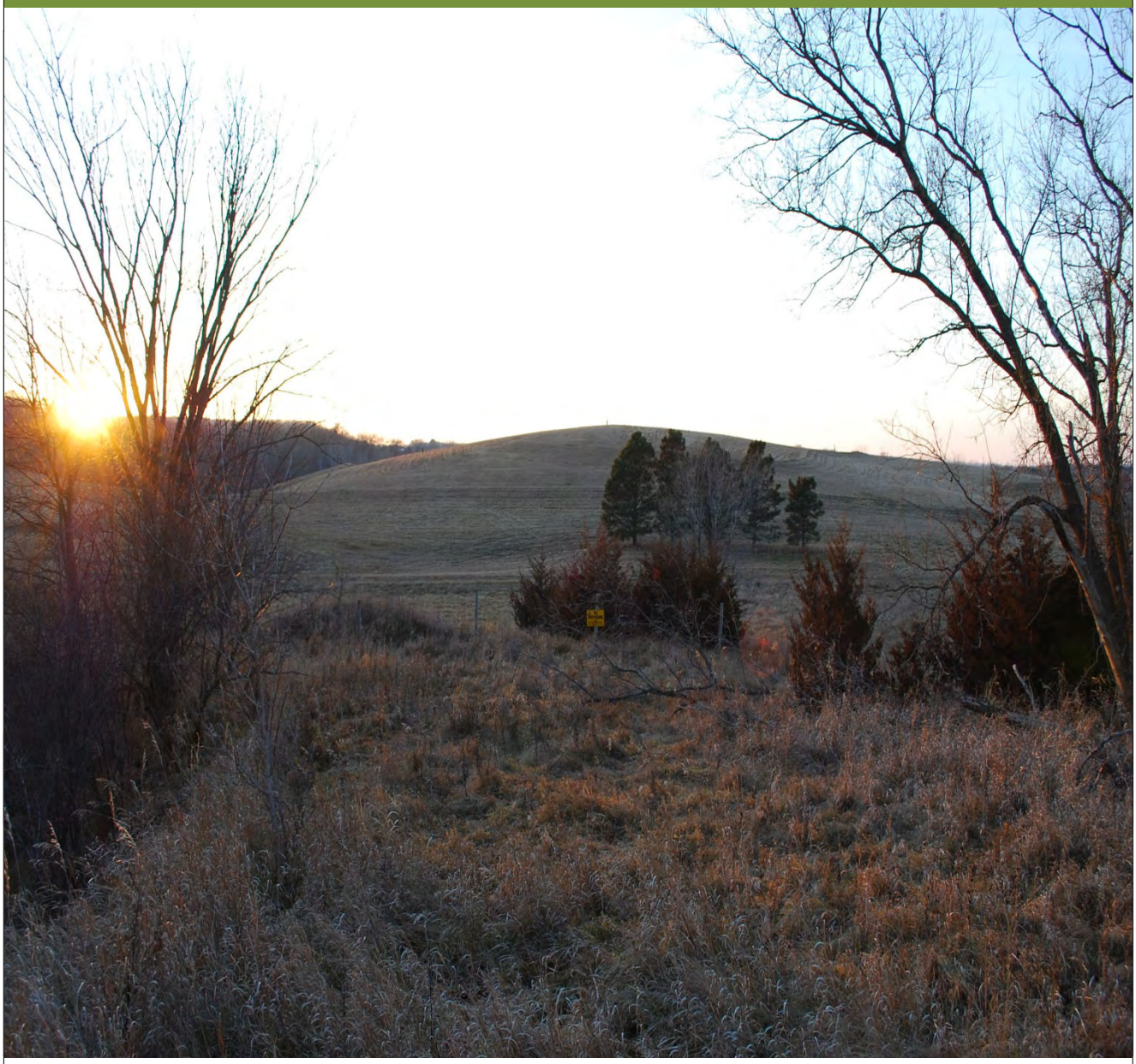
Closed Landfill Program

2011 Report to the Legislature



Minnesota Pollution Control Agency

December 2011

Program Overview

Purpose

The 1994 LCA created Minnesota's CLP so the state could effectively protect human health, safety and the environment associated with 112 closed, state-permitted, mixed municipal solid waste landfills throughout Minnesota. The program's goals to help achieve this outcome include managing the risks associated with human exposure to landfill contaminants and methane gas and mitigating the degradation of groundwater and surface water. Managing these risks is best accomplished by implementing certain strategies, including: (1) understanding the extent and magnitude of contaminant and methane gas impacts, as well as the overall risks, at each site; (2) maintaining the landfills and operating any remediation systems; (3) implementing construction-related response actions to reasonably address contaminant and methane gas migration issues; and (4) working with local governments to manage on-site and nearby land use. Table 1 summarizes the CLP's desired outcome, goals and strategies.

Table 1: Outcome, goals and strategies of the CLP

Desired outcome	Goals	Strategies
Protect human health, safety, and the environment associated with closed landfills	Manage the risk Minimize human exposure to contaminants and methane gas Minimize degradation of groundwater and surface water	Understand extent and magnitude of contamination and methane gas migration Clean up and/or control groundwater contamination Control or reduce methane gas migration Cooperatively manage land use Operate and maintain landfills

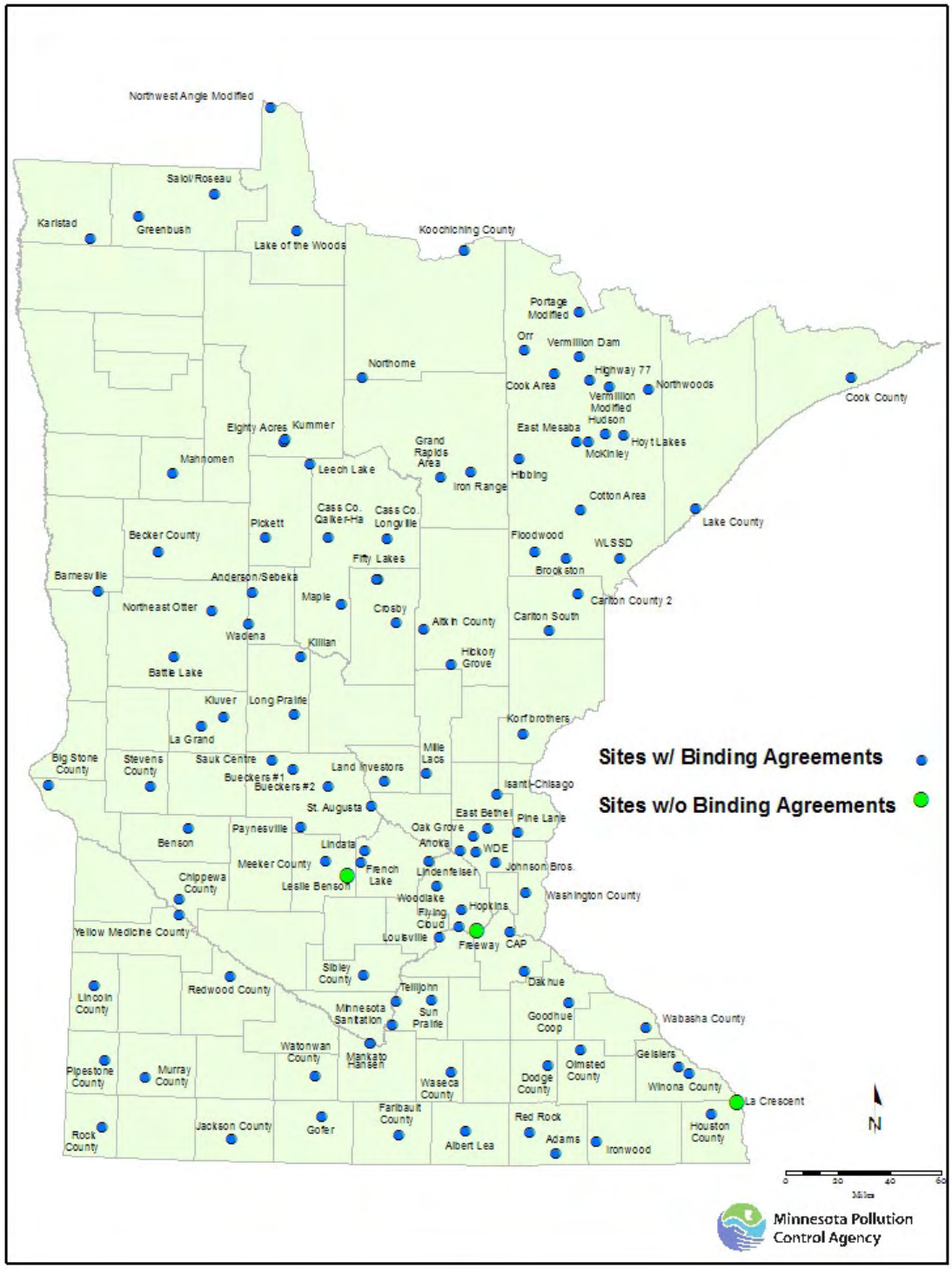
The CLP manages the risk to public health and safety in a cyclical fashion referred to as the "Risk Management Cycle." First, site information pertinent to understanding the risks at each landfill is collected (monitoring groundwater, methane gas, nearby land use) and stored in a database. Second, the CLP evaluates the information, identifies the risks at each site and determines each site's numerical risk using a risk-scoring model, and identifies the most practical response actions needed to lower the risk. Third, response actions are implemented based on several factors, including risk-score ranking, available resources (funds, staff), other required site work (operation and maintenance, land surveys, repairs), and other initiatives that are agency and program priorities (e.g., renewable energy). Fourth, the response actions implemented are measured for effectiveness and the monitoring of site conditions is continued.

Example sign being placed around some CLP landfills

Transfers from the Environmental Fund

The Environmental Fund is used to support many programs at the MPCA including, in part, the CLP. Various sources of revenue are deposited into the Environmental Fund. A portion of this fund is then transferred into the Remediation Fund for use at CLP sites and for other remediation programs. Minnesota Laws (2009), Ch. 37, Art. 1, sec. 3, subd. 6 required $40 million to be transferred from the Environmental Fund to the Remediation Fund for the FY 2010–2011 biennium.

Figure 1. Locations of CLP landfills



General obligation bonds

General obligation bonds are used to fund capital improvements, including the construction of remedial systems and the acquisition of land, at publicly owned CLP sites. Since 1994, the Minnesota Legislature has made a number of authorizations of general obligation bonds for these activities at closed landfills, including an initial authorization of $90 million in 1994. The 1994 authorization was intended to be available long term to meet the future capital needs of the program. However, in 2000, Minn. Stat. § 16A.642 cancelled all unused bonds more than four years old, regardless of program need or legislative intent. As a result, nearly $56 million of the original $90 million was cancelled. All authorizations through FY 2011, together with the cancelations, have resulted in a net authorization of over $102 million of bonds for use at closed landfills. Through FY 2011, more than $87 million of general obligation bonds has been spent on construction activities and land acquisitions at 51 sites.

Financial assurance

Minn. R. 7035.2665 requires owners of mixed municipal solid waste landfills remaining in operation after July 1, 1990, to set aside funds to pay for the cost of facility closure, postclosure care, and contingency action. Because several of the landfills that entered the CLP were still in operation as of July 1, 1990, their owners were required to meet these financial assurance rules. As part of the LCA, the owners of these landfills, upon entering the CLP, were required to transfer their financial assurance balances to the MPCA after they had met closure requirements.

From inception of the CLP through FY 2011, the state has received a total of $15,406,837 in financial assurance payments from owners or operators of 25 closed landfills. 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. Unless legislative changes allow additional sites to qualify for the CLP and transferring remaining financial assurance funds is required, no additional financial assurance dollars are anticipated in the future.

Insurance recovery

The LCA 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 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.

The state commenced six lawsuits against 56 insurance companies, with assistance from the state's Special Attorneys that had been appointed by the Attorney General's office. The final two lawsuits were settled in FY 2011.

The state's settlement efforts in FY 2011 resulted in global settlements totaling $11,900,000 with five insurance carriers that had been sued by the state. Global settlements resolve all of an insurance carrier's liability for all of the landfills covered by the 1994 Landfill Cleanup Act. Payments from these settlements, plus from two settlements reached in the prior fiscal year (totaling $7,771,237), was deposited in the Remediation Fund in FY 2011 after paying the Special Attorneys $4,129,850. Of the amount the state deposited, $743,241 was credited to the natural resources damages (NRD) account for the NRD portion of the settlements, $3,513,998 was transferred to the Closed Landfill Investment Fund, and $3,513,998 remained in the Remediation Fund. Through FY 2011, the state's share of all insurance

carrier settlements totaled $96.6 million. Although all settlements have been resolved successfully, some small payments will continue to be credited to the Remediation Fund in the future due to certain insolvent insurance carriers that were party to earlier settlements.

Under the LCA, insurance carriers may request that the state's claims for natural resource damages (NRDs) at any of the landfills in the CLP be included in settlements with the state. NRD payments received in FY 2011 as a result of settlements amounted to $743,241. Total NRD payments received through June 30, 2011, equal $9,398,601. Through its Remediation Fund Grants Program, the Minnesota Department of Natural Resources (DNR) uses NRD recoveries to rehabilitate, restore or acquire natural resources to remedy injuries or losses to natural resources resulting from a release of a hazardous substance. No grants were issued in FY 2011.

3M Settlement Agreement and Consent Order

The MPCA executed a Settlement Agreement and Consent Order with the 3M Company (3M) in May 2007, that authorized 3M to take response actions to address releases of PFCs at three disposal sites. As part of this agreement, 3M agreed to provide the MPCA $8 million for the MPCA's remedial actions at the Washington County Landfill. All $8 million has been spent through FY 2011.

Aerial view of nearly completed construction at the Washington County Landfill

Closed Landfill Investment Fund

In 1999, the Minnesota Legislature established the Closed Landfill Investment Fund (CLIF) for the purpose of setting aside and investing money for future postclosure care of the CLP landfills. The legislature foresaw the need to plan for a way to fund the state's obligation to care for these landfills in perpetuity. Initially, $5.1 million was transferred from the former Solid Waste Fund to the CLIF in each of the first four years. In addition, proceeds from settlements with insurance carriers (see Insurance recovery) were deposited equally in the Remediation Fund and the CLIF. The CLIF cannot be used to fund postclosure care activities until after Fiscal Year 2020. During the 2010 legislative session, however, the legislature transferred $48 million from the CLIF to the General Fund to help address the state's budget shortfall. Legislation requires, however, that $12 million, plus interest, be transferred back to the CLIF in each of four fiscal years starting in FY 2014. As of June 30, 2011, approximately $3,695,000 remained in the CLIF.

Program Activities in Fiscal Year 2011

Fiscal Year 2011 expenditures

Program expenditures for FY 2011 totaled $27,792,067. A summary of these expenditures is found in Table 2. Expenditures for each landfill in FY 2011 are itemized in Appendix A.

Collecting site information

Site risks are evaluated by monitoring groundwater, surface water, and landfill gas migration. Currently, the CLP samples over 2,750 monitoring points comprised of monitoring wells, gas probes and wells, residential wells, surface waters, piezometers and springs. These data are stored in a database referred to as the "Environmental Data Management System." Routine inspections are also conducted at each landfill. Site conditions are observed and items needing repair are noted. In addition, any nearby development that is observed is recorded.

Table 2. CLP expenditures

Expenditure type	FY 2011	Cumulative
Closed Landfill Program Administration and Support	$2,234,708	$37,534,252
Remedial Response Actions*	$14,822,201	$181,169,539
Operation and Maintenance	$4,217,091	$57,411,719
Land Surveys and Property Records Reviews	$184,435	$244,865
CLP Legal Counsel (Attorney General)	$69,521	$2,393,629
Insurance Recovery Legal Counsel (Attorney General)	$134,261	$3,220,882
Insurance Recovery Legal Counsel (Special Attorneys)	$4,129,850	$43,030,219
EPA Reimbursement	$0	$4,014,550
Responsible Party Reimbursements	$0	$37,107,759
Total	**$27,792,067**	**$366,127,415**

Expenditure information is based on MAPS data for the time period of July 1, 2010, to June 30, 2011.
*These activities include both Bond and non-Bond expenditures.

Understanding and evaluating site risks

Site information that is collected is evaluated to help ascertain risks at each site. Minn. Stat. § 115B.40, subd. 2 requires the MPCA to establish and update a priority list for preventing or responding to releases of hazardous substances, pollutants and contaminants, or decomposition gases at closed landfills. The CLP uses a scoring model to determine risk at each site. Landfills are scored based on hazards present at each site (monitoring data and field observations), the conditions that exacerbate those hazards (example: subsurface conditions), and the likelihood the public will be exposed to those hazards (distance to wells and buildings, population density). Landfills with high risk scores receive a high ranking or priority.

The CLP first scored and ranked the landfills and identified response actions for several of the high-risk sites in late 2009. These response actions ranged from constructing new liners and covers to installing gas vents to implementing CLUPs (see Local land use controls). This list was used, in part, to establish CLP work priorities in FY 2010 and FY 2011. For some landfills, remedial response actions had already been completed and the remedies undertaken were simply monitored for remedy effectiveness. For these sites, risk scores are expected to decrease over time. An updated priority list was developed in September 2011, which will help guide the future work of the CLP (see Table 3).

Not all CLP construction activities are necessarily reflected in this priority list because not all construction is directly risk related. For example, construction may be necessary to replace an aging active gas system, leachate-collection system, or equipment or parts — even at landfills that have a low risk score and ranking.

Response actions taken

Various response actions were taken in FY 2011 to address the risks posed by the closed landfills. These actions included implementing remedial response actions that were focused on reducing risks at the sites and were based on, in part, the risk priority list. Response actions also included operation and maintenance activities at all the landfills.

Cover construction at the East Mesaba Landfill, St. Louis County

Table 3. Site risk priority list (Top 30) – September 2011

Priority ranking	Landfill	Risk score	Initial response action completed or needed to lower risk score	Status
1	Washington County	208250	Complete relocation of waste on site on constructed triple-lined cells and monitor effectiveness of remedy	Ongoing
2	Hopkins	41900	Construct remedy to relocate waste away from adjacent property; construct new cover and gas wells	FY 2012
3	Lindala	25160	Assist county in implementing CLUP	Ongoing
4	WDE	23735	Design and install C3 extraction system at hazardous waste pit	FY 2012
5	Becker County	22581	Complete CLUP to address future land use	FY 2012
6	WLSSD	15500	Monitor effectiveness of waste relocation, upgraded cover and active gas-extraction system	Ongoing
7	Korf Bros.	9640	Install gas probe; Complete CLUP to address future land use	FY 2012
8	Dodge County	8875	Continue gas monitoring; Complete CLUP to address future land use	FY 2012
9	Houston County	7103	Feasibility study to address gas concerns; install additional gas probes	FY 2012
10	East Bethel	6974	Complete CLUP to address future land use	FY 2012
11	Crosby American Properties	6920	Install additional passive gas vents near property boundary	FY 2012
12	Red Rock	6740	Complete groundwater investigation/test pits	FY 2013
13	Freeway	6606	Relocate waste on constructed lined cell or construct new cover and active gas system with waste in place.	No BA
14	Mille Lacs County	5995	Assist county in implementing CLUP	Ongoing
15	Flying Cloud	5725	Upgrade cover and active gas system	FY 2013
16	Isanti-Chisago	5406	Complete CLUP to address future land use	FY 2012
17	Anoka-Ramsey	5284	Complete CLUP to address future land use	FY 2012
18	La Crescent	4910	Install gas probes	No BA
19	Bueckers #1	4790	Update/correct current gas data	Ongoing
20	Salol-Roseau	4760	Install additional gas probes and wells	FY 2012
21	Pine Lane	4685	Complete CLUP to address future land use	FY 2012
22	Maple	4471	Complete CLUP to address future land use	FY 2012
23	Woodlake	4290	Investigate gas migration on north; Install passive gas vents and probes if needed	FY 2012
24	Paynesville	3905	Complete CLUP to address future land use	FY 2012
25	Carlton County No. 2	3754	Complete groundwater investigation	FY 2013
26	Ironwood	3690	Enhance groundwater pumpout	FY 2013
27	Stevens County	3520	Install gas probes near transfer station	FY 2012
28	Louisville	3202	Assist city in implementing CLUP	Ongoing
29	Albert Lea	3126	Monitor effectiveness of waste relocation	Ongoing
30	Koochiching County	3126	Upgrade leachate collection system, cover, and gas system	FY 2012