



REPORT TO THE
LEGISLATURE

JANUARY 2023

Minnesota's contaminated sites biennial report

State activities and expenditures in cleaning up Minnesota's
most polluted industrial sites for fiscal years 2021 and 2022

Legislative charge

Minn. Stat. § 115B.20, subd. 6

Report to the Legislature

By January 31 of each odd-numbered year, the commissioner of agriculture and the 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.

Authors

Jeff Thuma, MPCA

Contributors/acknowledgements

Cathy Villas-Horns, MDA

Tom Higgins, MPCA

Susan Jaeger, MPCA

Crague Biglow, MPCA

Hans Neve, MPCA

Gary Krueger, MPCA

Amy Hadiaris, MPCA

Michele Mabry, MPCA

Drew Bahl, MPCA

Jennifer Haas, MPCA

LaRae Lehto, MPCA

Dorene Fier-Tucker, MPCA

Jason Moran, MPCA

Michael Rafferty, MPCA

Ned Brooks, MPCA

Natalie Brown, MPCA

Stacey VanPatten, MPCA

Editing and graphic design

Paul Andre

Lori McLain

Cover Photo 1: Dewatering of PCB contaminated sediment as part of the Munger Landing cleanup project in the St. Louis River Area of Concern.

Cover Photo 2: Remediation of dioxin contaminated sediment at the Scanlon reservoir as part of the St. Louis River Area of Concern project. Remedy consists of adding a carbon amendment to sequester dioxin contamination in the sediment, reducing the bioavailability of the contaminants within the reservoir.

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

Total staff time: 60 hrs.	\$3,000
Production/duplication	<u>\$100</u>
Total	\$3,100

Minnesota Pollution Control Agency

520 Lafayette Road North | Saint Paul, MN 55155-4194 |

651-296-6300 | 800-657-3864 | Or use your preferred relay service. | Info.pca@state.mn.us

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

Document number: lrc-s-1sy23

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 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 Minnesota Department of Agriculture (MDA) can spend money to investigate and remediate releases or threatened releases of hazardous substances, pollutants or contaminants, and agricultural chemicals.

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 2021 and 2022 (FY21 – FY22) (July 1, 2020 – June 30, 2022) 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. FY21 and FY22 Remediation Fund figures are current as of November 30, 2022. All cumulative income and expenditure figures are approximations. Direct staff costs to research, write, and review this report totaled about \$3,100.

State administrative costs from the Remediation Fund:

	MPCA	MDA	Total
FY21	27.4 FTE	2.5 FTE	29.9 FTE
FY22	25.2 FTE	2.5 FTE	27.7 FTE

Contents

Foreword	i
Contents	ii
Minnesota Environmental Response and Liability Act responsibilities	1
Superfund Sites annual report project costs FY21 & FY22	1
Superfund annual report closing numbers FY21 & FY22	3
Responding to emergencies and spills	3
Brownfield Program	4
Superfund Site Assessment	5
Superfund investigation and cleanup	6
Dry Cleaner Account	13
Harmful substance compensation program	13
East Metro Per- and polyfluoroalkyl substances (PFAS)	14
Public participation in the Superfund process	15
Priorities for the Superfund Program	16

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 152 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 (1,126 sites) and MDA's Voluntary Investigation and Cleanup Program (81 sites), as authorized by the Land Recycling Act of 1992 and performed according to respective agency protocols.

Superfund Sites annual report project costs FY21 & FY22

Site Name	Expended FY21	Expended FY22	Site Name	Expended FY21	Expended FY22
214 & 220 Ramsey Street	14,521	9,223	Hmong Center	96,324	105,292
5101 Minnetonka Blvd - Fern H	23,172	134,558	Hospital Linen	46,407	96,737
55th St & Lyndale S	32,253	55,516	Joslyn-5yr Review		5,479
66th St & Vincent Ave	88,358	122,708	Lehillier	33,415	19,171
Arcade St N & Hawthorne	46,080	15,467	Littlefork	110,240	124,951
Baytown	143,328	139,079	Long Prairie	177,802	134,491
Boise-5yr Review		11,439	Lyndale Ave Corridor	100,454	60,282
Bulinski Point	6,002	9,552	Main Street Plume	18,813	26,085
Capri / Byron Vapor	70	81	Mcgillis & Gibbs	490,499	422,896
Centerville Rd	2,149	13,640	Mn Valley Dump	48,822	7,148
Chemart	35,855	67,102	Perham	265,336	211,131
Clothing Care Cleaners	27,883		Peter Pan Cleaners	39,224	37,084
Duluth Air Force Base OU1	3,328	4,000	Pigs Eye	23,679	23,459
Duluth Dump #1	16,270		Pilgrim Cleaners	35,007	47,407
Esko GW Plume	30,133	29,205	Pine Street Dump	3,160	1,975
Exclusive Cleaners	61,320	17,268	Precision Plating	101,607	137,844
Farmington GW Plume	5,129	6,025	Pure Oil	34,767	15,703
Fish Hatchery	210	31,973	Rice County Dump	64,544	56,609
FMC	22,799	38,546	Richfield Gold Eagle	122,995	132,079
General Mills	42,645	50,618	Ritari	32,594	35,357
Hibbing Gas	153,681	156,420	Rochester GW Plume	39,323	60,614
			Schloff	27,004	31,412
			SE Hennepin Area GW	275,495	141,073

Site Name	Expended FY21	Expended FY22
Southview Blvd	43,699	29,146
St. Louis Park Vapor	26,649	1,365
St. Paul Levee	36,491	48,379
Superior Plating	261,265	429,497
SW Fridley	47,401	24,952
Universal Plating		100,238
Valentine Clark	17,917	16,812
West Duluth	13,909	
Whiteway Cleaners	113,502	60,366
Winona	182,007	397,924
Cedar Service, Bemidji (MDA)	423,775	534,935
CMC Heartland, S. Minneapolis (MDA)	57,083	85,436
Kettle River Co - Creosote Plant Site, Sandstone (MDA)	849,863	1,154,625
Page & Hill, Big Falls (MDA)	664	1,647
Site Subtotal	\$5,016,917	\$5,732,020

Superfund annual report closing numbers FY21 & FY22

Name	Expended FY21	Expended FY22
Emergencies	\$605,904	\$343,942
Drone Pilot Project		\$2,000
PFAS Technical Assistance	\$38,432	\$44,759
Site Assessment	\$784,255	\$748,152
Site Assessment (MDA)	\$63,626	\$32,727
Supplemental-Closed Sites	\$1,860,054	\$1,827,808
Technical Assistance	\$23,564	
Subtotal (site specific)	\$3,375,835	\$2,999,388
Site Specific Lab Analytical	\$229,675	\$175,873
Site Specific Lab Analytical (MDA)	\$5,061	
Site-specific Legal	\$63,225	\$57,321
Subtotal (site-specific support)	\$297,961	\$233,194
Total FY Expenditures	\$8,690,713	\$8,964,602

Responding to emergencies and spills

Emergency Response Program (ERP) 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 ERP 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 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. The table below summarizes the number of reports, emergencies declared, and dollars spent on state financed emergency responses using Superfund monies.

FY21		FY22		
MPCA	MDA	MPCA	MDA	
2,603		4,153		Duty officer reports triaged
1,854	98	2,231	75	Emergency response program Incidents
17	0	16	0	Emergency situations/declarations
\$599,436	\$0	\$330,832	\$0	Spending on emergency situations

Notable MPCA emergency expenditures in fiscal year 2021 include:

- a. Spent \$199,902 to contain and recover abandoned waste on tax forfeited property in Eveleth.
- b. Spent \$104,082 to clean up a large and complicated mercury spill in a St. Paul home.
- c. Spent \$83,000 to install sub-slab depressurization systems to control vapors from entering homes at a site in New Brighton.
- d. Spent \$27,621 to dispose of abandon drums of waste at the request of the city of St. Paul.
- e. Spent \$20,652 to sample and investigate contamination in Goose Lake near Albert Lea as a result of a spill from a train derailment.

Notable MPCA emergency expenditures in fiscal year 2022 include:

- a. Spent \$71,929 to cleanup a large mercury spill in a home in White Bear Lake caused by a plumbing and heating contractor. MPCA recovered the costs from the contractor.
- b. Spent \$60,460 to consolidate, package, and dispose of abandoned waste on tax forfeited property near Virginia.
- c. Spent \$48,694 to cleanup a large used oil spill onto the roadway in Monticello.
- d. Spent \$46,093 to dispose of abandoned waste from a site near Floodwood.
- e. Spent \$45,905 to investigate waste disposal site in Oakdale.

In addition, the program provides support to the Superfund Program to stabilize emergency conditions at their sites such as ventilating homes with high intruding vapor contamination and providing safe drinking water in situations when water supply wells are contaminated by hazardous substances.

Lastly, the MPCA and MDA plans and prepares for all hazards including natural disasters and terrorism related incidents so we can effectively support local units of government with cleanup and waste management tasks. When a disaster occurs, the MPCA and MDA may assist the local units of government and may utilize MERLA funds to contain, recover and dispose of scattered chemicals, materials, and containers to protect the public health or welfare or the environment.

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/release that 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, developers, development agencies, lending institutions, non-profit

organizations, and local units of government. During FY 21 and FY22, participation in the Brownfield Program resulted in 6,888 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 also manages brownfield sites under MERLA, for sites impacted by agricultural chemicals. 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.

	FY21		FY22	
	MPCA	MDA	MPCA	MDA
New sites	261	19	288	11
Open/active sites	1070	87	1126	81
Sites closed	232	14	162	14

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. 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 2021 Annual Report \(state.mn.us\)](https://state.mn.us/mn-brownfields/2021-annual-report) provides a more detailed description of the program. Examples of successful brownfield redevelopment projects in Minnesota can be found in the annual report. Minnesota Brownfields, in partnership with the McKnight Foundation and the MPCA, also developed the [Benefits of Brownfield Redevelopment in Minnesota report](#) that highlights how redevelopment of idled, contaminated commercial and industrial properties can enable economic growth and community revitalization, while improving the environment for all Minnesotans.

Superfund Site Assessment

The Superfund Site Assessment Program (SA) is a MPCA-EPA cooperative program designed to evaluate initial reports of hazardous substance releases and identify if potential responsible parties are present. In the absence of responsible parties, the Site Assessment Program will determine whether Superfund resources should be expended to assess environmental risk at these sites. The program works with EPA Region 5’s Superfund Program and, under a Cooperative Agreement, receives limited funding from EPA for staff resources. The MPCA SA Program receives State Duty Officer (spill) reports, referrals from other regulatory

programs, and citizen complaints; evaluates these referrals; and determines whether Superfund SA resources should be expended to assess risk to human health and the environment.

During the SA process, SA staff evaluate existing site data to determine the level of risk to nearby receptors posed by the site. When observed conditions indicate that an imminent risk exists, funding is made available to complete necessary site assessment investigations or response actions to reduce those risks. Due to staffing and project dollar limitations within Site Assessment, sites are added to the Site Assessment backlog when observed conditions do not indicate an imminent risk to human health or the environment is present. At the end of the FY19-20 biennium, 236 sites were on this backlog. At the end of the FY21-22 biennium, the site assessment backlog had grown by 42% to 336 sites. When observed conditions do not indicate that a risk is present or that the risk has been adequately addressed, the site is closed out under SA. SA funds originate from the general Superfund appropriation (see table on page 3). Sites listed on the Superfund Permanent List of Priorities (PLP) receive prioritization for funding over SA.

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 (the State Superfund list) and/or the EPA's National Priorities List (NPL; the Federal Superfund list).

Listing of a site on the PLP does not qualify it for listing on the NPL. The EPA has developed 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 conduct an investigation 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 sites listed on the PLP, the MPCA currently provides oversight at 156 cooperative responsible party sites in the Superfund program.

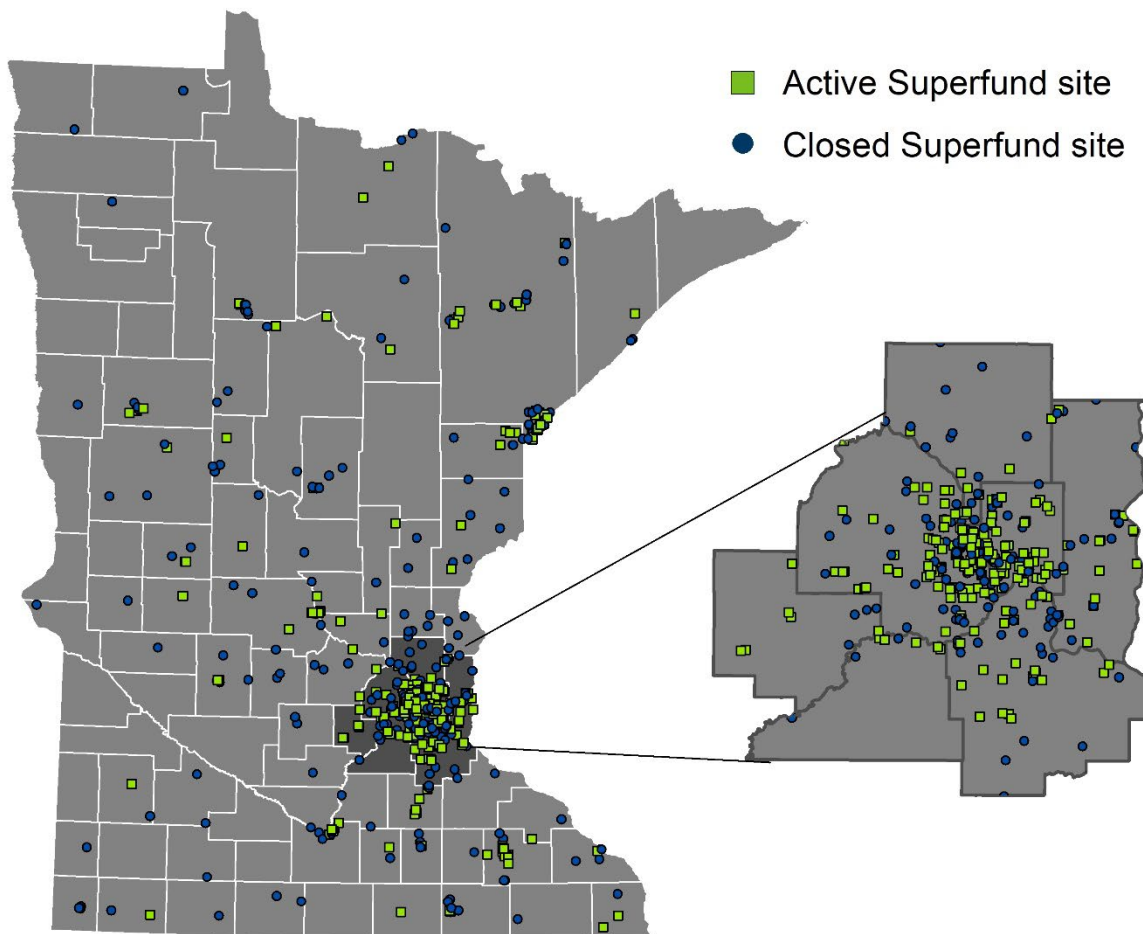
After the listing of a site on the PLP or the NPL, and if a responsible party either cannot be identified or is unable or unwilling to take requested action, the MPCA or MDA may use the Remediation Fund to conduct response actions. The agencies follow an established process in their site responses.

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’s 27 NPL sites that were active during FY21/22 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 O&M 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. Two sites were added to, and one site was delisted from the PLP in FY21-22.



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
St. Louis Park Solvent Plume	Hennepin	3	N	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
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 – Wittrup	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 Chemolite	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

Institutional controls

Institutional controls are used to help ensure that exposure to residual contaminants does not occur as a result 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
610	Brownfield site institutional controls
45	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 U.S. Environmental Protection Agency (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, but 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 Erie Pier site. Construction continued at the Ponds through 2022, with final project completion scheduled for June 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 are contaminated with PCB. The Munger Landing project will continue through May of 2024.

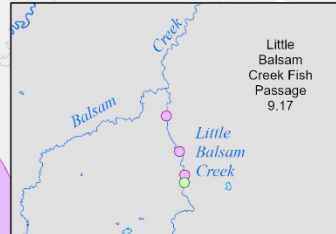
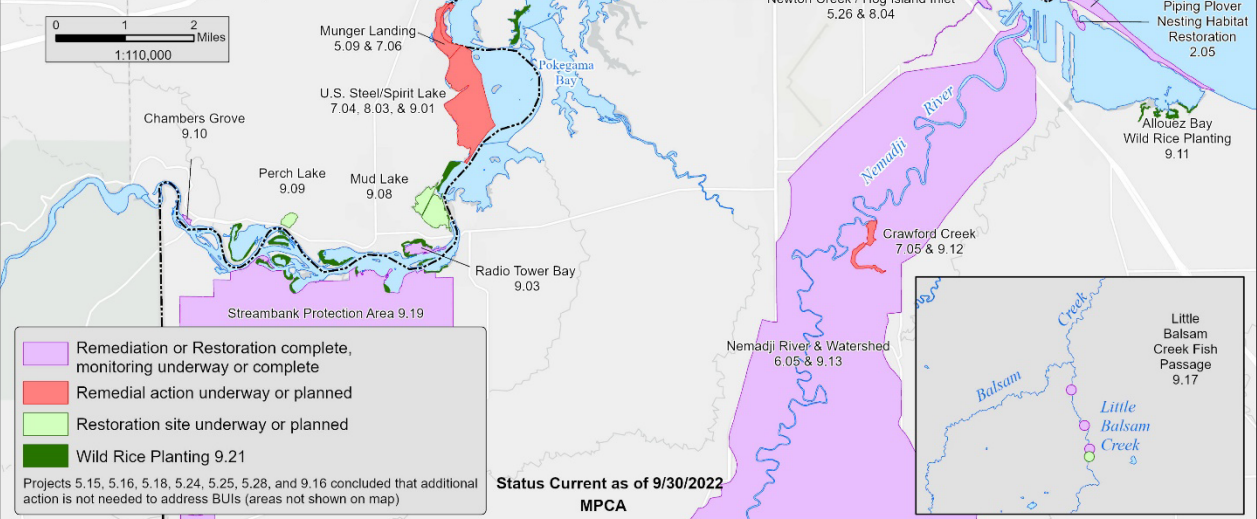
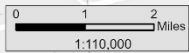
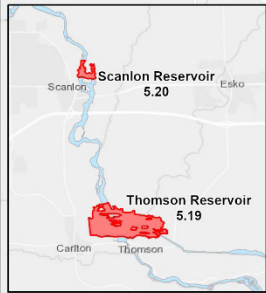
Remedial construction at all seven of these sites was/is being completed through Project Agreements with the EPA and funding from Minnesota's General Obligation Bonds and the federal Great Lakes Legacy Act (GLLA) fund, which is a component of the Great Lakes Restoration Initiative. The project agreement for the Munger Landing project also includes the WI Department of Natural Resources and Paramount Global as monetary partners. Following additional site characterization, a decision of "no action" was made for the Mud Lake West site.

Design work is underway for the remaining two sites, Thomson Reservoir, and the Northland Pier/AGP Slip. The MPCA expects to sign a GLLA Project Agreement with EPA in the spring of 2023 for the Thomson Reservoir project, which will utilize the remaining general obligation funds. The Northland Pier/AGP Slip site is being further evaluated in coordination with the Duluth Seaway Port Authority to ensure the best long-range plan for environmental protection and shipping needs in the Duluth harbor.

Pending negotiated project agreements and funding, all the remedial actions will be complete by fall 2024. Completion of all the remedial projects support the eventual delisting of the SLRAOC sometime after 2025.

St. Louis River Area of Concern Remediation and Restoration Sites

Lake Superior



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.

Legislative actions were taken during the 2019 session to assess the possibility of recovering environmental response costs from insurance policies held by dry cleaning facilities. These actions were presented in a legislative report submitted on January 15, 2021. [Dry Cleaner Cost Recovery Insurance Assessment \(mn.gov\)](#)

The 2021 legislative session resulted in actions to prioritize the reimbursement of dry cleaning operators ahead of owners of property that leased to drycleaners (lessors). Previously, lessors had equal access to money in the Dry Cleaner Account, even though they did not pay into the account. Approximately \$15.89 million has been reimbursed since establishment of the Dry Cleaner Account. In FY 2021, reimbursement was made to 13 facilities, for a total of over \$435,000 (maximum reimbursed that fiscal year. In FY 2022, reimbursements were made to 10 facilities, for a total of over \$475,000. Current outstanding reimbursement requests total nearly \$1.3 million, with 17 applicants waiting for reimbursement.

The 2021 legislative actions also banned the use of perchloroethylene (PCE) beginning in 2026 and transferred \$355,000 from the Remediation Fund to help drycleaners transition to environmentally preferable solvents. The \$355,000 was used to create a cost-share program, administered by the MPCA Small Business Loan Program, to reimburse drycleaners for up to \$20,000 of the cost of eliminating PCE from their facility or transitioning from PCE to alternative solvents.

Harmful substance compensation program

The Harmful Substance Compensation Program (HSCP) was created to compensate persons 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 HSCP was established to provide an administrative alternative to filing lawsuits against the person or company responsible for the damage. Decisions on compensation are made by the Commissioner of the MPCA. The Commissioner receives advice as necessary from physicians knowledgeable in toxicology, from health professionals knowledgeable about injuries caused by harmful substances, and from the Minnesota Attorney General's staff.

In 1996, the Minnesota Legislature abolished the Harmful Substance Compensation Board and transferred responsibility to manage the program to the MPCA and pay eligible claims out of the Remediation Fund (Minn. Stat. 115B.25 – 115B.37). Initially the MPCA had normally received one or two claim requests per fiscal year for review/approval. However, since FY14 the number of claims received has increased, primarily related to the lower drinking water standards for trichloroethylene (TCE) and PFAS compounds. Most of those claims found to be eligible have been for reimbursement of expenses

to replace private drinking water wells, connections of residential homes to a municipal water supply or installation of carbon filter systems.

During the 2015 Legislative session, the MPCA proposed, and the State Legislature approved an amendment to the Harmful Substance Compensation Program provisions of MERLA. In the amendment, reasonable costs for homeowners to install a vapor mitigation system to prevent migration of volatile organic compounds from sub-surface soils into the residence are now eligible for reimbursement. The MPCA recommendation for installing a vapor mitigation system is based on results of appropriate building sub-slab soil vapor samples collected. While the MPCA would normally install the appropriate vapor mitigation system when determined one was necessary, this amendment does offer the option to the homeowners to install the vapor mitigation system themselves, based on MPCA specifications, and request reimbursement for their costs. In FY22, one claim was approved for costs associated with installation of a soil vapor mitigation system. The approved amount of the claim was for \$385.71.

The payments listed below were associated with costs individuals incurred related to installation of home treatment systems to remove PFAS from their drinking water supply or costs associated with connecting the residence to the municipal drinking water supply. As all these claims were located in the East Metro area, the MPCA utilized funding from the 2018 Natural Resource Damage Settlement with 3M.

	Number claims	Amount associated with claims
FY21	11	\$81,781.35
FY22	7	\$85,192.92

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.

Four sites where 3M had disposed of PFAS manufacturing wastes in the past were identified: 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 handles 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 three 3M 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 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.

2018 3M Natural Resources Damages Settlement (Settlement)

When oil or other hazardous substances are released into the environment and harm wildlife, water, air, or other natural resources — including the benefits they provide — the state is authorized to seek compensation from the responsible parties to restore what was lost. A Natural Resource Damage Assessment (NRDA) may be initiated after significant environmental harm. On February 20, 2018, the state of Minnesota settled its 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 will be invested in drinking water and natural resource projects in the Twin Cities east metropolitan region.

The Settlement specifies how the MPCA and the Minnesota Department of Natural Resources (DNR) can spend the grant from 3M. It 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 DNR to set up working groups to guide use of the funds. To meet the requirement in the settlement agreement to engage with communities, stakeholders, and technical experts, the MPCA and DNR created work groups to analyze to provide advice on implementing the Settlement.

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 supply and which mitigates the PFAS impacts to the public and private drinking water supplies.

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 which outlines costs and long-term options to address PFAS impacts in the East Metro to meet the Priority One goals of the Settlement. Biannual legislative reports which outline progress of implementing the terms of the Settlement and expenditures of Settlement funds can be found on the main 3M Settlement webpage.

Temporary drinking water treatment systems

Under terms of the 2018 Settlement 3M is to provide 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 determined. 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. Under term outlined in the 2007 Consent Order, the MPCA will seek cost recovery of related State expenses incurred through February 20, 2023, from 3M. After that date, costs to operate these temporary treatment systems will be 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. Public notice is also required when sites are listed to or delisted from the PLP. Superfund staff often meet with local government officials and community groups and hold public meetings to

provide updates of site-specific activities. For example, in 2022, the MPCA held a public meeting regarding the remedial actions proposed for the contamination release from the Joslyn site.

The MPCA also works closely with EPA on public meetings for Federal Lead Superfund sites listed on the NPL or proposed for future listing. One recent example includes the federal NPL listing of the Southeast Hennepin Groundwater and Vapor Superfund site. This meeting provided the local community with an overview of EPA's role with future investigative and clean-up work associated with this site.

The MPCA coordinates closely with the EPA for public communication and outreach efforts regarding the St. Louis River Area of Concern (SLRAOC) remediation projects. Outreach teams are assembled for each of the SLRAOC remediation projects. In 2022, the EPA lead and MPCA assisted in a public meeting for the contaminated sediment remediation project in Spirit Lake adjacent to the former US Steel site. Also in 2022, the EPA and MPCA jointly held two virtual public meetings for the Munger Landing sediment cleanup project. Fact sheets for the Munger Landing project are being sent to interested parties on a regular basis as milestones are achieved. Ongoing public communication regarding the SLRAOC is also going out through the St. Louis River Alliance, a citizen action committee that works closely with the MPCA.

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 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 a number of 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. At present time the Superfund program is significantly understaffed and unable to fully

execute these core areas of its work. 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 issues will likely result in significant increase in MPCA Superfund activities over the next several years:

Groundwater/Drinking Water Protection

The MPCA Superfund Program and Minnesota Department of Health (MDH) have been collaborating to investigate and determine the best course to cleanup and protect public water systems that have been impacted by releases of hazardous substances.

Currently, the two agencies have prioritized 57 public water supply systems with manmade hazardous substances detected in one or more water sources supplying these systems. The concentrations are compared to Advisory Levels (ALs), defined by the MDH, which are health-based advisory levels and are not enforceable standards under the Federal Safe Drinking Water Act. These 57 public water supply systems are prioritized into one of three priority levels based on chemical detections at the source or entry point to a public water supply distribution system:

- ✓ Priority 1 entry point has a concentration exceeding an AL or health risk index,
- ✓ Priority 2 entry point has a concentration that is at least 50% of the AL or health risk index or consistently exceeds the AL or health risk index but is an emergency or backup entry point, and
- ✓ Priority 3 entry point is on increased monitoring due to a current or past detection, but concentrations are consistently less than 50% of the AL or health risk index.

This prioritization system is used to direct actions taken by the MPCA Superfund Program and MDH to investigate and, if necessary, provide short-term drinking water treatment while a long-term remedy is developed. 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, PFBS, and several 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.

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. MPCA is taking a programmatic approach to evaluating potential sources and managing/mitigating impacts where appropriate.

Another initiative was the continuation of the PFAS inventory pilot project. 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 U.S. Environmental Protection Agency (EPA) awarded, the MPCA, a Multipurpose Grant (MPG) to assist the pilot project to investigate PFAS sources and to validate the protocol. MPCA has sampled selected sites from the four counties listed above for PFAS based on implementation of the pilot protocol. The results from the pilot study will help determine how to incorporate PFAS considerations into the Remediation Division PFAS guidance as well as other MPCA programs that address PFAS contamination. It will also allow the MPCA to address sites that pose an unacceptable risk to human health and the environment based on PFAS contamination.

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 \(state.mn.us\)](#)). The PFAS Monitoring Plan provides a path forward for PFAS monitoring at solid waste, wastewater and 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.

The MPCA Remediation Division is also preparing more detailed PFAS guidance focusing on prescriptive site investigation and site remediation guidance to address PFAS at Superfund, Brownfields and Closed Landfill sites. The Remediation Division PFAS guidance is anticipated to be released in the fall of 2023. A stakeholder advisory group ([Developing PFAS remediation guidance | Minnesota Pollution Control Agency \(state.mn.us\)](#)) has been formed to assist with developing the PFAS guidance document for the Remediation program.

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 neighborhood of Andover and the community of Gem Lake in Ramsey County. MPCA has provided bottled water to impacted residents as an interim measure and we are working on solutions to provide long-term safe drinking water to both communities.

There is high likelihood that additional impacted 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. As of this Report, MPCA Site Assessment is still on-track to complete the project by the end of FY2028.

Minnesota Groundwater Contamination Atlas

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 on June 30, 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 general 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. The application currently features 152 contaminated areas, 103 Superfund sites, 46 CLP sites and 3 PRP sites. Additional contaminated sites are being added to continue to improve public awareness and access to MPCA and MDA data. Increased data accessibility will lead to better-informed stakeholders, more transparency and accountability

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.