



REPORT TO THE
LEGISLATURE

JANUARY 2025

Minnesota's contaminated sites biennial report

State activities and expenditures in cleaning up Minnesota's
most polluted industrial sites for fiscal years 2023 and 2024

Legislative charge

Minn. Stat. § 115B.20, subd. 6

Report to the Legislature

By January 31 of each odd-numbered year, the commissioners of the Minnesota Department of Agriculture and the Minnesota Pollution Control Agency shall submit to the Senate Finance Committee, the House of Representatives Ways and Means Committee, the Environment and Natural Resources Committees of the Senate and House of Representatives, the Finance Division of the Senate Committee on Environment and Natural Resources, and the House of Representatives Committee on Environment and Natural Resources Finance, and the Environmental Quality Board a report detailing the activities for which money has been spent pursuant to this section during the previous two fiscal years.

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Cover Photo 1: Perch Lake remediation project as part of the St. Louis River Area of Concern.

Cover Photo 2: Water sampling for contamination monitoring.

Estimated cost of preparing this report *(as required by Minn. Stat. § 3.197)*

Total staff time: 60 hrs.	\$3,400
Production/duplication	<u>\$100</u>
Total	\$3,500

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This report is available in alternative formats upon request, and online at www.pca.state.mn.us.

Document number: lrc-s-1sy25

Foreword

This report is submitted to the Minnesota Legislature under requirement of Minn. Stat. § 115B.20, subd. 6.

In 1983, the State enacted the Minnesota Environmental Response and Liability Act (MERLA), Minn. Stat. 115B, establishing the State Superfund Program. This law is implemented by the Minnesota Pollution Control Agency (MPCA) and the Minnesota Department of Agriculture (MDA), and provides broad state authority to respond to releases or threatened releases of hazardous substances that may endanger public health, welfare, or the environment. Minn. Stat. § 116.155 establishes a state Remediation Fund from which the MPCA and the MDA can spend money to investigate and remediate releases or threatened releases of hazardous substances, pollutants or contaminants, and agricultural chemicals.

The MERLA was later amended to include sections addressing:

- Harmful Substance Compensation (1985)
- Investigation and Cleanup by Voluntary Parties – Land Recycling Act; more commonly known as the Brownfield Program (1992)
- Landfill Cleanup Program; more commonly known as the Closed Landfill Program (1994)
- Dry Cleaner Environmental Response Law (1995)

The MPCA and MDA Commissioners access money appropriated from the Remediation Fund to accomplish investigation and cleanup of hazardous substance releases at sites without responsible parties and for administrative costs associated with those programs. Administrative costs are also received from Federal sources (Environmental Protection Agency, Department of Defense, etc.) and recovered from responsible parties when applicable.

This report does not include work done by responsible parties overseen by the State Superfund Program, the Petroleum Remediation Program, or the Closed Landfill Program.

The MPCA and MDA use the authorities granted under state and Federal Superfund laws to identify, evaluate, and clean up (or direct the cleanup of) sites that pose hazards to public health, welfare, and the environment. As required by Minn. Stat. 115B.20, subd. 6, this report details activities for which Remediation Fund dollars were spent during Fiscal Years 2023 and 2024 (FY23 – FY24) (July 1, 2022 – June 30, 2024) by the MPCA and the MDA for Superfund, emergency response, and voluntary cleanup related activities.

The MPCA's and MDA's administrative costs represent salaries, travel, equipment, non-site-specific legal costs, and supply expenditures associated with responding to emergencies and implementing or overseeing site cleanup. FY23 and FY24 Remediation Fund figures are current as of December 20, 2024. All cumulative income and expenditure figures are approximations. Direct staff costs to research, write, and review this report totaled about \$3,500.00.

State administrative costs from the Remediation Fund:

	MPCA	MDA	Total
FY23	29.8 FTE	2.5 FTE	32.3 FTE
FY24	25.1 FTE	2.5 FTE	27.6 FTE

FTE=Full Time Equivalent. This represents actual staff costs in terms of FTE drawn from the Remediation Fund.

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Minnesota Environmental Response and Liability Act responsibilities

The MPCA/MDA Superfund programs fulfill functions specified in MERLA for the 96 sites on the State’s Permanent List of Priorities (PLP), as well as for the 161 non-listed sites being addressed by cooperative responsible parties. Additional investigation and cleanup projects are addressed by voluntary parties (those parties not responsible for the contamination/release) enrolled in the MPCA’s Brownfield Program (1,650 sites) and MDA’s Voluntary Investigation and Cleanup Program (83 sites), as authorized by the Land Recycling Act of 1992 and performed according to respective agency protocols.

Superfund Sites annual report project costs FY23 & FY24

Site name	Expended FY23	Expended FY24
214 & 220 Ramsey Street	\$2,614.41.00	\$57,391.58.00
5101 Minnetonka Blvd - Fern H	\$131,859.43	\$175,226.22
55th St & Lyndale	\$30,939.45	\$15,749.83
66th St & Vincent Ave	\$61,809.87	\$70,947.48
Arcade St N & Hawthorne	\$35,169.62	\$14,377.91
Arrowhead	\$23,226.89	
Baytown	\$148,485.04	\$149,225.97
Boise-5yr Review	\$3,651.78	
Bulinski Point	\$14,988.54	\$35,070.10
Capri / Byron Vapor	\$86.82	\$38,055.79
Centerville Rd	\$19,676.49	\$3,681.94
Chemart	\$14,629.90	\$79,037.69
Clothing Care Cleaners	\$7,409.95	
Duluth Air Force Base OU1	\$5,850.00	\$44,815.79
Duluth Dump #1	\$22,694.12	\$110,231.37
Esko GW Plume	\$117,398.20	\$28,284.22
Farmington GW Plume	\$1,350.82	\$5,235.78
Fish Hatchery	\$3,107.74	\$35,640.83
FMC	\$29,299.98	\$29,842.16
General Mills	\$54,743.35	\$60,757.65
Hibbing Gas	\$60,685.18	\$197,082.60

Site name	Expended FY23	Expended FY24
Hmong Center	\$47,149.63	\$106,072.36
Hospital Linen	\$148,306.11	\$111,780.17
Joslyn	\$10,036.77	\$1,936.40
Lehillier	\$26,723.97	\$21,310.17
Littlefork	\$136,751.18	\$112,233.52
Long Prairie	\$171,207.60	\$136,017.51
Lyndale Ave Corridor	\$43,823.60	\$51,869.28
Main Street Plume	\$97,675.39	\$16,878.79
Mankato Plating	\$25,163.57	\$39,780.60
Mcgillis & Gibbs	\$431,897.20	\$397,379.66
Mn Valley Dump		\$5,683.26
Oakdale		\$15,194.60
Perham	\$190,001.01	\$224,707.73
Peter Pan Cleaners	\$38,266.31	\$46,703.53
Pigs Eye	\$23,779.37	\$14,257.58
Pine Street Dump	\$45,131.74	\$80,279.17
Precision Plating		\$68,521.63
Pure Oil	\$13,320.37	\$7,059.24
Rice County Dump	\$58,055.48	\$272,162.05
Richfield Gold Eagle	\$88,620.64	\$78,341.52
Ritari	\$33,470.85	\$31,318.41
Rochester GW Plume	\$72,678.53	\$86,104.91
Schloff	\$16,723.13	
SE Hennepin Area GW	\$48,335.86	\$73,169.21

Site name	Expended FY23	Expended FY24
Southview Blvd	\$49,261.84	\$40,694.19
Spring Park Mun Wells	\$2,981.36	
St. Paul Levee	\$10,221.11	
Superior Plating	\$577,286.66	\$497,314.13
SW Fridley	\$17,918.59	
Universal Plating	\$112,820.59	\$66,465.39
US Steel / St Louis River	\$35,671.44	\$11,837.28
Valentine Clark	\$17,941.99	\$20,258.43
West Duluth	\$15,302.04	\$8,503.10
Whiteway Cleaners	\$32,142.65	\$18,606.44
Winona	\$220,528.88	\$52,543.41
Woodbury		\$17,649.19
Cedar Service, Bemidji (MDA)	\$520,074.90	\$443,347.96
CMC Heartland, S. Minneapolis (MDA)	\$68,029.40	\$74.67
Kettle River Co - Creosote Plant Site, Sandstone (MDA)	\$1,192,930.45	\$1,237,761.02
Page & Hill, Big Falls (MDA)	\$787.14	\$10,322.72
Site subtotal	\$5,430,694.93	\$5,618,495.18

Superfund annual report closing numbers FY23 & FY24

Name	Expended FY23	Expended FY24
Emergencies	\$425,680.20	\$460,765.64
PFAS technical assistance	\$51,380.62	
Harmful substance	\$17,465.71	
Site assessment	\$1,084,260.56	\$1,706,615.01
Site assessment (MDA)	\$15,281.82	
Supplemental-closed sites	\$1,470,303.92	\$1,620,755.86
Technical assistance	\$11,658.00	
Subtotal (site specific)	\$3,075,030.83	\$3,788,136.51
Site specific lab analytical	\$238,110.00	\$415,575.00
Site specific lab analytical (MDA)	\$5,061.00	\$5,061.00
Site-specific legal	\$63,362.83	\$58,482.80
Subtotal (site-specific support)	\$306,533.83	\$479,118.80
Total FY expenditures	\$8,812,259.59	\$9,885,750.49

Responding to emergencies and spills

Emergency Management Unit (EMU), under the Safety and Emergency Management Section staff at the MPCA, are on call and available to respond to environmental emergencies 24 hours a day, seven days a week, 365 days a year. The MPCA receives reports from regulated parties, other units of government and citizens through the duty officer program at the Department of Public Safety. These reports are reviewed and triaged for emergency conditions and about one third of the incidents are transferred to other MPCA programs for follow-up. These transferred reports are releases of air pollutants, hazardous waste, wastewater, and petroleum. The programs have the tools and processes to address these referrals, however if a situation rises to the level of an emergency, the EMU will lead the response. When agricultural products or chemical spills occur, the MDA is the lead state agency to respond and MPCA is in a support role.

The MPCA's and MDA's emergency response role is to provide advice and oversee cleanup performed by responsible parties. In some situations, a responsible party is not identifiable or is unable or unwilling to perform the cleanup. In these situations, Superfund monies are used to cleanup, stabilize, or mitigate emergency conditions resulting from releases of hazardous substances, pollutants, or contaminants. Examples include fuel and engine oil spills from trucks, mercury spills affecting sensitive populations, abandoned containers of chemicals or oil, abandoned businesses containing chemicals, oil and waste or other situations in which the commissioner of the MPCA or the MDA (or delegates) has declared as emergencies.

During FY23 and FY24, numerous fuel spills from saddle tanks and vehicle fluid spills, along the right of way, have been an issue in identifying the responsible party and/or the RP is unable or unwilling to perform the cleanup. This has resulted in a significant increase in the use of Superfund monies for these cleanup activities.

The table below summarizes the number of reports, emergencies declared, and dollars spent on state financed emergency responses using Superfund monies.

FY23		FY24		
MPCA	MDA	MPCA	MDA	
4697		4453		Duty officer reports triaged
2692	72	2581	73	Emergency response program Incidents
17		24		Emergency situations/declarations
\$425,680.00		\$460,765		Spending on emergency situations

Notable MPCA emergency expenditures in fiscal year 2023 include:

- a. Spent \$167,771 on Tax Forfeited Property in Virginia, MN
- b. Spent \$136,628 on Vapor Mitigation
- c. Spent \$130,680 on Residual Vapor Intrusion.

Notable MPCA emergency expenditures in fiscal year 2024 include:

- a. Spent \$114,089 on Petro Storage tank release (MERLA portion of cost).
- b. Spent \$62,336 on Mercury Release.
- c. Spent \$45,924 on Petro release into storm sewer.

Brownfield Program

A “brownfield” is any property that is abandoned or under-used due to the known or likely presence of contamination, such as a deserted railroad depot, a closed factory, a former drycleaner, or an abandoned gas station. Minnesota’s Brownfield Program was created in 1988 and strengthened by passage of the Minnesota Land Recycling Act in 1992, to help overcome the environmental and legal barriers that prevent the redevelopment of these properties.

The Brownfield Program is a fee-for-service program for parties not responsible for the contamination. The program provides technical assistance and liability assurance letters to promote the voluntary investigation, cleanup, and redevelopment of contaminated property. The assurance letters provide liability protection for property developers and environmental closure for identified contamination. Program customers include property owners, prospective purchasers, small businesses, developers, development agencies, lending institutions, non-profit organizations, and local units of government. During FY 23 and FY 24, participation in the Brownfield Program resulted in 7,490 acres of blighted property returned to productive use.

The MPCA’s Brownfield Program includes sites managed under MERLA (Minn. Stat. § 115B) and the Petroleum Tank Release Cleanup Act (Minn. Stat. § 115C). The MDA Agricultural Voluntary Investigation and Cleanup (Ag VIC) Program also manages brownfield sites under MERLA, for sites impacted by agricultural chemicals (AgVIC). The metrics presented below reflect only sites within the MERLA portion of the Brownfield Program. The number of “open/active” sites reflects projects in various stages as they move through the environmental assessment, cleanup, and redevelopment process. Simple sites are often completed within one year, while it may take three or more years for a complex brownfield redevelopment project to complete the process.

	FY23		FY24	
	MPCA	MDA	MPCA	MDA
New sites	280	11	257	7
Open/active sites	1380	16	1358	5
Sites closed	117	76	135	78

The MPCA’s Brownfield Program has seen a significant increase in requests for assurances and approvals of cleanup actions primarily due to the number of soil vapor investigations conducted during redevelopment projects.

A successful brownfield redevelopment project depends on many partners working together to navigate the environmental, legal, and financial challenges that arise when transforming a blighted property into a community resource. Key partners of the Brownfield Program include Minnesota Brownfields, a 501 (c)(3) non-profit organization which is dedicated to promoting the efficient cleanup and reuse of contaminated land through education and research. The MPCA staff are frequent speakers at Minnesota Brownfield forums, where topics are often chosen to coincide with current MPCA initiatives. The Brownfield Program partners with the Minnesota Department of Employment and Economic Development (DEED) and the Metropolitan Council by providing technical support and review of applications submitted to their contamination investigation and cleanup grant programs. On redevelopment projects where the community has questions about risk to public health, the Brownfield Program works with the Minnesota Department of Health (MDH) to resolve concerns. The U.S. Environmental Protection Agency (EPA) provides valuable financial support to MPCA’s Brownfield Program through federal grants that help pay for program operational expenses and investigation grants administered by the MPCA.

The [MPCA Brownfield Program 2023 Annual Report](#) provides a more detailed description of the program and also includes financial metrics for cost recovery. Examples of successful brownfield redevelopment projects in Minnesota can be found in the annual report and also in the [Brownfield Success Stories](#) story map.

Superfund Site Assessment

The Superfund Site Assessment (SA) program is a joint effort between the MPCA and EPA. This program investigates reports of hazardous substance releases and tries to find out who is responsible. They get reports from various sources, including the state duty officer, other regulatory programs, and public complaints. The SA program evaluates these reports to see if there's a risk to people's health or the environment.

If no responsible parties are found, the SA program decides whether to use Superfund resources to take further action. Through site assessment, staff look at available data to determine if there's a risk to nearby people or the environment. If they find an imminent risk, they use available funds for investigations or actions to reduce that risk. The SA program also works with the EPA Region 5 Superfund Program and receives limited funding through a Cooperative Agreement to assess certain sites for possible inclusion in the EPA's National Priorities List (NPL).

Due to limited staff and funding, SA sites that do not pose an immediate threat are triaged. At the end of the FY21-22 period, there were 336 sites triaged and placed in the backlog. By the end of FY23-24, this backlog grew by nearly 30% to 440 sites. From this total, 117 are considered high priority because they have the highest potential to impact human health. At the current intake rate, the backlog of high priority sites is projected to grow. Work is underway to evaluate and address program processes and secure resources to appropriately address the backlog of high priority sites as well as to properly evaluate and manage lower priority backlog sites. If additional investigation shows a lower risk or if the risk has been reduced through mitigation, no further action is taken by SA. The SA program is funded by general Superfund appropriation, with priority given to sites on the PLP for funding. Without the additional resources dedicated, the SA program is projected to increase its high priority backlog by over 200 sites by 2029.

Superfund investigation and cleanup

Potential Superfund sites are identified by or reported to the MPCA or the MDA, and when responsible parties do not cooperate to investigate or cleanup; the sites enter a formal assessment process for possible addition to the PLP or the NPL.

Listing of a site on the PLP does not automatically qualify it for listing on the NPL. The EPA has developed separate NPL listing and delisting procedures. However, prior to a site being listed on either the PLP or NPL, responsible parties, landowners, or facility operators are provided an opportunity to investigate and cleanup under the oversight of the MPCA or the MDA. Should the responsible party be unwilling or unable to conduct the necessary investigations and/or cleanup, the MPCA or MDA conducts the cleanup with MERLA funding and seeks cost recovery from responsible parties.

For sites under the oversight of the MDA, both responsible and voluntary parties may be eligible for partial reimbursement of their cleanup costs from the Agricultural Chemical Response and Reimbursement Account (ACRRA). At the present time, the MDA is the lead state agency for site responses being performed at the South Minneapolis Residential Soil Contamination NPL site and five PLP only sites: Cedar Service site in Northeast Minneapolis, the Cedar Service site in Bemidji, the Kettle River Company Creosote Plant site in Sandstone, the CMC Heartland Lite Yard site in South Minneapolis, and the Page and Hill Forest Products site in Koochiching County.

The primary purpose of the PLP (and NPL) is to identify which sites are eligible for state (or federal) funding for the purpose of the MPCA/MDA (or EPA) to conduct fund-financed response actions. The MPCA does have the authority under Minn. Stat. 115B to provide oversight of investigations and response actions taken by responsible parties who agree to cooperatively work with the MPCA to complete investigation and clean-up actions. As such, and in addition to the 96 sites listed on the PLP, the MPCA currently provides oversight at 161 cooperative responsible party sites in the Superfund program.

After the listing of a site on the PLP or the NPL, and if a responsible party either cannot be identified or is unable or unwilling to take requested action, the MPCA or MDA may use the Remediation Fund to conduct response actions. The agencies follow an established process in their site responses.

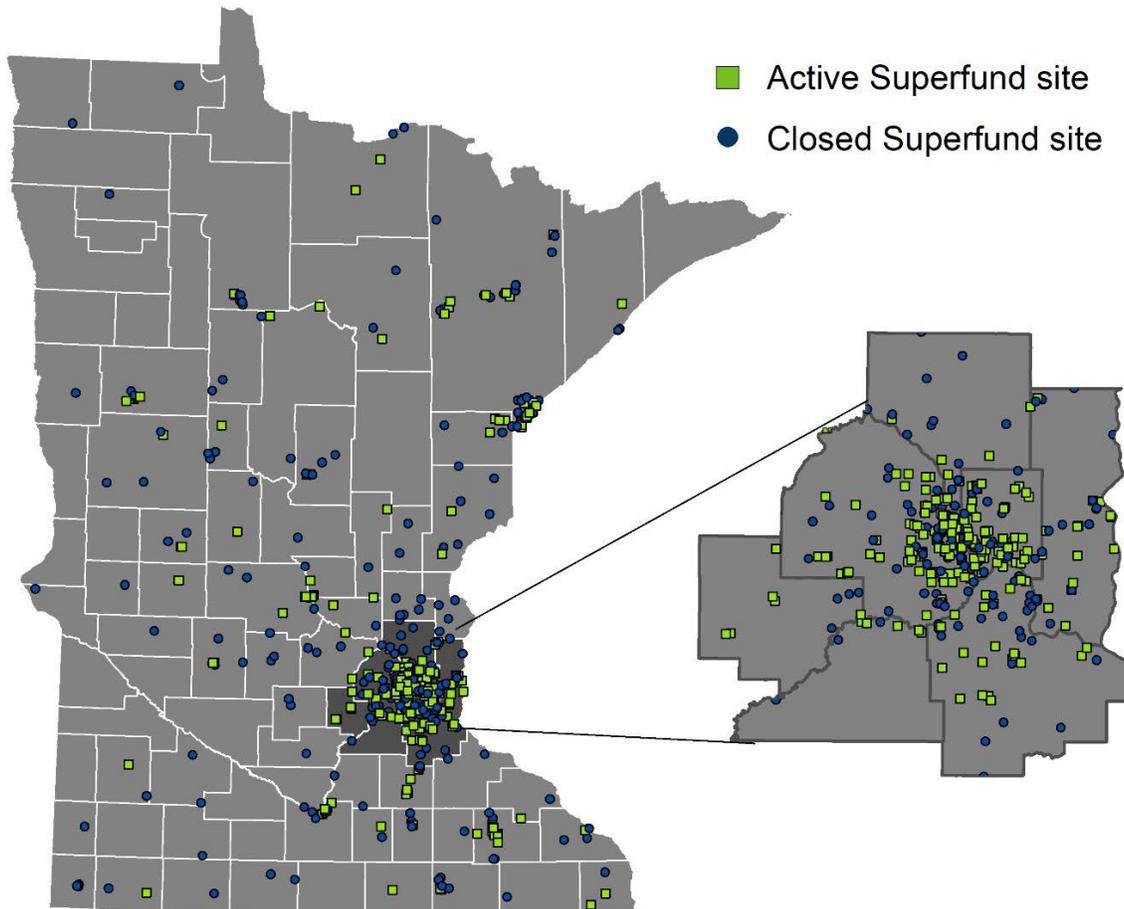
A remedial investigation/feasibility study is conducted to determine the extent of contamination and evaluate cleanup alternatives. Following a decision on the necessary activities, a plan for remedial design/remedial action is developed and implemented. If financially viable responsible parties are identified at any point during investigation or

cleanup, the State will attempt to secure their cooperation and recover costs from them. Such cooperation or cost recovery leverages private funds for cleanups, conserving State funds for truly “orphan” sites, for which no viable responsible party can be identified.

After response actions are complete or when a site no longer poses risks to public health or the environment, the site may be “delisted” from the PLP or the NPL. Sites are delisted from either the PLP or the NPL, if responsible parties have completed all necessary response actions and/or if no additional MERLA funding is needed to conduct response actions. Conditions at some responsible party-led sites may require ongoing maintenance or monitoring using land use controls after the delisting process to ensure long-term risk reduction.

Minnesota had 24 NPL sites during FY23/24 and they were eligible for federal funding under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, the Federal Superfund law) for response actions based on national priority. In return for access to these funds, states are required to match either 10% of the cost of site-specific remedial actions (when no state or local government has been identified as a responsible party) or pay 50% (if the site was owned or operated by a state or local governmental entity). The state is also responsible for long-term operations and maintenance at NPL sites as the EPA is “prohibited by CERCLA from conducting Operation and Maintenance activities at NPL sites.” (<https://semspub.epa.gov/work/HQ/174124.pdf>)

Below is a map of Minnesota showing the approximate location of all currently active and closed Superfund Sites followed by a table listing all the current PLP and NPL Sites.



MPCA and MDA active permanent list of priorities sites	County	HRS* score	NPL	PLP list	Site ID
Boise Cascade/Onan/Medtronic	Anoka	59	N	10/30/1984	SR0000004
Dealers Manufacturing Co	Anoka	28	N	12/30/1990	SR0000027
FMC	Anoka	66	Y	10/30/1984	SR0000029
NIROP OU1	Anoka	63	Y	10/30/1984	SR0000072
Boise Cascade Medtronic	Anoka	59	N	10/1/1984	SR0001522
Cedar Services Inc.	Beltrami	17	N	2/1/2014	SR0001051
Mankato Plating Company	Blue Earth	8	N	5/30/1995	SR0000176
D's Fabric Care	Carlton	5.81	N	8/24/2016	SR0000264
Esko Groundwater Contamination Site	Carlton	8	N	8/15/2006	SR0000369
St. Regis Paper OU1	Cass	53	Y	10/30/1984	SR0000008
BURLINGTON NORTHERN (Tie Plant, Brainerd)	Crow Wing	47	Y	10/30/1984	SR0000016
Burlington Northern Car Shops (Brainerd)	Crow Wing	38	N	12/30/1988	SR0000017
Freeway Sanitary Landfill	Dakota	46	Y	10/30/1984	SR0000098
Old Freeway Dump	Dakota	65.64	N	6/30/1993	SR0000099
Pine Street Dump	Dakota	32	N	12/30/1991	SR0000192
214 and 220 Ramsey Street	Dakota	24.07	N	4/22/2020	SR0000266
Farmington Ground Water Plume	Dakota	5.62	N	6/30/1999	SR0000329
Southview Boulevard	Dakota	3	N	4/2/2010	SR0000375
Joslyn Mfg. & Supply Co. OU1	Hennepin	44	Y	10/30/1984	SR0000001
General Mills	Hennepin	39	Y	10/30/1984	SR0000003
Honeywell Inc - Golden Valley Plant	Hennepin	31	N	10/1/1984	SR0000018
Tonka Main Plant	Hennepin	31	N	12/30/1985	SR0000025
Reilly Tar & Chem Saint Louis Park	Hennepin	59	Y	10/30/1984	SR0000060
Cedar Services	Hennepin	17	N	12/30/1990	SR0000087
Brooklyn Park Dump	Hennepin	35.5	N	12/30/1989	SR0000112
Superior Plating Inc	Hennepin	6	N	10/30/1984	SR0000131
Minnegasco OU-1 Soils	Hennepin	42	N	10/30/1984	SR0000155
Schloff Chemical	Hennepin	7	N	12/30/1989	SR0000175
Mibco Site	Hennepin	40	N	5/30/1992	SR0000177
Pilgrim Cleaners	Hennepin	12.2	N	12/30/1996	SR0000206
Precision Plating, Inc.	Hennepin	4	N	12/1/2014	SR0000249
CMC Heartland Lite Yard	Hennepin	13	Y	4/15/2002	SR0000348
Edina Well Field Site	Hennepin	50	N	7/6/2006	SR0000358
Hmong Shopping Center/Pilgrim Cleaners	Hennepin	3	N	4/1/2010	SR0000373
Highway 100 and Co Rd 3 Groundwater Plume	Hennepin	3	Y	4/15/2010	SR0000377
Chemical Marketing Corp Of America	Hennepin	23.22	N	6/30/1999	SR0001009
White Way Cleaners	Hennepin	4	N	6/30/1998	SR0001293
Spring Park Municipal Wells	Hennepin	50	Y	8/27/2014	SR0001349
Universal Plating	Hennepin	25	N	8/24/2016	SR0001398
66th St & Vincent Ave	Hennepin	50	N	8/24/2016	SR0001400
Southeast Hennepin Area Groundwater & Vapor Site	Hennepin	33	N	9/21/2015	SR0001401
Lyndale Ave Corridor	Hennepin	38	N	8/24/2016	SR0001402

MPCA and MDA active permanent list of priorities sites	County	HRS* score	NPL	PLP list	Site ID
55th St & Lyndale Ave S	Hennepin	17	N	9/24/2015	SR0001404
Pure Oil Bulk Facility	Hennepin	7	N	8/15/2016	SR0001430
Gold Eagle Cleaners – Richfield	Hennepin	50.05	N	5/1/2020	SR0001569
Minnetonka Boulevard and Raleigh Avenue South	Hennepin	51.32	N	5/1/2020	SR0001570
Isanti Solvent (Aka Charles Schumaker Farm)	Isanti	30	N	10/30/1984	SR0000063
Ace Signs, Inc	Kandiyohi	3	N	2/25/2014	SR0001351
Littlefork GW Contamination Site	Koochiching	22.56	N	5/30/1995	SR0000199
Page & Hill	Koochiching	17	N	9/1/2010	SR0001354
Finland Air Force Station (Former)	Lake	13	N	6/30/1996	SR0000205
Reserve Mining Silver Bay Scrapyard & Dro Plume	Lake	10	N	10/30/2003	SR0000351
Exclusive Cleaners Worthington	Nobles	6	N	8/1/2014	SR0001339
Rochester Groundwater Plume	Olmsted	50	N	7/6/2006	SR0000359
Capri Beauty Salon	Olmsted	4	N	4/20/2010	SR0000372
Clothing Care Cleaners	Olmsted	14	N	3/4/2014	SR0001353
Perham Arsenic Site	Otter Tail	38	Y	10/30/1984	SR0000056
Kettle River Company – Creosote	Pine	35	N	6/30/2002	SR0000349
Bell Lumber & Pole Company	Ramsey	48	Y	10/30/1984	SR0000034
Valentine Clark Corp	Ramsey	4	N	12/30/1988	SR0000044
Pig's Eye Landfill	Ramsey	43	N	12/30/1989	SR0000117
Highway 96 Dump	Ramsey	31	N	10/15/1984	SR0000122
St. Paul Levee Property	Ramsey	20	N	5/30/1992	SR0000198
MacGillis and Gibbs Waste Site	Ramsey	48	Y	10/30/1984	SR0000200
Gold Eagle Cleaners	Ramsey	50.01	N	4/30/2020	SR0000290
TCAAP General	Ramsey	59	Y	10/30/1984	SR0000313
Fish Hatchery Dump	Ramsey	22	N	8/1/2007	SR0000376
Centerville Road Dump	Ramsey	9	N	8/1/2010	SR0000379
Arcade & Hawthorne Ave E	Ramsey	24	N	9/30/2015	SR0001403
University Ave & Pascal St	Ramsey	18	N	8/15/2016	SR0001405
Hospital Linen	Ramsey	50	N	8/15/2016	SR0001406
Rice County Dump (Former, Comus)	Rice	12	N	2/1/2014	SR0000382
Pollution Controls Inc. (A.K.A. Pci)	Scott	52	N	10/30/1984	SR0000107
Minnesota Valley Landfill	Scott	14	N	7/6/2006	SR0000360
Arrowhead Refinery Co.	St. Louis	40	Y	10/30/1984	SR0000067
Duluth City Dump Former #1	St. Louis	28	N	12/31/1987	SR0000093
Duluth Air Force Base OU1	St. Louis	21	N	10/30/1984	SR0000095
St. Louis/Interlake/Duluth/Tar Site - OU Sed	St. Louis	32	Y	10/30/1984	SR0000149
West Duluth Industrial Site	St. Louis	11	N	10/30/1984	SR0000179
St. Louis River/Us Steel OU-P Wire Mill P	St. Louis	32	Y	10/30/1984	SR0000190
Former Peter Pan	St. Louis	3	N	1/30/2003	SR0000350
Hibbing Gas Manufacturing Plant Site	St. Louis	11	N	7/6/2006	SR0000361
Bulinski Point	St. Louis	5	N	2/28/2014	SR0000381
Poplar Hill Solvent Site	St. Louis	6	N	8/1/2013	SR0001273

MPCA and MDA active permanent list of priorities sites	County	HRS* score	NPL	PLP list	Site ID
Main Street Solvent Plume	St. Louis	2	N	8/1/2013	SR0001281
Waite Park Wells	Stearns	32	Y	12/30/1985	SR0000035
Electric Machinery	Stearns	38	Y	4/30/1986	SR0000136
West Broadway Ground Water Contamination	Steele	6	N	6/30/1999	SR0001503
Long Prairie Groundwater Contamination	Todd	32	Y	10/30/1984	SR0000040
Ritari Post & Pole	Wadena	30	Y	10/30/1984	SR0000039
3M Cottage Grove	Washington	33	N	10/30/1984	SR0000033
3M Oakdale Dump Sites	Washington	59	Y	10/30/1984	SR0000055
Baytown Twp Groundwater Contamination	Washington	38	Y	12/30/1988	SR0000084
Lakeland Ground Water Contamination	Washington	16	N	6/24/2014	SR0000145
Ashland Oil - Park Penta	Washington	32	N	4/30/1986	SR0000278
Winona Groundwater Contamination	Winona	25	N	12/30/1989	SR0000181

*HRS = Hazard Ranking System, an EPA scoring system to assess the relative potential of sites to pose a threat to human health or the environment. Higher score = Higher potential risk.

Institutional controls

Institutional controls are used to help ensure that exposure to residual contaminants does not occur because of inappropriate land use at former Superfund and Brownfields sites. The MPCA has developed institutional control tracking mechanisms for sites to ensure that citizens and local units of government are aware of, and honor, any controls and land use restrictions already in place. The MPCA started sharing institutional control information, including site details and location in the MN GeoSpatial Commons. They can be viewed here:

<https://gisdata.mn.gov/dataset/env-institutional-controls>

Sites with institutional controls	Program
755	Brownfield site institutional controls
43	RCRA Remediation site institutional controls
83	Superfund site institutional controls

The MDA also includes institutional control information including site details in the Mn GeoSpatial Commons. This information can be viewed here: <https://gisdata.mn.gov/dataset/env-agchem-incidents>

St. Louis River Area of Concern

Remediation work at contaminated sediment sites has evolved in the last 20 years, particularly in the St. Louis River Area of Concern (SLRAOC), which stretches from the Duluth harbor to Cloquet. The SLRAOC was designated by the EPA in 1987. Nine beneficial use impairments were identified here, many of which are related to contaminated sediments.

Several small sediment investigations were conducted prior to 2006. Since then, the MPCA has partnered with the EPA and the U.S. Army Corps of Engineers (USACE) to assess the state of sediment contamination throughout the lower St. Louis River estuary. In 2013, six sites on the Minnesota side of the SLRAOC were identified during a Phase 1 Assessment as needing more investigation and cleanup. A Phase 2 Sediment Assessment using EPA Great Lakes Restoration Initiative funding was completed in late 2014. This work identified eight additional sites for potential cleanup. See the map of the SLRAOC remediation sites and completion status below.

Remediation at two of the sites was completed by outside entities through the Brownfields program, while two other sites received “no action” determinations. In 2016, Focused Feasibility Studies (FFS) for the ten remaining remedial sites were completed. The FFS identified several remedial alternatives for each site. The initial Partnership Agreement with the USACE for design of restoration projects and the Minnesota Slip sediment remediation project was amended to add the remaining remedial sites.

In the fall of 2018, three slips in the Duluth harbor (Minnesota Slip, Slip 3, and Slip C) were remediated. Another Duluth harbor remediation project was completed at the Azcon/Duluth Seaway Port Authority Slip in the fall of 2020. In the summer of 2021, remedial construction began at the Ponds behind the Erie Pier site, where contaminated sediments were dredged, removed, and disposed of at an offsite landfill. Remedial construction and site restoration at the Ponds was completed in the summer of 2023. In 2022, remedial construction was started and completed at the Scanlon Reservoir site where an activated carbon amendment was applied to treat dioxins/furans contaminated sediment. Also in the summer of 2022, remedial construction was started at the Munger Landing site where sediments were contaminated with PCBs at a busy public boat landing. Over 100,000 cubic yards of contaminated sediments from Munger Landing were dredged, removed, and disposed of offsite. Construction was completed in 2024 with a new motorized boat launch and a sandy paddle sport landing.

In the fall of 2024, construction began at the Thomson Reservoir, the final SLRAOC remedial site in Minnesota. This is another project where an activated carbon amendment is applied to treat dioxins/furans contaminated sediment. Construction completion is scheduled for November 2025.

Remedial construction at all eight of these sites was/is being completed through Project Agreements with the EPA and funding from Minnesota’s General Obligation Bonds and the federal Great Lakes Legacy Act (GLLA) fund, which is a component of the Great Lakes Restoration Initiative. The project agreement for the Munger Landing project also included the WI Department of Natural Resources and Paramount Global as monetary partners. The project agreement at the Thomson Reservoir also includes Potlatch Deltic as a monetary partner.

Following additional site characterization, a decision of “no action” was made for the Mud Lake West site. The MPCA also revised the remedial decision at the AGP/Northland Slip site to implementation of robust institutional controls and monitoring. The decision not to implement a remedial construction project at this time was made based on a re-examination of the site characterization and risk, and the planned future use of the Duluth Seaway Port Authority.

All the remedial actions in Minnesota are scheduled for completion by the end of 2025. Completion of all the remedial projects support the eventual delisting of the SLRAOC sometime after 2028. To date, the MPCA and EPA have completed seven remedial projects together, which have remediated over 416,000 cubic yards of contaminated sediments, with over 155,000 cubic yards of sediment dredged and removed from the estuary. In 2024, the EPA and US Steel completed the four-year remedial construction project at Spirit Lake site where over 1.3M cubic yards of contaminated sediments were remediated.

Dry Cleaner Account

The Dry Cleaner Environmental Response and Reimbursement Account (Dry Cleaner Account) was established by the Minnesota Legislature in 1995 and is used to reimburse owners or operators of dry cleaning facilities for costs associated with environmental cleanups. The MPCA reviews reimbursement requests, determines reasonable costs, and approves reimbursements, minus a deductible of \$10,000. The Dry Cleaner Account is funded by annual registration fees from drycleaner operators, as well as fees on solvents used in the dry cleaning process. Registration and solvent fees are increased each year to ensure the statutory required amount of \$650,000 is collected.

Prioritizing the reimbursement of dry cleaning operators ahead of owners of property that leased to drycleaners, a legislative action taken during the 2021 session, has dramatically reduced reimbursement wait times for operators. Operators are now reimbursed within about three months, while property owners generally wait two years or more.

Approximately \$17.17 million has been reimbursed since establishment of the Dry Cleaner Account. In FY 2023, reimbursement was made to 14 facilities, for a total of over \$632,500 reimbursed that fiscal year. In FY 2024, reimbursements were made to 10 facilities, for a total of over \$576,500. Current outstanding reimbursement requests total approximately \$1 million, with 12 applicants waiting for reimbursement.

Harmful Substance Compensation Program

The Harmful Substance Compensation Program (HSCP) was created to compensate homeowners who suffer certain kinds of injury or property damage from exposure to harmful substances in Minnesota. This exposure may come from water, soil, or air contaminated by improperly disposed of or discharged chemical waste, petroleum, or agricultural chemicals. The MPCA manages the HSCP, decisions on compensation are made by the Commissioner.

All but one of the payments listed below were associated with the replacement of the primary drinking water source for residential homes. Homeowners are reimbursed for costs incurred connecting to municipal water supplies and sealing private drinking water wells, or for the cost of installing carbon filtration systems. One payment was for costs associated with installing a soil vapor mitigation system.

Nearly all claims in recent years have been due to drinking water impacted by PFAS, because of releases from either the 3M Oakdale Superfund Site or the Washington County Closed Landfill. For payment of those claims the MPCA used funding from the 2018 Natural Resource Damage Settlement with 3M. Only two claims were unrelated to 3M releases in the East Metro, they were paid out of the Remediation Fund (Minn. Stat. 115B.25 – 115B.37).

	Number claims	Amount associated with claims
FY23	12	\$160,580.76
FY24	10	\$176,405.46

East Metro Per- and polyfluoroalkyl substances (PFAS)

2007 3M Consent Order (Consent Order)

Per- and polyfluoroalkyl substances (PFAS) are a family of substances made by the 3M Company (3M), and other manufacturers that have been used for decades to make products that resist heat, oil, stains, grease, and water.

3M disposed of PFAS manufacturing wastes in the past at four sites: the 3M Oakdale site, the 3M Woodbury site, the 3M Cottage Grove site, and the closed Washington County Landfill. The Superfund Program manages remediation of the three 3M sites; the Closed Landfill Program manages remediation of the Washington County Landfill.

In May 2007, the MPCA Citizens' Board approved a Settlement Agreement and Consent Order (Consent Order) negotiated between MPCA staff and 3M. The Consent Order is a legally binding document that lays out timetables, deliverables, and other requirements, including funding for investigating and cleaning up PFAS at the 3M Oakdale site, 3M Woodbury site, and 3M Cottage Grove sites and providing safe drinking water to impacted residents. Because the Washington County Landfill site is in the Closed Landfill Program, the MPCA is required by state law to fund the response action related to releases from the landfill. However, 3M did agree under the Consent Order to provide up to \$8 million to help fund the State's cleanup of the site. 3M also funded the construction of a lined disposal cell at SKB Industrial Waste Landfill (SKB) in Rosemount to contain only the excavated PFAS waste material from the three 3M sites. 3M also provided \$5 million to the MPCA to be used for PFAS research activities to help evaluate impacts of PFAS releases to the environment. Investigation and cleanup work at the 3M Oakdale, Woodbury, and Cottage Grove sites continues; MPCA has requested additional work to better define the extent and magnitude of the PFAS contamination at the sites that may impact the cleanup work.

2018 3M Natural Resources Damages Settlement (Settlement)

On February 20, 2018, the State of Minnesota settled its Natural Resources Damages Assessment (NRDA) lawsuit against the 3M Company in return for a grant of \$850 million. Minnesota sued 3M in 2010 alleging that the company's production of substances known as PFAS had damaged drinking water and natural resources in the east Twin Cities metro area. After legal and other expenses are paid, about \$720 million is being invested in drinking water and natural resource projects in the Twin Cities east metropolitan region.

The Settlement sets two top priorities for funding – ensure safe and sustainable drinking water (Priority One) and enhance natural resources (Priority Two) – and provides guidelines for using any remaining money after those two issues are adequately addressed. It also directs the MPCA and Department of Natural Resources (DNR) to set up working groups to engage with communities, stakeholders, and technical experts and to help guide use of the funds.

Priority 1 also requires that the MPCA conducts a source assessment and feasibility study regarding the role of the Valley Branch Water District's project known as Project 1007 in the conveyance of PFAS in the environment. MPCA is currently working on these efforts and will finalize the feasibility study in 2025.

In August 2021, the MPCA and DNR, with assistance from the workgroup members, finalized the Conceptual Drinking Water Supply Plan, which outlines the long-term actions needed to ensure safe, sustainable drinking water supplies for community systems and private wells.

To date the Settlement has provided funding for the planning/design and construction of several

water treatment plants, and whole-home treatment filters for private wells.

More detailed information about implementation of the Settlement can be found at the 3M Settlement webpage (<https://3msettlement.state.mn.us/>). This includes information about the Conceptual Drinking Water Supply Plan, legislative reports which outline progress of implementing the terms of the Settlement and expenditures of Settlement funds, and documentation from work group meetings.

Temporary drinking water treatment systems

Under the terms of the Settlement, 3M provided up to \$40 million, in addition to the \$850 million grant amount, over the first five years of the Settlement for temporary drinking water treatment systems until the long-term actions are implemented. These temporary treatment systems are to meet 3M's obligation to provide an alternative drinking water supply where public or private drinking water wells exceed MDH criteria for PFAS, as outlined in the 2007 Consent Order between 3M and the MPCA. Such temporary municipal carbon treatment systems are currently operating in Cottage Grove, Oakdale, and Woodbury. The five-year timeframe ended on February 20, 2023. Costs to operate these temporary treatment systems are now covered by the Settlement until the long-term drinking water treatment facilities are in operation.

Public participation in the Superfund process

Providing information to the public and public participation is an important component of the Superfund process. A public notice component is defined in state statute for selection of final remedial actions at listed sites. For example, the MPCA sought public comment on the proposed remedial actions in draft Minnesota Decision Documents (MDDs) for the West Duluth Industrial Site and the AGP Slip Site in Duluth in FY23 and FY24, respectively. Public comments were collected, taken into consideration, and responded to prior to finalizing the MDD and remedial action decisions. Public notice is also required when sites are listed to or delisted from the PLP. Superfund staff often meet with local government officials, community groups, and hold public meetings to provide updates of site-specific activities.

The MPCA coordinates closely with the EPA for public communication and outreach efforts regarding the SLRAOC remediation projects. Outreach teams are assembled for each of the SLRAOC remediation projects.

In cooperation with the EPA, in June 2023, the MPCA released its environmental assessment worksheet for the proposed Thompson Reservoir sediment remediation project. In April 2024, the EPA announced its funding investment in partnership with the MPCA for covering the contaminated sediments in the reservoir with activated carbon.

In July 2024, the EPA announced and the MPCA assisted in the completion of the four-year sediment cleanup and habitat restoration project at Spirit Lake, located adjacent to the former US Steel Site in Duluth.

In the past, the main way to communicate with the public and promote public participation was through news releases, public notices, in-person meetings, and by providing information on the MPCA's website. While these methods are still used, the agency also provides information via social media (Facebook, Twitter, and YouTube) that includes targeted ads. The agency uses virtual event options when appropriate to provide additional access to the public. The MPCA sends communications out via GovDelivery email for specific sites and for general communications. The agency also translates important information about sites to other languages to make it more accessible. The goal of these various forms of communications is to provide information to the public in real time to engage in a

dialogue on program and site activities, especially for those impacted by these issues.

The Superfund Program is working to make our data accessible – to citizens, elected officials, industry, and the environmental community. Remedial programs collect data from sites all over the state and our stakeholders rely on the data to make decisions about siting wells, buying homes, and developing properties.

The [Minnesota Groundwater Contamination Atlas](#), launched in 2020 and developed with funding from the Environmental and Natural Resources Trust Fund (ENRTF), is a web application composed of three parts: a map, a site story, and a data download. The map and site story present groundwater contamination areas of concern and tell the contamination story of each area in a way that is understandable to the public and meaningful to technical users. The data download allows for direct public access to groundwater data hosted on the statewide enterprise database in a self-service format. Increased data accessibility will lead to better-informed stakeholders, more transparency, and accountability. The Groundwater Contamination Atlas is continually updated as new data is collected.

The MPCA also developed a framework for integrating environmental justice principles into the agency's public communications and program processes. This framework states the MPCA will, within its authority, strive for the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations or policies. These principles have been integrated into the MPCA Superfund Program's site management processes. For example, if a site is located in an area with higher concentrations of lower-income residents and people of color, the MPCA conducts more extensive community-oriented engagement including in languages besides English, if warranted. More information about the MPCA's environmental justice principles can be found at <https://www.pca.state.mn.us/about-mPCA/mpca-and-environmental-justice>.

Priorities for the Superfund Program

As development in Minnesota continues, new sites with contamination will be discovered and old ones redeveloped. Lower detection limits and changing health-based standards sometimes may trigger investigation or cleanup at sites where action was not previously required.

The MPCA and the Superfund Program need to have adequate capacity to respond to many emerging environmental health priorities that will require significant attention over the next several years. These issues will necessitate additional assessments and work at current active sites and reassessment of closed sites to ensure that they do not pose a continued threat to public health and the environment. The Superfund program has added staff to execute these core areas of its work. The program will continue to backfill positions as necessary in the future. For many years the program has been operating in a triage state which has resulted in the need to idle and backlog active sites.

The following sections discuss issues that MPCA Superfund will prioritize over the next several years.

Groundwater/Drinking Water Protection

The Minnesota Department of Health (MDH) routinely samples public water supply systems for hazardous substances, as required by the Federal Safe Drinking Water Act. In recent years, a broader effort led by MDH has included sampling for emerging contaminants including PFAS. The MPCA Superfund Program and MDH collaborate to investigate and determine the best course to cleanup and protect public water systems that have been impacted by releases of hazardous substances and other

emerging contaminants. Sampling of the public water supply entry point(s) is led by MDH while MPCA is tasked with sampling nearby private wells potentially at risk and investigating potential sources of the contamination.

Currently, the two agencies have prioritized 82 public water supply systems with hazardous substances detected in one or more water sources supplying these systems. Public water supply systems are further prioritized based on contaminant detection frequency and concentrations found in the entry point(s).

Of the 82 public water supply systems currently prioritized, 22 are being evaluated due to the presence of PFAS. The 2023 Minnesota Legislative Session appropriated \$25M to the MPCA to investigate these sites and provide grants to public water supply systems impacted by PFAS. The appropriation also funds the agency's work to conduct source investigations of PFAS contamination, identify potential responsible parties, and to sample and treat private drinking water wells. Four new permanent staff positions were created to support this work. Approximately \$10.7M of grants have been dispersed to aid public water supply systems impacted by PFAS. MPCA has initiated investigations into the sources of PFAS and private well sampling/treatment which will continue for several years to come.

As the regulatory landscape of PFAS and other emerging contaminants continues to develop, the effort to ensure drinking water in these communities is safe will impose an additional significant demand on the Superfund Program resources in terms of both staff time and project funding.

Per- and polyfluoroalkyl substances (PFAS)

PFAS are a group of man-made substances that includes PFOA, PFOS, PFHxS, PFNA, PFBS, HFPO-DA (GenX), and many others. This group of substances are commonly used in non-stick and stain resistant consumer products, food packaging, fire-fighting foam, and industrial processes. These substances are very persistent in the environment and in the human body and can accumulate over time, which can lead to adverse human health effects.

The MPCA partnered with MDH to investigate PFAS in Minnesota in the early 2000s. Since then, MDH has established and updated criteria for six different PFAS compounds. In response to these published criteria, the MPCA and MDH have coordinated efforts to monitoring both public and private drinking water wells in both the East Metro and Statewide to ensure public health and the environment are adequately protected. The MPCA is taking a programmatic approach to evaluating potential sources and managing/mitigating impacts where appropriate.

In February of 2021, the MPCA released the Minnesota PFAS Blueprint (<https://www.pca.state.mn.us/waste/minnesotas-pfas-blueprint>) which identifies our coordinated and strategic approach to addressing PFAS across multiple programs at the MPCA. The Blueprint lays out the MPCA's desired strategy for PFAS management including:

- **Prevent** PFAS pollution wherever possible
- **Manage** PFAS pollution when prevention is not feasible, or pollution has already occurred
- **Clean up** PFAS pollution at contaminated sites

In March of 2022, the MPCA released an agency wide PFAS Monitoring Plan to support the PFAS Blueprint ([PFAS Monitoring Plan \(state.mn.us\)](https://www.pca.state.mn.us/waste/minnesotas-pfas-blueprint)). The PFAS Monitoring Plan provides a path forward for PFAS monitoring at solid waste, wastewater facilities, stormwater facilities, hazardous waste landfills, facilities with air emissions, and sites in the Superfund and Brownfields programs. Appendix E of the PFAS Monitoring Plan provides high level guidance for PFAS evaluation at sites in the Remediation program including Superfund, Closed Landfill and Brownfields sites. In April 2024, initial findings, and next steps of the PFAS Monitoring Plan was released. This release included early results and follow-up

actions based on monitoring for PFAS at permitted solid waste, hazardous waste, wastewater, stormwater, and facilities with air emissions permits. Additional information is also provided regarding the development of guidance for remediating sites in the Brownfield or Superfund programs.

The MPCA Superfund staff also participate on the MPCA PFAS Lateral team which consists of representatives from all MPCA programs impacted by PFAS. The MPCA PFAS lateral team contributed to the development of the PFAS Blueprint and the PFAS Monitoring Plan. The MPCA PFAS lateral team ensures that all MPCA programs impacted by PFAS are communicating with each other regarding PFAS policy development and how PFAS policies developed by one MPCA program may affect or impact the other MPCA programs.

Another initiative was the continuation of the PFAS inventory pilot project which was completed in 2023. The primary objective of the inventory pilot is to evaluate historical and current potential PFAS-contaminated locations in Dakota, Olmsted, Stearns, and St. Louis Counties. A protocol was developed to identify and prioritize potential PFAS sources in a manner that is defensible, well documented, reproducible, financially feasible, and transparent. A PFAS Inventory Risk Communications Plan has also been developed to establish a clear communications strategy for the protocol, which includes a stakeholder analysis, a decision framework for execution and supporting tools. The EPA awarded the MPCA a Multipurpose Grant (MPG) to assist the pilot project to investigate PFAS sources and to validate the protocol. The MPCA used the protocol to select sites from the counties listed above that indicated a potential for PFAS contamination and conducted PFAS site investigation for possible soil and groundwater contamination in 2022 and 2023. The pilot project site investigations detected PFAS in the groundwater adjacent to the sites identified. The PFAS pilot protocol was then incorporated into the development of the Remediation Division PFAS guidance (discussed in further detail below) as well as other MPCA programs that address PFAS contamination.

A stakeholder advisory group consisting of MPCA staff and external stakeholders ([Developing PFAS remediation guidance | Minnesota Pollution Control Agency \(state.mn.us\)](#)) was formed in 2021 to assist with developing the PFAS guidance document for the Remediation program. A 30-day public comment period was also provided in September and October of 2023 to allow for public input and comment on the Remediation PFAS guidance. The MPCA provided individual responses to each public comment and incorporated these comments where appropriate, into the final Remediation PFAS Guidance document that was released in May of 2024 (<https://www.pca.state.mn.us/business-with-us/pfas-remediation-guidance>).

1,4 dioxane

1,4 dioxane is an industrial chemical used as a stabilizer for the application of many chlorinated solvents and PFAS. 1,4 dioxane does not have an established EPA federal drinking water standard however, the MDH has established a state Health Risk Limit of 1 part per billion. During the last biennium sampling for 1,4 dioxane resulted in the discovery of this chemical at established MPCA Superfund Sites investigating the releases of PFAS's and/or chlorinated solvents. 1,4 dioxane has been detected in five community water supply wells, and they are actively being monitored by the MDH.

1,4 dioxane has been identified as a contaminant of concern in deep groundwater (at depths greater than 80 feet) associated with the former Twin Cities Army Ammunition Plant (TCAAP) Superfund site. The U.S. Army paid for drinking water treatment systems to be installed for the municipal water supplies of New Brighton and the Village of St. Anthony to treat the 1,4-dioxane, to supplement treatment systems already in place for chlorinated compounds. The city of St. Louis Park has 1,4-dioxane contamination at two of their municipal wells. The MPCA has designed water treatment plants for these

two wells to treat both chlorinated compounds as well as the 1,4 dioxane. A treatment system is now in place and operational for one well. The other well is currently offline.

1,4-dioxane has also been detected above the established health risk limit in residential drinking water wells in the Red Oaks and Eastbrook Terrace neighborhoods of Andover. The MPCA provided bottled water to impacted residents as an interim measure as we work on more permanent solutions to provide long-term safe drinking water to these communities. The MPCA received \$6.1M in bond funding to connect the portion of the Red Oaks neighborhood with 1,4-dioxane impacts above health-based levels to municipal water supply as the long-term solution for the drinking water impacts.

The Gem Lake community in Ramsey County also has residential drinking water wells with 1,4-dioxane above health-based levels. The MPCA is currently providing bottled water as a temporary mitigation measure as we evaluate long-term solutions for this community that does not currently have a municipal water supply system.

There is high likelihood that additional 1,4-dioxane impacted drinking water supplies will be discovered in the future that will need direct MPCA actions due to the absence of viable responsible parties. Additional consideration is also needed for conducting surveillance monitoring across the State at potential 1,4 dioxane contamination sites to ensure that public health impacts are not occurring from this emerging contaminant.

Vapor Intrusion

Chlorinated solvents are a large family of chemical compounds that contain chlorine and are the source of much of the work for the Superfund Program. Typical chlorinated solvent compounds that are found at superfund sites include tetrachloroethylene (PCE) and trichloroethylene (TCE). PCE and TCE can migrate as a vapor into buildings from the source of the contamination through the soil. This route of exposure is called vapor intrusion. These vapors can degrade the quality of the indoor air and sometimes pose risks to human health. Vapor intrusion sites can vary in size from small sites impacting a single building to large sites encompassing many city blocks. The understanding of vapor intrusion is still evolving; it drives the work at many of our sites and is expected to continue to do so into the future.

Closed sites reassessment project

The recent lowering of health-based guidance values and the development of new vapor intrusion guidance resulted in the need to re-evaluate sites that were previously closed in order to verify closure decisions made in the past are adequately protective using current policy and guidance. Minnesota's Superfund Program is in the process of re-evaluating 1,035 closed sites for vapor intrusion and 528 closed sites for drinking water risks. These sites were closed prior to knowledge of any health risks posed by vapor intrusion and reduction of the drinking water standard for TCE. Site re-evaluations have been prioritized to focus on closed sites located near schools or daycares first followed by sites where TCE was identified as a contaminant of concern, or if sites are located within environmental justice areas.

For additional information about the MPCA's Superfund Program, please visit www.pca.state.mn.us.

For additional information about the MDA's Incident Response Program, please visit www.mda.state.mn.us.