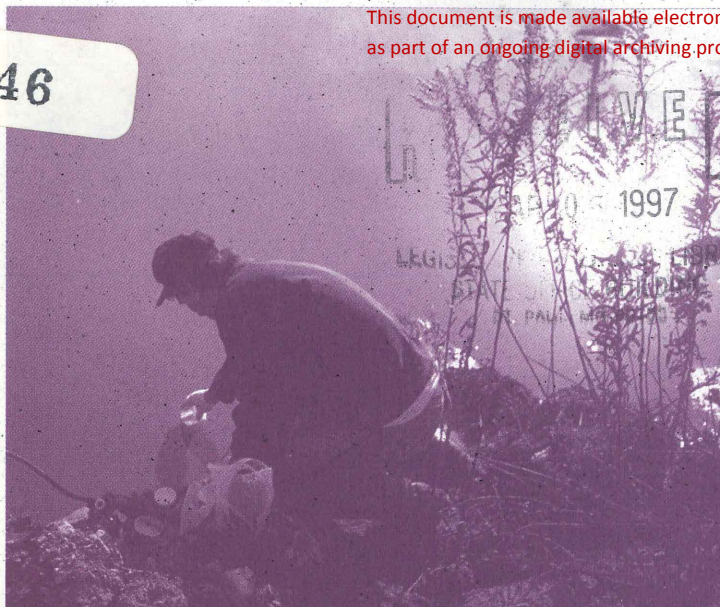


970146

Minnesota
Pollution
Control
Agency



Minnesota Superfund Annual Report

The term "Superfund" means many things to the citizens of Minnesota. It is a law that was enacted to protect public health and the environment by driving cleanup of old hazardous waste sites where past disposal practices have resulted in present-day harm. It is a fund that pays for responses to environmental emergencies, such as chemical spills, contaminated drinking water supplies, abandoned barrels, and other imminent threats to Minnesota communities. It is a process that involves law, science, and technology in restoring the state's air, land, and water resources and protecting the public health. This 1996 report on the law, fund, and process shows how the federal and state Superfund programs have benefited the state's citizens and natural environment during the last fiscal year.

In 1980, the consequences of the United States' industrial past had become clear, in public concerns about old hazardous waste sites such as Love Canal. The U.S. Congress enacted the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), which established a process for cleaning up such problems of the past. Congress also created a fund, popularly termed "Superfund," to pay for sites where environmental emergencies threatened and where parties responsible for the contamination were unknown, unable to pay for cleanup, or unwilling to undertake their cleanup responsibilities. In 1983, the Minnesota Legislature enacted state law to complement and parallel CERCLA, the Minnesota Environmental Response and Liability Act (MERLA). CERCLA, MERLA and the Resource Conservation and Recovery Act have changed hazardous waste disposal practices in Minnesota.

MERLA has undergone continuous change since its creation. The Minnesota Comprehensive Ground Water Protection Act of 1989 amended the law to allow the Minnesota Department of Agriculture to access the fund for cleanups involving agricultural chemicals. In 1992, the Land Recycling Act allowed parties who voluntarily cleaned up old sites to receive legal assurances that would protect them from Superfund liability, stimulating investigations and cleanups of land that otherwise might have stood useless for years. In 1994, the Landfill Cleanup Program was established to allow removal of old, closed, leaking landfills from Superfund liability, making them a public responsibility. In addition, the legislature created a Hazardous Waste Generator Loan Program to assist small businesses with cleanup expenses. And in 1995, the U.S. EPA provided funding for assessment of "brownfield" sites, which present barriers to development that could bring jobs and economic health, especially to inner-city areas.

This report summarizes MERLA's and CERCLA's accomplishments, outlines how Fund dollars have been spent on behalf of Minnesota communities, and describes changes in both state and federal approaches to dealing with contaminated land.

FY 1996 SUPERFUND

The Future of Minnesota Superfund

While 151 of Minnesota's 161 sites are cleaned up or in process, the job of investigating and cleaning up hazardous waste sites is far from done. The numbers reflect the MPCA's and MDA's focus on "worst sites first" - big industries, coal-gas plants, major spill or leak sites, sites with impacts on drinking water or water bodies. Now, it's time to investigate and prioritize the remaining sites — former open dumps, small former industrial properties in inner city areas, and other "brownfields" that adversely affect communities environmentally and economically.

To make sure the MPCA approaches future sites in the most positive and cooperative way, the Superfund staff undertook a long-range planning process called COMPASS. Job one was finding out what the agency's customers thought would improve the Superfund process and outcomes. Focus groups and surveys of consultants, regulated parties, citizens and others provided this "to do" list for MPCA:

- Address health and environmental concerns on the basis of risk;
- Remove roadblocks to economic redevelopment of contaminated land;
- Provide liability assurances (which do away with fear of Superfund lawsuits) to stimulate cleanups paid for by private dollars;
- Determine cleanup plans on the basis of future land use;
- Make sure that all players in the process have a full understanding of common goals;
- Provide consultants investigating sites with clear expectations through guidance documents; and

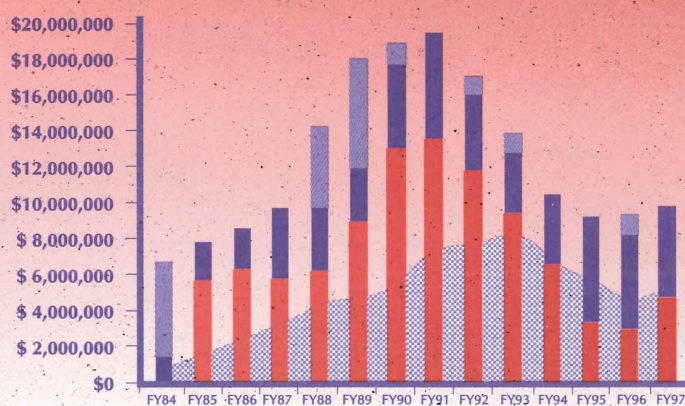
- Help businesses and local governments communicate with the public about site-specific problems.

The MPCA and MDA already fulfill many of these expectations through voluntary cleanup programs in both agencies. Through COMPASS, the MPCA is already working on risk-based decision-making processes, guidance documents, and cleanup goals based on land use.

Funding future Superfund efforts may be problematic; as publicly funded site activities move from the investigative to the more expensive cleanup phase, funds are dwindling. The revenue from appropriations, a tax on hazardous-waste generators and penalties are not keeping pace with the needed cleanup activities (see figure below).

Work is proceeding with responsible parties who are working on site cleanup. In FY 96, for every state Superfund administrative dollar expended in working with responsible parties, approximately \$20 in private dollars were invested in cleanup activities. This does not include the private dollars used in cleanup activities in the VIC program. The Minnesota Legislature will be asked to look at this issue to determine how best to fund the program in the coming years.

Historical Income and Expense Comparison



LEGEND

- Expenditures
- Prior year carryover
- FY income
- Appropriations

FY 1996 Superfund

Superfund Community Relations

The MPCA is committed to informing citizens, local officials, environmental groups and the media about important milestones at Superfund sites. This is accomplished through a variety of communication tools, including direct mailings of fact sheets and update letters to interested people, news releases to local and other interested media, public gatherings in the community and phone calls to local interested officials.

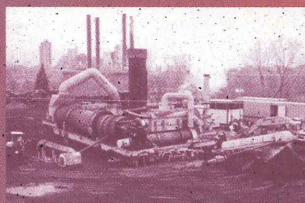
Site-specific information is usually provided about the following activities:

- discovery of drinking-water well contamination;
- addition or removal of a site from the state Superfund list;
- the beginning of site investigation;
- the results of site investigation;
- proposed cleanup alternatives;
- changes in the cleanup plan or activities; and
- completion of the cleanup activities.

The MPCA's community relations efforts also include seeking public comment on site cleanup plans through a 30-day comment period and public involvement opportunities. MPCA uses a flexible approach, choosing the public forum that best suits the community's needs: availability sessions with interested or concerned residents; open houses, where "learning stations" are set up to educate the public; or Community Work Groups (CWGs), which serve as a regular forum for diverse community interests.

In addition, MPCA responds to an estimated 300 calls and 50 information requests each month about contaminated land issues. New interest among communities about "brownfields" sites have generated an

increase in requests for agency data and cleanup methods, a trend that may continue throughout 1997.



CASE STUDY

Minnegasco (Former Minneapolis Gas Works) Site

The Community Advisory Council (CAC), established by Minnegasco and the MPCA in September 1994 is an interesting example of a community work group established in response to strong community interest. During the summer of 1994, public outcry about odors associated with the cleanup of spent-oxide box filler at the site stopped the project. Anticipating additional cleanup activities at the site, Minnegasco invited concerned groups to select representatives to serve on a CAC. "Groups" initially included three residential associations; three business and neighborhood improvement groups; the University of Minnesota; and the Minneapolis Mayor's Office, City Council, Community Development Association, and Park and Recreation Board. All of the groups, except one residential association, sent representatives to the council. A few months into the process, another group, the Environmental Law Society at the U of M, asked to have a representative on the Council; the CAC representatives approved this addition.

The CAC consists of these members plus community involvement coordinators from Minnegasco, the MPCA and the Minnesota Department of Health (MDH). Minnegasco, MPCA and MDH members express the views of their company/agencies but do not participate in the Council's recommendations. Technical staff from the MPCA, MDH, and Minnegasco and their consultants, serve the CAC as "technical resource members." A neutral facilitator, available through the Office of Dispute Resolution at the Minnesota Department of Administration, leads the meetings.

The CAC has made recommendations on the location of the site's ground-water treatment building and the technology used for soil cleanup. Early in the CAC process, most meetings involved providing the council with background information about the site and the Superfund Process. Anticipating a decision about soil treatment, the CAC, working through Minnegasco's consultant, developed a chart that compared the community's criteria to available clean-up options. The council also developed a "decision tree" to be used by Minnegasco and the MPCA in responding to odor complaints.

The CAC has been instrumental in helping Minnegasco keep the cleanup moving along. "The CAC has had a positive impact on the whole process through its active, consistent participation and commitment to act as the communications contact in the neighborhood," says Karen Studders, director of environmental programs for Minnegasco. "There's no better way to prevent surprises than through community involvement and communication."

In addition, the CAC has provided meaningful community involvement in the decision-making process. "The Council has provided an effective forum for hearing, evaluating and disseminating communications (among the people in the surrounding community and the organizations involved in treating the site)," says Salvatore Franco, a CAC representative. "I... believe that the high level of consensus which the Council has achieved about major issues... has helped to raise significantly the community's confidence that its interests are taken into account as the project progresses."

Superfund Responsibilities

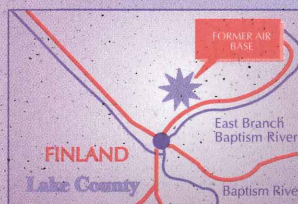
In 1996, the state and federal Superfund laws applied to a number of different types of hazardous waste sites, including:

- 161 state Superfund sites, which are high-priority sites based on public health or environmental risk;
- 35 federal Superfund sites (a subset of the 161 state sites), which the U.S. EPA considers high priority for cleanup;
- 5 sites of agricultural chemical spills and contamination (another subset of the state sites), which the MDA considers high priority for cleanup;
- 723 state Voluntary Investigation and Cleanup (VIC) sites, which are being investigated and/or cleaned up under the 1992 Land Recycling Act and its amendments;
- 500 sites listed on the federal Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS), sites where the potential exists for environmental contamination;
- 984 file evaluations, which include reviews of lists, maps, or databases for people seeking potential contamination problems associated with specific locations or planning a preliminary investigation of property;
- 23 declared emergencies, including chemical leaks, spills or accidents, and 305 abandoned barrels.

Responding to Emergency Situations

When emergency situations involving hazardous waste develop, Superfund dollars often are tapped to respond. Among the types of emergencies for which Superfund is used are tank or pipeline leaks or spills; train, truck or tank accidents; abandoned drums; drinking-water contamination; and other incidents in which chemicals released to the environment could pose a public health or environmental threat.

The Emergency Response Unit of MPCA's Hazardous Waste Division and the MDA Agronomy Services Division are on call 24 hours a day, seven days a week to respond to emergency situations. In 1996, MPCA and MDA responded to 23 declared emergencies, as well as recovery of 305 drums of hazardous waste dumped illegally. The state Superfund spent \$150,964 to respond to 23 of these emergencies, including \$148,456 by MPCA, and \$2,508 by MDA.



CASE STUDY:

Finland Air Force Radar Station

In fall 1995, residents living in Lookout Mountain Village near Finland, Minnesota, contacted the Minnesota Department of Health's (MDH's) Duluth regional office to complain about the taste of their drinking water. MDH sampled the well that supplied approximately 60 people in the residential area, and found levels of trichloroethene (TCE) that exceeded the U.S. EPA's standard for drinking water.

Lookout Mountain Village is located on a former U.S. Air Force radar station, which was closed in 1982. The U.S. Army Corps of Engineers and MPCA acted quickly to provide residents with emergency drinking water. Under the Defense Environmental Restoration Program, created by the federal Superfund law, the Corps drilled another well, hooked up residences to the new supply, and sampled the water on January 30, 1996 to make sure it was clean. Activities to locate the source of the TCE are ongoing.

Discovering and Assessing Sites

Past industrial practices have contaminated many sites in Minnesota, and the Superfund provides a process that allows the MPCA and MDA to discover, investigate, prioritize, and list known or suspected sites. Sites are discovered through reports from citizens, discoveries during excavation or development, routine environmental audits, and other methods. Newly discovered or nonassessed sites may be handled in a variety of ways:

- For the first time, sites that are suspected hazardous waste sites but are not listed on the federal inventory can be investigated. The MPCA completed 24 initial reviews of sites with federal dollars in 1996.
- Sites listed on CERCLIS which require assessment are investigated using federal dollars. The MPCA performed site assessments and preliminary investigations on 23 CERCLIS sites in 1996.
- Those sites posing a potential threat can be referred to the Voluntary Investigation and Cleanup Programs of either MPCA or MDA.
- Sites also can be investigated and cleaned up under MDA oversight, with partial reimbursement available through the Agricultural Chemical Response and Reimbursement Account (ACRRA).
- Sites also can be added to the state or federal Superfund list, especially if those parties responsible for the contamination are unable or unwilling to provide a thorough investigation or cleanup. In 1996, two sites were added to the state Superfund list; no sites were added to the federal National Priority List.



CASE STUDY:

Maxson Steel

The Maxson Steel property in St. Paul housed a metal foundry for more than a century, and until 1996, no one knew what the environmental impacts had been. Now, a brownfields site assessment has provided answers — and an incentive for developers to return the property to productive use.

Brownfield sites are those abandoned industrial sites located within urban centers that lie vacant because potential contamination makes them too risky for developers, who turn to the relatively pristine “greenfields” of suburban areas for development opportunities. The purpose of brownfield investigations is to define the extent of possible contamination, so the MPCA can predict what clean-up effort may be needed to protect public health and the environment and bring the land back into productive use.

The Maxson Steel property is located in an low-income neighborhood in St. Paul. While the property is a prime candidate for redevelopment, the limited amount of information available regarding on-site contamination made the property unattractive.

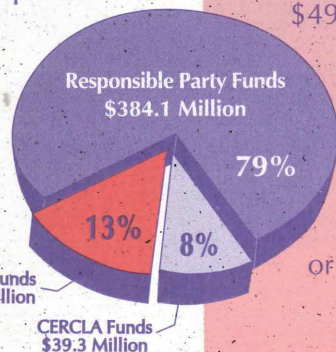
The Maxson Steel brownfield investigation was conducted through a Cooperative Agreement between the MPCA and the EPA. At the request of the City of St. Paul, the Site Assessment Unit conducted an on-site investigation which included the collection and analysis of 30 soil samples and installation and sampling of three temporary and four permanent on-site monitoring wells.

The investigation shows that on-site soils have been contaminated, but the cost of cleanup would not be prohibitive. As a result, the St. Paul Port Authority is collecting bids for site cleanup. Twenty acres of prime property will be developed, providing jobs and an improved tax base to a community in need of economic help.

Site Investigation and Cleanup

As in the past, during FY 1996 the majority of clean-up activities in the state have been paid for with private funds from responsible parties. Of the approximately \$57.5 million spent on cleanup activities in 1996, \$49.5 million (or 86 percent of the total) was funded by responsible parties. Since the beginning of the state Superfund program, approximately 79 percent of site investigations and cleanups have been paid for by responsible parties. This reflects the state Superfund program's commitment to rely first on encouraging those parties responsible for site contamination to work cooperatively with the MPCA or MDA on investigation and cleanup:

FY 83-96 Site Cleanup Expenditures



FY '96 Site Cleanup Expenditures



The MERLA and CERCLA funds are used to oversee the work by the responsible parties and to select the site remedy, following public participation. If the MPCA or MDA cannot identify responsible parties, or if those parties are unable or unwilling to pay for site clean-up activities, the MERLA and CERCLA funds are used to complete the work and, if appropriate, recovery of the costs are sought upon completion of the work.

The MERLA fund also is used to provide the required state match for federal dollars coming into Minnesota to manage and clean up the 35 federal Superfund sites in the state. Federal funds also pay for studies and pilot programs, staff training, and other management activities. In FY 96, \$4.8 million from the MERLA account and \$3.2 million in federal funds were used for the purposes detailed above.

Investigation and Cleanup of Sites by Voluntary Parties

The MPCA and MDA provide technical assistance and legal assurances to voluntary parties who agree to investigate and/or clean up contaminated sites they want to buy, sell, or develop. Minnesota was one of the first states to establish a voluntary cleanup program, and the MPCA VIC Program has received national attention and become a model for other states seeking a solution to the problem of "brownfields." Brownfields are old industrial properties that buyers and developers do not want because of potential environmental problems. The legal assurances provided by the VIC program give potential buyers, sellers or developers of property the security that they will not have to take on liabilities that are not theirs. This allows developers to move forward with plans that bring jobs and an improved tax base into communities burdened with abandoned sites.

Since 1988, 723 sites have entered the MPCA VIC Program and 424 have been cleaned up or found acceptable for purchase, development, refinancing, or transfer to other regulatory programs. Currently, an average of three new sites enters the program weekly; this trend is expected to continue for a total of 156 new sites in the coming year.



CASE STUDY:

Ashland Refinery

After 26 years of oil refining in St. Paul Park along the River, the Ashland Refinery Site has had its share of problems with soil and water contamination. More than 100 storage tanks, filled with nearly 170 million gallons of various products, take up more than two-thirds of the company's 100-acre property. Oil and wastewater spills and leaks have contaminated soil, ground water, and the river over the course of the company's history.

But in 1996, Ashland completed a clean-up system under the state Superfund program that should protect the river for years to come and recover and recycle the contamination from its industrial past. An extensive underground network, consisting of 24 wells and approximately 2,500 feet of french drain, intercepts petroleum products and contaminated ground water before they affect the river. The company recovers petroleum and contaminated water, and routes it back to the refinery, where treatment removes petroleum for reuse.

Among Ashland's other efforts to clean up past contamination and prevent future problems, the company:

- paid approximately \$150,000 in penalties for past spills into the State Fund;
- spent \$35,300 on a study to discover new and better ways to recycle contaminated wastewater;
- funded a community advisory panel to assure public involvement in Ashland's decisions;
- completed a leak and spill prevention plan;
- donated \$40,600 to the Science Museum of Minnesota to further educational efforts on water conservation and protection; and
- began work on a new, deeper french drain to intercept more petroleum from entering the main channel of the Mississippi River.

A cross-media team of MPCA staff meets regularly with Ashland to assure continued coordination and cooperation.



CASE STUDY:

Texaco Refining/ Crosby Lake Redevelopment

The 41-acre Texaco site was operated as a bulk petroleum storage facility from 1951 to 1983. Seventeen above-ground storage tanks were dismantled in 1988-1989 under the direction of the MPCA Tanks and Spills Section. Texaco entered the VIC Program in 1993 to obtain legal assurances for future buyers. Investigations identified several different petroleum releases from above-ground tanks and pipelines on the site. The petroleum releases have affected the ground water.

Contaminated soil was excavated and stockpiled in a compost bio-pile, in which contaminants are degraded by biological organisms, thermally treated, and used as daily cover at a solid waste industrial landfill. In addition, an innovative soil clean-up technique known as soil washing was attempted, but the technique did not clean up the soils to an acceptable level, so other measures were undertaken. Ground water, once treated, will be monitored to ensure that contamination does not adversely affect the Mississippi River.

The site was purchased by the St. Paul Port Authority and was renamed the Crosby Lake Business Park. Future tenants include EMC Corporation, Twin City Tile and Marble and the Summit Brewing Company. Construction activities began in September 1996 on the EMC Corporation parcel. Each cleaned-up parcel, as well as each new tenant, will receive legal assurances from the state.

MPCA and the U.S. EPA have signed a Memorandum of Agreement that allows the state to review investigations and cleanups without federal concurrence, and to run a pilot program funding "brownfields" work for sites in areas of the Twin Cities.

Reimbursements from voluntary parties pay for the MPCA's and MDA's oversight of the voluntary cleanup programs. The public benefit, both environmentally and economically, of the voluntary cleanup programs make them some of the state's most popular services.

Property Transfer File Evaluations

The Property Transfer File Evaluation Program was developed to provide information to the public from the files and databases of the agency. In FY 1996, the MPCA performed 984 routine evaluations of data lists, maps, or databases for customers outside the agency. The

evaluation provides reports of all known or potential contamination sites within a one-mile radius of a given property address, allowing a property buyer or environmental consultant investigating the property to obtain all pertinent information. Users are charged a reasonable fee for the service.

MPCA Legal Action under MERLA

The Minnesota Attorney General's Office represents the state's interests in matters of cost recovery and application of Superfund law. During the past year, the Attorney General's Office brought two new lawsuits to recover MPCA response costs, involving the McGuire Wire Site and the Winona Groundwater Contamination Site. A major settlement was reached during the year with Tower Asphalt, Inc., in which Tower agreed to pay \$450,000 to the MPCA for costs associated with state-funded remedial action to provide a public water supply to replace contaminated residential wells in the City of Lakeland. Additional settlement discussions are ongoing regarding cost recovery for the Schloff Chemical and Trio Solvents Site.

Annual Report

Minnesota's Superfund Program

The MERLA Expenditures and Income Table details MERLA programmatic FY 1996 and cumulative expenditures and income. Reimbursements to the Account in FY 1996 covered 73 percent of the program's administrative costs. In FY 1996, for every state Superfund administrative dollar expended in working with responsible parties, approximately \$20 in private dollars were invested in cleanup activities. MPCA/MDA's administrative costs represent salaries for 58.4 staff as well as travel, equipment, non-site-specific legal costs, and supply expenditures associated with responding to emergencies and implementing site cleanups.

Superfund Program Expenditures and Income

Balance Forward 7-1-95	\$ 2,981,000	
Plus Prior Year Adjustment	824,000	
Adjusted Balance Forward	\$ 3,805,000	
INCOME TO THE FUND	FY1996	FY1983-1996
Appropriations	\$ 1,000,000	\$19,400,000
RP Reimbursements, HW Penalties	3,958,000	27,739,000
Hazardous Waste Generator Tax	1,989,000	13,121,000
Interest	310,000	8,831,000
Less Revenue Refund	(78,000)	(1,564,000)
Total Income to the Fund	\$ 7,179,000	\$67,527,000
EXPENDITURES FROM THE FUND	FY1996	FY1983-1996
Administrative (MDA=\$229,706)	\$3,953,706	
Site-Specific Costs (MDA=\$35,997)	358,100	
Site-Specific Support Costs (MDA=\$310)	131,392	
Unliquidated Obligations (MDA=\$75,693)	369,802	
MERLA Fund Expenditures:	\$ 4,810,000	\$61,309,000
Transfer to General Fund	0	44,000
Total Expenditures and Obligations	\$ 4,810,000	\$61,353,000
MERLA Account Balance 6-30-96	\$6,174,000	

The Minnesota Superfund 1996 Legislative Report is a publication of the MPCA's Ground Water and Solid Waste Division. It was prepared by:

MPCA Site Response Section

- Rich Sandberg, Manager
 - Johnna Benke
- MDA Agronomy Services

- Paul Liemandt, Manager
- Minnesota Attorney General's Office
- Alan Williams

MPCA Public Information Office

- Peggy A. Hicks, Designer
- Katherine Carlson
- Emmy Reppe

For more information about Minnesota Superfund or other information involving contaminated land, contact:

- Emmy Reppe, (612) 296-6706
- Michael Rafferty, (612) 297-2759
- Toll free 1 (800) 657-3864
- TDD (612) 282-5332



Minnesota Pollution Control Agency
Ground Water and Solid Waste Division
520 Lafayette Road
St. Paul, MN 55155-4194

Bulk Rate
U.S. Postage
PAID
Permit No. 171
St. Paul, MN

Upon request, this report can be made available in other formats, such as in Braille, large type or on audiotape. TDD users please call (612) 282-5332 or toll free at 1 (800) 657-3864.



Printed on recycled paper containing at least 100 percent fibers from paper recycled by consumers.