground-water and landfill gas concerns.

## Environmental Indicators as a Measure of Progress

MPCA staff use environmental indicators to generally measure the progress of the CLP and to better manage the Program. There are two environmental indicators that are measured for in the CLP: 1) reduction of leachate generation, and 2) the reduction of landfill gas emissions. Both have the potential to cause significant risk to public health and the environment.

Each year, staff determine the reduction of leachate generation for the landfills in the Program using an enhanced computer model called Hydrologic Evaluation of Landfill Performance (HELP). Completely eliminating leachate generation at unlined landfills is impossible given current technology, knowledge, and economics. However, there are several things that can be done to reduce the amount of leachate each landfill generates, thereby minimizing the potential impact leachate can have on ground water. Similarly, the total elimination of landfill gas that escapes to the environment is not currently possible. However, installation of active-gas collection systems at larger sites can significantly reduce landfill gas emissions directly to the atmosphere.

## Leachate Reduction

Work completed at closed landfills has meant significant reductions each year in the amount of leachate reaching the ground water. Since the Program's inception, 1,682 acres of the 2,174 total acres of waste currently managed by the CLP are protected by covers that meet or exceed current standards. Improved or synthetic covers greatly reduce the infiltration of precipitation into the waste, thereby reducing the volume of leachate produced.

Landfills with poor covers allow infiltration that can generate leachate at a rate of 53,530 gallons per acre, annually. With improved covers, leachate generation can be reduced to 6,224 gallons or less per acre, annually. That is an eight-fold reduction in the amount of water that may potentially leach through the waste, become contaminated, and move into the ground water.

Since the beginning of the CLP in 1995, a total of 185 acres of waste from closed landfills (and 9 acres from nearby dumps) have been relocated and consolidated with existing waste. At 42 landfills, 783 acres have been improved to meet current MPCA cover standards. In FY 05, the CLP reduced the footprint of landfills in the Program by an additional



*Installation of gas extraction systems at the Dakhue Landfill, Dakota County*

24 acres and placed 31 acres of new and improved covers on existing landfills. Both efforts will reduce the amount of leachate generated at those landfills by almost three million gallons, each year.

The CLP program also re-contours landfill surfaces, establishes vegetative growth on landfill covers, and engineers holding basins to further reduce the amount of surface water likely to come into contact with waste and form leachate. The CLP operates six leachate collection systems and seven ground-water pump-out systems at 13 sites. This prevents another five million gallons of leachate per year from reaching the ground water.

## Landfill Gas Reduction

Landfill gas was discussed in the 1997 legislative report as an emerging issue for the CLP. Currently, most landfills in the CLP have some type of passive-gas extraction system. Eighteen landfills have an active-gas extraction system. As many as five additional landfills have a large enough volume of waste to support an active-gas extraction system.

Active-landfill-gas extraction systems provide the following beneficial uses:

- reduction in methane migration and vegetative loss;
- overall reduction in greenhouse gas emissions;
- reduction of volatile organic compounds otherwise migrating to ground water or emitted to the atmosphere; and
- for gas-to-energy use.

Active-gas extraction systems and flares started operating in FY 05 at the Dakhue and Koochiching County landfills. In FY 05, nearly 31 million pounds of methane were destroyed by 18 flares operating at CLP landfills (see Table 5). The stack test results in FY 04 showed greater than a 99 percent destruction of methane and other contaminants in all but one of the enclosed flares.

**Table 5: FY 05 Landfill Gas Data for the CLP**

Landfills	Gas Flow (cfm)	%Methane in LF Gas	Operation Hours	Methane Destroyed (Pounds)
Albert Lea	204	39%	7,648	1,636,771
Anoka	333	58%	8,733	4,513,422
Becker County	57	34%	7,020	358,229
Dakhue	92	39%	6,908	666,426
Grand Rapids	68	38%	7,454	514,713
Hopkins	65	30%	7,778	400,369
Koochiching County	80	50%	4,581	493,254
Lindenfelser	95	44%	7,583	858,483
Louisville	447	42%	8,430	4,279,959
Oak Grove	101	61%	8,305	1,356,543
Olmsted	213	33%	7,275	1,349,533
Pine Lane	195	57%	7,706	2,312,054
St. Augusta	85	62%	8,006	1,128,237
Tellijohn	94	33%	7,078	585,215
Washington County	136	36%	8,367	1,107,896
Watonwan County	67	41%	7,580	557,844
WDE	167	48%	8,550	1,838,700
Woodlake	644	49%	8,284	6,965,587
<b>TOTAL</b>				<b>30,923,237</b>



*Gas extraction well at the Pine Lane Landfill, Chisago County*

## Landfill Gas-to-Energy

With recent advancements in technology, it has become evident that direct use of landfill gas as a boiler fuel or for electricity production can provide a beneficial use for this source of energy. Currently, it is estimated that if all closed landfills were developed for electrical generation, where active-gas extraction systems are either completed or planned, these landfills would have the capacity to produce as much as eight to ten megawatts of baseload (steady state) electricity. This would provide sufficient electricity for the annual needs of more than 9,300 homes.

The CLP is currently exploring several options to maximize development of this energy resource. The CLP, working with consultants, defined the economic and technical feasibility of developing a landfill gas-to-electricity project using microturbines at the WDE Landfill in Andover, Minnesota. Due to maintenance concerns, the CLP will instead move forward with the installation of a Stirling cycle engine, rather than a microturbine, to generate up to 220 kilowatts of electricity. Subsequent to this installation and other site specific feasibility studies, the CLP intends to

develop several projects to demonstrate the technical and economic feasibility of landfill gas-to-energy in direct use applications as well as electric generation at additional

landfills. Private development of this energy source is dependent upon the price offered by utilities. The price offered by utilities is determined by their avoided costs, grant and loan availability to defray initial investment costs, and the need for electricity.

Today, and in recent years, there has been increased interest in distributed generation of electricity using renewable energy sources such as landfill gas. Development of landfill gas-to-energy not only affects closed landfills, but also open landfills. It is becoming more evident that the MPCA needs to coordinate these landfill gas-to-energy development efforts with the Minnesota Department of Commerce and the Public Utility Commission. With this coordination component in mind, the CLP has been working closely with these agencies and programs to ensure that recent reports (such as the Department of Commerce's recent 2004 Quad Report) reflects the MPCA's best information about landfill gas-to-energy potential and activities.

## Environmental Data Management System Database

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

The EDMS is an automated system that stores monitoring data, including analytical and field measurements of ground-water and surface-water quality, leachate, landfill gas condensate and emissions, and flare information. It also includes geologic data, monitoring well information, gas vent locations, and construction information. The database can match analytical data with physical characteristics of each landfill. The data is electronically submitted by contractors and validated prior to integration into the system.

Staff use both standardized reports and build project-specific queries to define ground-water contaminant trends and hydrographs of ground-water levels. Contours of ground-water surfaces showing flow direction and contaminant concentrations are constructed by combining query outputs with contouring and GIS software packages. CLP staff use the database to create sampling work plans, review data trends, create reports (site annual reports, Metropolitan Council Environmental Services Special Discharge Reports, Department of Natural Resources (DNR) Annual Water Use Reports, etc.) and respond to public inquiries in a timely and accurate manner.

### Gopher State One Call

As a property owner, the MPCA is required by law to respond to calls from Gopher State One Call to identify underground and fill utilities in the public right-of-way. In order to respond to requests, MPCA staff had property surveys conducted at the five sites where known underground utilities exist in public right-of-ways. Full-service operation and

maintenance contracts have been amended to provide contractor assistance to respond to Gopher State One Call requests, including around-the-clock response. Staff are also investigating the possibility of removing underground utilities at two sites to eliminate the need to respond to requests. In addition, MPCA staff will attempt to eliminate underground utilities located in public right-of-ways for any new construction projects.

### Land Use Plans

The LCA requires the MPCA to develop a Land Use Plan for each landfill qualified for the CLP and that local units of government make their local land-use plans consistent with the plan developed by the MPCA. Because the MPCA is responsible for the cleanup and long-term care of the landfills in the CLP (including installing and maintaining response action equipment, taking care of the landfill cover, monitoring ground water and landfill gas, and securing the site) the local units of government must make their land-use plans compatible with the MPCA's future responsibilities and obligations for each site.

The purpose, therefore, of each Land Use Plan is to:

- protect the integrity of the landfill's remediation systems;
- protect human health and public safety at each landfill; and
- accommodate local government needs and desires for land use with consideration for health and safety requirements.

The elements outlined here can be accomplished through the adoption and implementation of a site-specific Land Use Plan that may recommend local zoning and other land-use measures.

Essentially, the Land Use Plan compares the MPCA's obligations at the qualified facility to local land-use plans and zoning. If they are in conflict, the MPCA will recommend that the local unit of government adopt a zoning district and ordinance for the qualified facility that will be compatible with the MPCA's obligations at the site.

## Contracts

The CLP manages six contracts that retain several contractors and vendors to handle a large portion of the Program's work. These contracts are necessary for the CLP to take response actions at 109 sites including sampling, investigations, data management, design, construction oversight, mowing, and operation and maintenance. CLP staff spent considerable time in FY 05 extending one contract and creating four new contracts. The contracts include:

- design and construction (extended);
- operation and maintenance (new);
- mowing (new);
- Environmental Data Management System (new);
- drilling; and
- sampling and analytical (new, agency wide).

The CLP anticipates new contracts will be developed in FY 06 with Department of Administration assistance for drilling, design, surveying, and leachate hauling.

## Insurance Recovery Effort

### Background

The Landfill Cleanup Act authorizes the MPCA and the Attorney General's Office to seek recovery of 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 includes insurance policyholders who 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 LCA, 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 responsible persons.

To date, the State has commenced four lawsuits against insurance companies with assistance from the State's Special Attorneys that have been appointed by the Attorney General's Office. The first lawsuit, involving 17 carriers, was fully settled in early 2003. A second lawsuit was commenced in Hennepin County in 2002 against 13 insurance carriers. This lawsuit was fully settled in the summer of 2004, shortly before it was scheduled to go to trial. In 2004, a third lawsuit was commenced in Anoka County against 10 insurance carriers. As of June 2005, all but one of the carrier defendants in that lawsuit had agreed to settle with the State, and several settlements are currently being finalized. A fourth lawsuit, against a single carrier, was filed in 2004 in Anoka County. A global settlement with that carrier was reached in 2005.



*Installation of liner at the WDE Landfill, Anoka County*

## **FY 05 Activities**

The State's settlement efforts in FY 05 continued to focus on negotiating global settlements with insurance carriers. Global settlements resolve all of an insurance carrier's liability for all originally qualified landfills (106) covered by the landfill insurance recovery law. The State reached global settlements with 11 insurance carriers in FY 05. In addition, the State received a share of two settlements between BFI and its insurance carriers. These settlements, last year, resulted in a deposit of \$14,821,373 that was split equally between the Remediation Fund and Closed Landfill Investment Fund.

Also in FY 05, the State issued settlement offers to six additional insurance carriers. Each carrier was issued a global settlement offer and one or more carriers were issued landfill-specific settlement offers. The State will encourage those receiving settlement offers to enter into negotiations to resolve the claims. The State expects to bring additional lawsuits if carriers fail to settle. Total settlement payments to the State through FY 05 equal \$69,509,688.

## **Future Activities**

The State and its Special Attorneys will complete the litigation or settlement of the State's third coverage lawsuit in Anoka County by the fall of 2005. At the same time, the State will continue to negotiate financial settlements with insurance carriers who received settlement offers in FY 05. Based on previous experience, the State expects that carriers with outstanding settlement offers will begin serious negotiations when they anticipate litigation on the horizon or have a lawsuit filed against them.

## **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. State statute defines NRD as damages to the following natural resources including, "...but not be limited to, all mineral, animal, botanical, air, water, land, timber, soil,

quietude, recreational and historical resources. Scenic and aesthetic resources shall also be considered natural resources when owned by any governmental unit or agency." NRD payments received in FY 05 amounted to \$1,404,863 from settlements. Total NRD payments received through June 30, 2005 equal \$6,738,548.

The MPCA and the 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 about how it plans to spend this money. In FY 05, the DNR's Remediation Fund Grants Program awarded a total of \$2,042,000 to 10 restoration or acquisition projects throughout Minnesota. To date, \$2,749,740 has been awarded to 14 projects. One of the criteria used to award this grant money is the proximity of the project to a closed landfill. The funding source for these awards was the money collected from the NRD portion of the State's insurance settlements.

## **Emerging Issues**

### **Emerging Contaminants in Minnesota's Closed Landfills**

Since 2000, the MPCA has gathered information about certain chemicals of concern in Minnesota. Polybrominated diphenyl ethers (PBDEs), brominated dioxins and furans, perfluorinated chemicals (PFCs), and alkyl phenols (APs) are some of the "emerging" contaminants that have been the focus of various investigations. For more specific information about this effort, see [www.pca.state.mn.us/publications/reports/lr-air-water-pollution-sy03.pdf](http://www.pca.state.mn.us/publications/reports/lr-air-water-pollution-sy03.pdf). So far, the CLP has focused on two of these contaminant groups - PBDEs and PFCs.

## Polybrominated Diphenyl Ethers

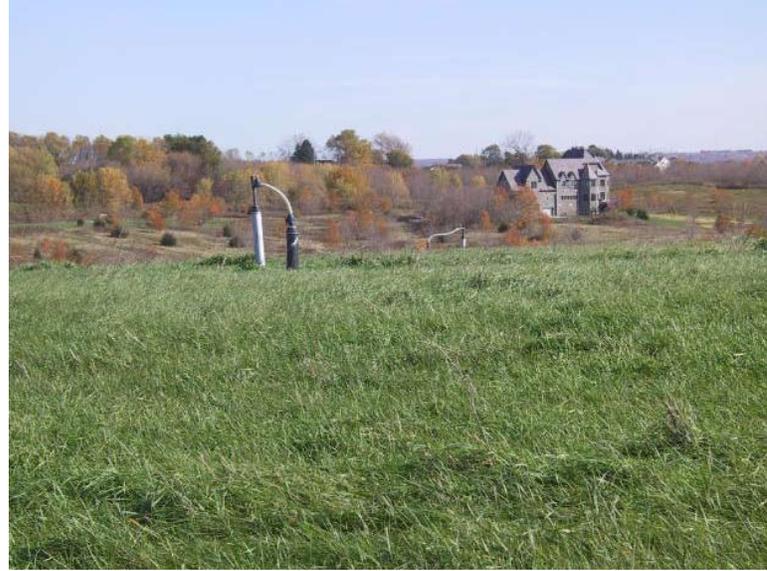
Polybrominated diphenyl ethers (PBDEs) have been extensively used as additive flame retardants in plastics, textiles, coatings and electrical components in products such as computers, TVs, electrical appliances, furniture, building materials, carpets and automobiles. The disposal of these waste products in landfills over time has resulted in a potential source for PBDE impacts to ground water. These chemicals have been found to persist in the environment and bioaccumulate in humans and wildlife.

Studies conducted by the MPCA found PBDEs in all environmental settings examined, with the highest relative concentrations found in landfill leachate and wastewater treatment plant sludges.

The Western Lake Superior Sanitary District (WLSSD) Landfill, a closed facility located near Duluth, was selected for analysis to further evaluate the presence and distribution of PBDEs from a landfill. Although the study is not complete, preliminary results indicate that certain PBDE compounds have been detected in leachate generated from the landfill. Low concentrations of PBDEs were detected in some of the monitoring wells on and off the site. In addition, low concentrations of PBDEs were detected in sediments from an adjacent creek and in the gases emitted from the landfill's passive vents.

## Perfluorinated Compounds

Perfluorinated compounds (PFCs), including perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA), are a class of chemicals widely incorporated into consumer products and recently identified as contaminants of concern. In April 2003, the EPA released a preliminary risk assessment presenting serious concerns about developmental exposure to PFOA and its salts and toxic effects (see [www.epa.gov/opptintr/pfoa/index.htm](http://www.epa.gov/opptintr/pfoa/index.htm)). More recently, an EPA science advisory board published a preliminary determination suggesting PFOA to be a likely human carcinogen. PFCs have been shown to cause specific toxicity in several biological systems. These strongly persistent



*Residential Development near the Olmsted County Landfill*

chemicals have been detected in human blood and in wildlife in remote locations around the world.

PFOS is a member of a large family of sulfonated PFCs produced by 3M and was used over the last 50 years in a wide variety of industrial, commercial, and consumer products (Scotchguard). Preliminary MPCA research detected the presence of PFOS and PFOA in fish. In FY 05, investigations continued into the presence and distribution of PFOS and PFOA in Minnesota's landfills and wastewater. Initial sample collection was completed in 2005. In addition to evaluating several sources, the study included PFOS and PFOA sampling and analyses of soil and ground water at the Washington County Landfill where 3M wastes containing PFCs were buried in the past. A number of residential wells near this site have been impacted by PFOS and/or PFOA — some at concentrations in excess of health based values (HBVs) for drinking water established by the Minnesota Department of Health.

In response to information indicating 3M's disposal of PFC production waste at the Washington County Landfill, the CLP sampled monitoring wells at the Washington County Landfill in the spring of 2004. PFOA was detected in some of the samples collected. The highest concentrations were found at the heart of the ground-water plume at a depth of 100 feet in wells near the southeast corner of the landfill.

The CLP proceeded to sample residential wells around the landfill. The residential wells sampled in late spring and early summer 2004 detected trace amounts of PFOA below the (HBV). PFOS and PFOA found in Oakdale municipal wells prompted the CLP to expand residential sampling to an area between the landfill and the impacted Oakdale municipal wells. The results showed PFOS and PFOA in some of the wells. By the end of FY 05, 235 residential wells in the area had been sampled. Nine wells were found to exceed the health based value for PFOS and three exceeded the calculated additivity Hazard Index Value for PFOS and PFOA. These 12 residences were supplied with bottled water and eventually provided with granular-activated carbon (GAC) filters to allow the residents to resume using their well water. Sixty-three residences with detections below the HBVs for PFOS and PFOA were placed on a schedule for routine monitoring. Any well samples that exceed the HBVs, as a result of routine monitoring, will be eligible for bottled water and GAC filters. The CLP is evaluating various remedies to address the PFC contamination at the Washington County Landfill. The city of Lake Elmo is proposing to extend municipal water to its residents living in the affected part of the city with help from a 3M grant.

## Land Use Issues

Land use issues at closed landfills are increasing. As development expands to more rural areas of the State, and as open areas in metropolitan communities become limited, property near and at landfills is becoming more attractive to developers and others for commercial and residential development and for recreational purposes. Challenges arise when specific land use desires come in conflict with ground-water and landfill gas contamination emanating from a landfill or with long-term response actions at the landfill that are the State's responsibility. These challenges become greater when contamination problems are not well communicated to those interested in developing property or when local zoning is not compatible with the CLP's long-term obligations at a landfill.

The CLP is designed to respond to these land use pressures by: 1) implementing and maintaining response actions that help alleviate impacts from ground-water contamination and landfill gas migration, 2) providing local governments with information about ground-water contaminant and landfill gas plumes as required by State statute (see Annual Reports), and 3) developing a site-specific Land Use Plan that better aligns local land-use zoning with CLP response action obligations at a landfill.

## Looking Ahead to FY 06

### Proposed New Projects

MPCA staff anticipate constructing improved covers, gas systems, and ground-water treatment systems as well as implementing other response actions, at several CLP landfills in FY 06. Table 6 provides planned activities at specific sites. Some major construction activities in FY 06 include starting design and construction of active gas systems at five landfills, new covers at nine landfills, a ground-water treatment system at one landfill, and a gas-to-energy pilot at one landfill.



Gas flare at the Louisville Landfill, Scott County

**Table 6: Anticipated Response Actions for FY 06**

Landfill	Class	Design, Oversight, Construction, and Other Activities
Albert Lea	B	Design and construct groundwater treatment system
Brookston Area	C	Install passive gas vents
East Bethel	B	Install active gas extraction system and new cover and relocate some waste
Floodwood	C	Install passive gas vents
Freeway	B	Design new cover and active gas extraction system
Gofer	C	Finish new cover
Hopkins	B	Design improved cover and gas collection system
Jackson County	C	Design new cover
Kluver	B	Install passive gas vents
La Grand	B	Design and construct new cover
Long Prairie	D	Design new cover
Meeker County	C	Finish new cover and waste consolidation
Minnesota Sanitation	D	Construct groundwater controls
Rock County	D	Install passive gas vents
Sibley County	C	Design new cover and passive gas vents
Washington County	A	Design and construct upgrade to groundwater treatment system to address PFC concerns
WDE	B	Gas to Energy Pilot
Winona County	B	Relocate waste and install new cover and active gas extraction system
WLSSD	B	Design active gas extraction system and new cover
Woodlake	B	Design and construct new cover and active gas extraction system and improve leachate collection system

## Other Activities

MPCA staff will continue to address the PFC contamination issue near the Washington County Landfill in FY 2006. Specific activities will include responding to residents with PFC concentrations exceeding the HBVs by offering them granular-activated carbon filters for their private water supplies, evaluating remedial alternatives to address the PFC contamination, and assessing other potential sources of the PFC contamination.

Additional activities for FY 2006 will include developing Land Use Plans at closed landfills, continued assessment of PFC contamination near closed landfills, exploring additional landfill gas to energy opportunities, and ongoing operation and maintenance activities.

## Web Information

The MPCA continues to add and update information concerning the CLP on the MPCA's Web site at [www.pca.state.mn.us/cleanup/landfill-closed.html](http://www.pca.state.mn.us/cleanup/landfill-closed.html). Staff updated the CLP Web site during FY 05 to make it more user-friendly. Site annual reports, especially those reflective of 2004 activities, continue to be added to the Web.

## Program Contacts

For more information about the CLP, contact:

- *Doug Day*, Unit Supervisor, Landfill Cleanup Program, (651) 297-1780, toll-free/TTY (800) 657-3864.
- *Jeff Lewis*, Section Manager, Petroleum and Landfill Remediation Programs, (651) 297-8505.
- *Shawn Ruotsinoja*, Project Leader, Closed Landfill Program, (651) 282-2382.

## *Appendix A: Financial Assurance*

Site Name	Financial Assurance Received	Amount Spent in FY 05	Total Amount Spent	Financial Assurance Balance
Anoka-Ramsey*	\$ 1,781,489	\$ -	\$ 1,781,489	\$ -
Cass Co. (L-R)	\$ 84,497	\$ 2,855	\$ 32,405	\$ 52,092
Cass Co. (W-H)	\$ 84,497	\$ 9,750	\$ 63,597	\$ 20,900
Chippewa County	\$ 362,516	\$ 12,609	\$ 110,492	\$ 252,024
Cook County	\$ 644,726	\$ 65,509	\$ 90,987	\$ 553,739
Dakhue	\$ 150,411	\$ -	\$ 150,411	\$ -
Dodge County	\$ 1,189,672	\$ 9,350	\$ 66,141	\$ 1,123,531
East Mesaba	\$ 696,244	\$ 47,974	\$ 196,400	\$ 499,844
French Lake	\$ 14,931	\$ -	\$ 14,931	\$ -
Grand Rapids	\$ 1,750,000	\$ 80,420	\$ 602,443	\$ 1,147,557
Hibbing	\$ 468,020	\$ 10,392	\$ 173,510	\$ 294,510
Isanti-Chisago	\$ 333,839	\$ -	\$ 333,839	\$ -
Lindenfelser	\$ 400,827	\$ -	\$ 400,827	\$ -
Long Prairie	\$ 72,973	\$ -	\$ 72,973	\$ -
Louisville	\$ 337,130	\$ -	\$ 337,130	\$ -
Meeker County	\$ 378,002	\$ -	\$ 378,002	\$ -
Northeast Otter Tail	\$ 590,996	\$ 47,274	\$ 69,035	\$ 521,961
Paynesville	\$ 111,641	\$ -	\$ 111,641	\$ -
Pipestone County	\$ 16,622	\$ -	\$ 16,622	\$ -
Redwood County	\$ 81,689	\$ -	\$ 81,689	\$ -
Sun Prairie	\$ 10,725	\$ -	\$ 10,725	\$ -
Tellijohn	\$ 351,406	\$ -	\$ 351,406	\$ -
Winona	\$ 1,586,726	\$ 131,158	\$ 366,014	\$ 1,220,712
Woodlake	\$ 1,350,000	\$ -	\$ 1,350,000	\$ -
WLSSD	\$ 4,338,747	\$ 112,431	\$ 112,431	\$ 4,226,316
<b>Total</b>	<b>\$ 15,406,837</b>	<b>\$ 529,722</b>	<b>\$ 7,275,140</b>	<b>\$ 8,131,697</b>

\*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: FY05 Financial Summary

Landfill Name	Class & Score	MPCA Salary & Expenses	Attorney General Support	Operation & Maintenance	Design/ Construction Non-Bond	Design/ Construction Bond	Landfill Totals
ADAMS (Re-located)	D/00	\$ 57		\$ 2,348			\$ 2,405
AITKIN AREA	D/26	\$ 2,958		\$ 8,190			\$ 11,148
ALBERT LEA	B/25	\$ 9,277		\$ 111,618		\$ 5,651	\$ 126,546
ANDERSON-SEBEKA	D/02	\$ 394		\$ 4,646			\$ 5,040
ANOKA-RAMSEY	D/03	\$ 8,642	\$ 770	\$ 343,054		\$ 47,220	\$ 399,686
BARNESVILLE	C/01	\$ 333		\$ 6,418			\$ 6,751
BATTLE LAKE	D/01	\$ 448		\$ 10,201			\$ 10,649
BECKER COUNTY	B/13	\$ 6,372		\$ 124,341	\$ 8,280	\$ 95,307	\$ 234,300
BENSON	D/03	\$ 1,688		\$ 8,926			\$ 10,614
BIG STONE COUNTY	D/02	\$ 1,751		\$ 11,468			\$ 13,219
BROOKSTON AREA	C/02	\$ 1,163		\$ 6,212			\$ 7,375
BUECKERS #1	D/04	\$ 1,791		\$ 8,666			\$ 10,457
BUECKERS #2 (Re-located)	D/00						\$ -
CARLTON COUNTY #2	D/05	\$ 5,841		\$ 42,353			\$ 48,194
CARLTON COUNTY SOUTH	B/10	\$ 4,052		\$ 18,499			\$ 22,551
CASS COUNTY (L-R)	D/05	\$ 672	\$ 30	\$ 2,855			\$ 3,557
CASS COUNTY (W-H)	D/02	\$ 643		\$ 9,750			\$ 10,393
CHIPPEWA COUNTY	D/11	\$ 2,375		\$ 12,609			\$ 14,984
COOK (AREA)	C/04	\$ 698		\$ 5,714			\$ 6,412
COOK COUNTY	D/03	\$ 7,649	\$ 150	\$ 48,509	\$ 17,000		\$ 73,308
COTTON	D/05	\$ 1,262		\$ 5,273			\$ 6,535
CROSBY	D/02	\$ 983		\$ 7,933			\$ 8,916
CROSBY AMERICAN PROPERTIES	B/07	\$ 7,079	\$ 1,175	\$ 19,241			\$ 27,495
DAKHUE	B/11	\$ 20,573	\$ 470	\$ 73,524		\$ 707,397	\$ 801,964
DODGE COUNTY	D/30	\$ 2,956		\$ 9,350			\$ 12,306
EAST BETHEL	B/40	\$ 37,389	\$ 23,923	\$ 137,440	\$ 180,822		\$ 379,574
EAST MESABA	C/18	\$ 12,291		\$ 22,534	\$ 25,440		\$ 60,265
EIGHTY ACRE	D/10	\$ 1,059		\$ 25,209			\$ 26,268
FARIBAULT COUNTY	C/15	\$ 1,688		\$ 11,129			\$ 12,817
FIFTY LAKES	D/04	\$ 554		\$ 4,683			\$ 5,237
FLOODWOOD	C/05	\$ 806		\$ 7,135			\$ 7,941
FLYING CLOUD	C/12	\$ 5,707		\$ 45,682			\$ 51,389
FREEWAY	B/100	\$ 18,084	\$ 8,670	\$ 13,536	\$ 45,092		\$ 85,382
FRENCH LAKE	D/03	\$ 1,433		\$ 4,134			\$ 5,567
GEISLERS	D/00	\$ 289					\$ 289
GOFER	C/17	\$ 27,814		\$ 13,314	\$ 580,348	\$ 1,420,556	\$ 2,042,032
GOODHUE CO-OP	C/11	\$ 2,826		\$ 8,857			\$ 11,683
GRAND RAPIDS	D/17	\$ 4,379		\$ 80,420		\$ 4,788	\$ 89,587
GREENBUSH (Re-located)	D/00	\$ 93					\$ 93

## *Appendix B: FY05 Financial Summary*

Landfill Name	Class & Score	MPCA Salary & Expenses	Attorney General Support	Operation & Maintenance	Design/ Construction Non-Bond	Design/ Construction Bond	Landfill Totals
HANSEN	C/14	\$ 1,446		\$ 6,208			\$ 7,654
HIBBING	D/07	\$ 987		\$ 10,392			\$ 11,379
HICKORY GROVE	D/02	\$ 564		\$ 4,266			\$ 4,830
HIGHWAY 77	C/02	\$ 1,009		\$ 3,853			\$ 4,862
HOPKINS	B/22	\$ 13,384	\$ 350	\$ 86,058		\$ 14,119	\$ 113,911
HOUSTON COUNTY	D/25	\$ 1,984		\$ 13,065			\$ 15,049
HOYT LAKES	C/03	\$ 1,312		\$ 3,783			\$ 5,095
HUDSON	C/05	\$ 652		\$ 3,317			\$ 3,969
IRON RANGE	C/04	\$ 520		\$ 6,906			\$ 7,426
IRONWOOD	D/09	\$ 5,676		\$ 104,924			\$ 110,600
ISANTI-CHISAGO	B/22	\$ 3,835		\$ 74,673			\$ 78,508
JACKSON COUNTY	C/06	\$ 1,642		\$ 7,652			\$ 9,294
JOHNSON BROS.	C/11	\$ 175		\$ 6,035			\$ 6,210
KARLSTAD	C/04	\$ 3,651		\$ 13,303	\$ 26,560		\$ 43,514
KILLIAN	D/05	\$ 1,597		\$ 6,221			\$ 7,818
KLUVER	B/15	\$ 7,552	\$ 3,040	\$ 21,289			\$ 31,881
KOOCHICHING COUNTY	C/11	\$ 8,454		\$ 83,852		\$ 98,067	\$ 190,373
KORF BROS.	D/15	\$ 5,236	\$ 30	\$ 24,364			\$ 29,630
KUMMER	B/13	\$ 2,524		\$ 44,286			\$ 46,810
LA CRESCENT	C/03	\$ 1,661	\$ 1,770		\$ 11,721		\$ 15,152
LA GRANDE	B/16	\$ 22,476	\$ 100	\$ 8,111	\$ 51,575		\$ 82,262
LAKE COUNTY	C/15	\$ 1,976		\$ 5,750			\$ 7,726
LAKE OF THE WOODS COUNTY	C/08	\$ 526		\$ 4,951			\$ 5,477
LAND INVESTORS (Re-located)	D/15	\$ 480		\$ 3,326			\$ 3,806
LEECH LAKE	D/04	\$ 1,851	\$ 4,730	\$ 23,076		\$ 5,674	\$ 35,331
LESLIE BENSON	C/01	\$ 430	\$ 90				\$ 520
LINCOLN COUNTY (Re-located)	D/02	\$ 122					\$ 122
LINDALA	D/11	\$ 2,981	\$ 190	\$ 10,495			\$ 13,666
LINDENFELSER	D07	\$ 4,381		\$ 69,406			\$ 73,787
LONG PRAIRIE	D/07	\$ 5,756	\$ 1,690	\$ 8,878			\$ 16,324
LOUISVILLE	D/04	\$ 10,025	\$ 5,740	\$ 103,648			\$ 119,413
MAHNOMEN COUNTY	C/10	\$ 1,038		\$ 5,430			\$ 6,468
MANKATO	D/23	\$ 1,939		\$ 8,194			\$ 10,133
MAPLE	D/23	\$ 1,876	\$ 470	\$ 9,689			\$ 12,035
MCKINLEY	C/04	\$ 595		\$ 3,363			\$ 3,958
MEEKER COUNTY	C/13	\$ 27,950		\$ 11,174	\$ 443,414	\$ 497,300	\$ 979,838
MILLE LACS COUNTY	C/02	\$ 59		\$ 6,923			\$ 6,982
MN SANITATION	D/07	\$ 6,968		\$ 5,233	\$ 23,237		\$ 35,438
MURRAY COUNTY	D/105	\$ 2,323		\$ 24,686			\$ 27,009

## *Appendix B: FY05 Financial Summary (Continued)*

Landfill Name	Class & Score	MPCA Salary & Expenses	Attorney General Support	Operation & Maintenance	Design/ Construction Non-Bond	Design/ Construction Bond	Landfill Totals
NORTHEAST OTTER TAIL	D/03	\$ 2,018		\$ 47,247			\$ 49,265
NORTHOME	D/03	\$ 106		\$ 3,705			\$ 3,811
NORTHWEST ANGLE	B/02	\$ 361		\$ 1,983			\$ 2,344
NORTHWOODS	D/09	\$ 842		\$ 12,419			\$ 13,261
OAK GROVE	D/11	\$ 3,900		\$ 92,061			\$ 95,961
OLMSTED COUNTY	D/13	\$ 11,926	\$ 40	\$ 138,079			\$ 150,045
ORR	B/05	\$ 114					\$ 114
PAYNESVILLE	D/07	\$ 8,258	\$ 550	\$ 8,670	\$ 12,331		\$ 29,809
PICKETT	B/03	\$ 1,091		\$ 15,719			\$ 16,810
PINE LANE	D/06	\$ 11,401	\$ 250	\$ 65,306		\$ 243,823	\$ 320,780
PIPESTONE COUNTY	C/08	\$ 2,151		\$ 12,707			\$ 14,858
PORTAGE MOD. (Re-located)	D/00						\$ -
RED ROCK	D/26	\$ 1,795		\$ 17,204			\$ 18,999
REDWOOD COUNTY	D/08	\$ 7,615	\$ 190	\$ 22,643		\$ 71,893	\$ 102,341
ROCK COUNTY	D/07	\$ 3,745		\$ 10,765	\$ 14,570		\$ 29,080
SALOL / ROSEAU	D/04	\$ 2,005	\$ 70	\$ 12,882			\$ 14,957
SAUK CENTRE	D/22	\$ 7,258	\$ 960	\$ 19,289		\$ 43,892	\$ 71,399
SIBLEY COUNTY	C/07	\$ 928		\$ 11,142			\$ 12,070
ST. AUGUSTA	C/21	\$ 16,241	\$ 510	\$ 114,463			\$ 131,214
STEVENS COUNTY	B/30	\$ 2,940		\$ 7,551		\$ 10,718	\$ 21,209
SUN PRAIRIE	D/22	\$ 2,106	\$ 80	\$ 14,212			\$ 16,398
TELLIJOHN	D/15	\$ 6,107	\$ 190	\$ 73,011			\$ 79,308
VERMILLION DAM (Re-located)	D/00						\$ -
VERMILLION MODIFIED	D/11	\$ 580		\$ 5,377			\$ 5,957
WABASHA COUNTY	D/11	\$ 1,039	\$ 20	\$ 14,668			\$ 15,727
WADENA COUNTY	D/05	\$ 992	\$ 70	\$ 4,135			\$ 5,197
WASECA COUNTY	B/20	\$ 6,657		\$ 33,929		\$ 436,001	\$ 476,587
WASHINGTON COUNTY	A/24	\$ 41,781	\$ 360	\$ 156,413	\$ 110,162		\$ 308,716
WATONWAN COUNTY	D/06	\$ 4,791		\$ 87,256			\$ 92,047
WASTE DISPOSAL ENG (WDE)	B/116	\$ 40,135	\$ 5,360	\$ 259,408	\$ 1,212,960		\$ 1,517,863
WINONA COUNTY	B/22	\$ 14,394		\$ 84,158	\$ 47,000	\$ 38,279	\$ 183,831
WLSSD	B/48	\$ 18,591	\$ 8,430	\$ 61,346	\$ 51,085		\$ 139,452
WOODLAKE	B/34	\$ 15,526	\$ 40	\$ 335,990	\$ 14,482	\$ 25,617	\$ 391,655
YELLOW MEDICINE COUNTY	D/20	\$ 1,588		\$ 12,837			\$ 14,425
Program Support		\$ 2,461,546	\$ 78,352	\$ 163,817			\$ 2,703,715
<b>TOTAL</b>		<b>\$ 3,062,210</b>	<b>\$ 148,860</b>	<b>\$ 4,032,943</b>	<b>\$ 2,876,079</b>	<b>\$ 3,766,302</b>	<b>\$ 13,886,394</b>

## *Appendix C: CLP State Ownership of Landfills and Adjacent Property*

Appendix C: CLP State Ownership of Landfills and Adjacent Property.								
SITE NAME*	County	Landfill (Acres)	Adj Property (Acres)	Twp	Range	Sect	Donated (Y/N)	When Acquired
ANDERSON/SEBEKA	WADENA	27		137	35	29	Y	8/3/99
ANOKA/RAMSEY	ANOKA	317		32	25	27	Y	6/30/98
Anoka/Ramsey Buffer	ANOKA		23	32	25	23	N	12/7/01
BUECKERS #1	STEARNS	17	13	126	32	31	Y	9/23/94
DAKHUE	DAKOTA	80		113	18	24	Y	11/1/96
EAST BETHEL	ANOKA	60		33	23	8&9	Y	7/22/99
EAST MESABA	ST LOUIS	128		58	17	15	Y	12/31/96
FRENCH LAKE	WRIGHT	11		120	28	28	Y	8/16/96
French Lake Buffer	WRIGHT		69	120	28	28	N	5/24/96
ISANTI/CHISAGO	ISANTI	40		35	23	1	Y	8/25/97
Kummer Buffer	BELTRAMI		7	147	33	32	N	12/3/96
Kummer Buffer	BELTRAMI		3	147	33	32	N	6/27/03
LA GRANDE	DOUGLAS	80		128	38	18	Y	6/25/97
LAND INVESTORS, INC.	BENTON	9		36	30	11	Y	6/30/98
LEECH LAKE	HUBBARD	60		145	32	13	Y	6/17/97
Leech Lake Buffer/Bergeron Prop.	HUBBARD		13	145	32	13	N	12/5/03
Leech Lake Buffer/Goodman Prop.	HUBBARD		3	145	32	13	N	2/10/04
LINDALA	WRIGHT	60		120	28	3	Y	3/6/00
Lindala Buffer	WRIGHT		23	120	28	3	Y	5/28/99
LINDENFELSER	WRIGHT	60		120	24	26	Y	4/12/00
Lindenfelser Buffer	WRIGHT		11	120	24	26	N	4/12/00
Long Prairie Buffer/Prill Prop.	TODD		80	129	32	18	N	11/1/02
Long Prairie Buffer/Loegeving Prop.	TODD		20	129	32	18	N	6/7/04
OAK GROVE	ANOKA	160		33	24	28	Y	1/27/00
Oak Grove Buffer (3 properties)	ANOKA		6	33	24	28	N	9/26/96
OLMSTED	OLMSTED	252		108	14	27	Y	2/27/96
Olmsted Buffer	OLMSTED		47	108	14	27	y	2/27/96
PAYNESVILLE	STEARNS	56		122	32	22	Y	6/1/00
PICKETT	HUBBARD	16		140	34	7	Y	5/31/02
PINE LANE	CHISAGO	44		33	21	16/17/20	Y	12/20/01
Pine Lane Buffer	CHISAGO		22	33	21	16/17/20	N	12/20/01
PIPESTONE	PIPESTONE	40		107	44	31	Y	9/13/96
RED ROCK	MOWER	80		108	17	32	Y	12/26/96
Red Rock Buffer	MOWER		81	108	17	32	N	6/18/97
SALOL	ROSEAU	102		162	38	15	Y	12/23/96
Sauk Centre Buffer	STEARNS		11	126	34	14	N	6/26/03
Sauk Centre Buffer	STEARNS		3	126	34	14	N	7/8/03
ST AUGUSTA	STEARNS	48		123	27	17/12	Y	6/30/98
St. Aug. Buffer/Hankemeyer	STEARNS		43	123	27	7	Y	5/8/97
St. Aug. Buffer/McConnell	STEARNS		35	123	27	7	N	12/21/96
SUN PRAIRIE	LE SUEUR	80		111	24	24	Y	6/30/98
WABASHA COUNTY	WABASHA	29		109	24	24	Y	11/24/03
Washington Co. Buffer	WASHINGTON		20	29	21	10	N	11/21/95
WDE Buffer	ANOKA		6	32	24	27	N	2/20/02
WOODLAKE	HENNEPIN	85		118	23	8	Y	5/11/00
Woodlake Buffer	HENNEPIN		110	118	23	8	Y	5/17/00
<b>Total</b>		<b>1,941</b>	<b>649</b>					
*(Site names in upper case include landfill permitted areas. Site names in lower case are buffer areas adjacent to or surrounding the landfill.)								