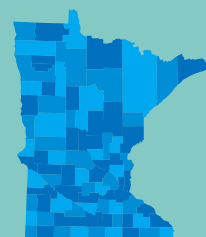


January 2019

Superfund Program Biennial Legislative Report for Fiscal Years 2017 and 2018



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 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 fiscal year.

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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 (1992)

Landfill Cleanup 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 and for administrative costs associated with those programs. The Remediation Fund also contains two special accounts, the Drycleaner Environmental Response and Reimbursement Account and the Metropolitan Landfill Contingency Action Trust Account. This report does not apply to expenditures from the Metropolitan Landfill Contingency Action Trust Account.

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 2017 and 2018 (FY17 - FY18) (July 1, 2016 – June 30, 2018) 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 site cleanup. FY17 and FY18 Remediation Fund figures are current as of December 30, 2018. All cumulative income and expenditure figures are approximations. Direct staff costs to research, write, and review this report totaled about \$2,200.

Administrative costs cover salaries for:

FY17	FY18	
24.5	23	MPCA full-time equivalent positions
2.5	2.5	MDA full-time equivalent positions
27 FTE	25.5 FTE	

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Minnesota Environmental Response and Liability Act responsibilities

The MPCA/MDA Superfund programs fulfill functions specified in MERLA for the 92 sites on the State's Permanent List of Priorities (PLP), as well as for the 138 non-listed sites being addressed by cooperative responsible parties. An additional 920 MPCA projects and 85 MDA projects are currently being addressed under Voluntary Investigation and Cleanup (VIC) programs authorized by the Land Recycling Act of 1992 and performed according to respective agency protocols.

Responding to emergencies and spills

Emergency Management Unit 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. These reports are triaged and some were transferred to other MPCA programs for follow-up. These transferred reports were other types of releases, such as air pollutants, wastewater bypasses, and tank petroleum leaks. When agricultural chemical spills occur, the MDA is the lead state agency that would respond.

The MPCA and MDA Emergency Management/Response teams' roles are 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 respond. Examples include fuel spills from unknown sources, mercury spills affecting sensitive populations, unknown chemicals infiltrating a sump in a home, abandoned containers of chemicals or oil, or other situations in which the commissioner of the MPCA or the MDA (or delegates) has declared emergencies.

Natural disaster and terror preparedness is an important part of the State Emergency Response programs. Contingency planning and preparing are done to prepare for assisting local officials with abandoned chemicals, oils and wastes, and managing contaminated or infected debris. When a disaster occurs, the MPCA and MDA may assist the local units of government and may utilize MERLA funds to recover scattered chemicals, materials and containers to protect the environment and human health.

FY17		FY18		
MPCA	MDA	MPCA	MDA	
3,232		3,177		Duty officer reports
2,169	122	2,105	104	Incidents reported
26	0	17	0	Emergency situations/declarations
\$559,929	NA	\$1,689,177	NA	Spending on emergency situations

The most significant cost expenditure was Cottage Grove Municipal Well filtration work to treat the cities' drinking water supply for Perfluorochemicals (PFAS or PFCs) contamination. More information about these chemicals is found at the end of this report. In FY17, \$146,000 was spent for the site under MERLA authorities. In FY18, \$1,307,624 was for the Cottage Grove Municipal Well filtration work. The MPCA is seeking cost recovery of the Cottage Grove expenses from 3M under terms of the 2007 Consent Order regarding PFAS releases from 3M disposal sites.

Superfund annual report closing numbers FY17 & FY18

Site Name	Expended FY17	Expended FY18
55th St & Lyndale S	\$45,476	\$63,081
Arcade St N & Hawthorne	Not Funded	\$55,361
Baytown	Not Funded	\$15,615
Brainerd Foundry	\$17,538	\$7,973
Bulinski Point	\$44,731	\$10,906
Capri / Byron Vapor	\$10,639	\$18,390
Cedar Service - Bemidji (MDA)	\$250,032	\$242,726
Cedar Service - Mpls (MDA)	\$1,301	\$912
Chemart	\$11,170	\$8,417
Clothing Care Cleaners	\$9,330	\$10,843
CMC Heartland (MDA)	\$10	\$2,182
CMC Minneapolis (MDA)	\$28,778	\$28,528
D's Fabric Care	Not Funded	\$7,192
Duluth Dump	\$48,865	Not Funded
Esko GW Plume	\$29,951	\$88,794
Exclusive Cleaners	\$8,980	\$48,784
Farmington GW Plume	\$5,455	\$10,746
Fish Hatchery	Not Funded	\$33,035
FMC / Fridley Area GW	\$30,046	\$20,816
General Mills	\$87,700	\$41,636
Hibbing Gas	Not Funded	\$49,739
Hmong Center	\$12,935	\$72,271
Hospital Linen	\$26,419	\$33,068
Kettle River (MDA)	\$919,927	\$796,946
Kurt/SW Fridley	\$14,448	Not Funded
Lakeland GW Contam	\$43,035	\$31,641
Lehillier	Not Funded	\$4,704
Littlefork	\$257,625	\$186,787
Long Prairie	\$238,401	\$386,969
Lyndale Ave Corridor	\$28,103	\$48,220
Main Street Plume	\$15,840	\$68,523
Mankato Plating	\$14,523	\$6,797

Site Name	Expended FY17	Expended FY18
Mcgillis & Gibbs	\$543,409	\$580,817
Perham	\$179,827	\$311,528
Peter Pan Cleaners	\$41,838	\$33,089
Pigs Eye	\$32,754	\$34,867
Pilgrim Cleaners	\$67,095	\$19,157
Pine Street Dump	\$43,532	\$21,454
Precision Plating	\$59,491	\$45,923
Pure Oil	Not Funded	\$38,258
Rice County Dump	Not Funded	\$3,639
Ritari	\$25,750	\$43,522
Rochester GW Plume	\$48,437	\$103,420
Schloff	\$17,470	\$23,616
SE Hennepin Area GW	\$129,659	\$418,441
Southview Blvd	\$53,202	\$28,945
Spring Park Mun Wells	\$188,082	Not Funded
St. Louis Park Vapor	\$578,940	\$11,256
St. Louis River AOC	Not Funded	\$24,918
Superior Plating	\$775,661	\$267,129
Universal Plating	Not Funded	\$42,276
University Ave & Pascal	Not Funded	\$11,277
Valentine Clark	\$15,956	\$11,897
West 66th St & Vincent	Not Funded	\$131,442
West Duluth	\$43,957	Not Funded
Whiteway Cleaners	\$11,882	\$17,214
Winona	\$63,564	\$58,646

Superfund annual report closing numbers FY17 & FY18

Name	Expended FY17	Expended FY18
Emergencies	\$448,739	\$401,554
Harmful Substance	\$55,388	\$158,755
MDH Well Fees - Superfund	\$21,790	\$2,270
Non-Emergency Removals	\$388,353	\$862,054
PFAS short-term response actions	\$344,340	\$3,297,540
PFC Technical Assistance	\$151,193	\$157,192
Site Assessment	\$735,587	\$340,285
Site Assessment (MDA)	Not Funded	\$21,402
Superfund Emergencies	\$52,010	\$108,724
Supplemental-Closed Sites	\$22,586	\$195,181
Technical Assistance	\$58,358	\$31,371
Technical Assistance (MDA)	Not Funded	Not Funded
Subtotal (site specific)	\$7,400,107	\$10,282,062
Site Specific Lab Analytical	\$349,941	\$546,891
Site Specific Lab Analytical (MDA)	\$3,483	\$11,337
Site-specific Legal	\$4,509	\$71,290
Subtotal (site-specific support)	\$357,934	\$629,518
Total FY Expenditures	\$7,758,041	\$10,911,580

Brownfields

Minnesota has built and maintains programs that enable properties with known or suspected environmental problems to be returned to productive use. The voluntary cleanup/brownfields programs of the MPCA and the MDA, to varying degrees, are involved in most of Minnesota's redevelopment projects on "brownfield" properties. As a result of the Land Recycling Act of 1992, these two programs offer a menu of assurances regarding potential liabilities that voluntary parties may obtain after their investigation of, and, if necessary, cleanup of contaminated sites.

Since 1988, the MPCA's Brownfields Program has overseen almost 4,800 projects. The MPCA's Brownfields Program includes sites managed under MERLA (Minn. Stat. § 115B and the Petroleum Tank Release Cleanup Act Minn. Stat. § 115C). This report only refers to sites within the MERLA portion of the Brownfields Program. Of those, over 3,600 have been cleaned-up; found acceptable for purchase, refinancing, or redevelopment; transferred to other regulatory programs for appropriate action; or have become inactive.

MDA's Agriculture Voluntary Investigation and Cleanup (AgVIC) Program has a combination of liability assurances available under MERLA, and eligibility for partial reimbursement of corrective-action costs from the Agricultural Chemical Response and Reimbursement Account (ACRRA) that offer a unique, incentive-driven program. This opportunity was positively received by MDA clientele.

FY17		FY18		
<i>MPCA</i>	<i>MDA</i>	<i>MPCA</i>	<i>MDA</i>	
281	17	291	13	New sites entered into the program
688	90	876	85	Open/active sites
76	6	79	17	Processed/closed sites

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.

The MPCA Brownfields programs continue to work closely with agency partners in the cleanup and reuse of contaminated properties in Minnesota. MPCA Brownfield staff are often asked to participate/present information concerning Brownfield redevelopment at seminars sponsored by community/non-profit organizations or educational institutions. The MPCA is a member of Minnesota Brownfields, a nonprofit organization that promotes coordination among governmental units, consultants, and private developers for the redevelopment of Brownfield properties in the State. MPCA Brownfield Program staff and MDA staff are members of Minnesota Brownfields Advisory Council, and often plan or participate in seminars/training sessions sponsored by the association. Minnesota Brownfields also sponsors an annual awards program called "The ReScape Awards," that highlights successful Brownfield redevelopment projects in Minnesota (<http://mnbrownfields.org/>). Minnesota Brownfields and MDA assisted the MPCA in preparing the Benefits of Brownfields report which highlights the community, environmental, and economic benefits of Brownfield redevelopment. <https://www.pca.state.mn.us/waste/benefits-brownfields-redevelopment>

Superfund Site Assessment

The Superfund Site Assessment Program (SA) is a MPCA-U.S. Environmental Protection Agency (EPA) cooperative program designed to evaluate initial reports of sites to determine whether Superfund resources should be expended to assess environmental risk at these sites. The program works with EPA Region 5 Superfund, and under a Cooperative Agreement, receives limited funding from EPA for staff resources. The SA program recently underwent a desk review with the EPA's State Program officer. EPA's findings were that the MPCA is responsive to site needs and activities under the Pre-Remedial Cooperative Agreement and all activities are on schedule, drawdowns are consistent, and progress reporting is provided in a timely manner. 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 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 risks. When observed conditions do not indicate an imminent risk is present, the site is added to the long-term backlog of sites. When observed conditions do not indicate a risk is present or if the risk has been adequately addressed, the site is closed out under SA. Site assessment 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 site assessment.

FY17	FY18	
139	115	New sites entered into the program
39	58	Referrals to other programs
16	20	Number of sites actively investigated
\$735,587	\$340,285	Expended Site Assessment Funds

Superfund investigation and cleanup

Potential Superfund sites are identified by or reported to the MPCA or the MDA, and when responsible parties do not volunteer to investigate or cleanup; the sites enter a formal assessment process for possible addition to the PLP 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 site will be listed on the PLP so the MPCA or MDA can conduct the cleanup with MERLA funding and seek 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 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.

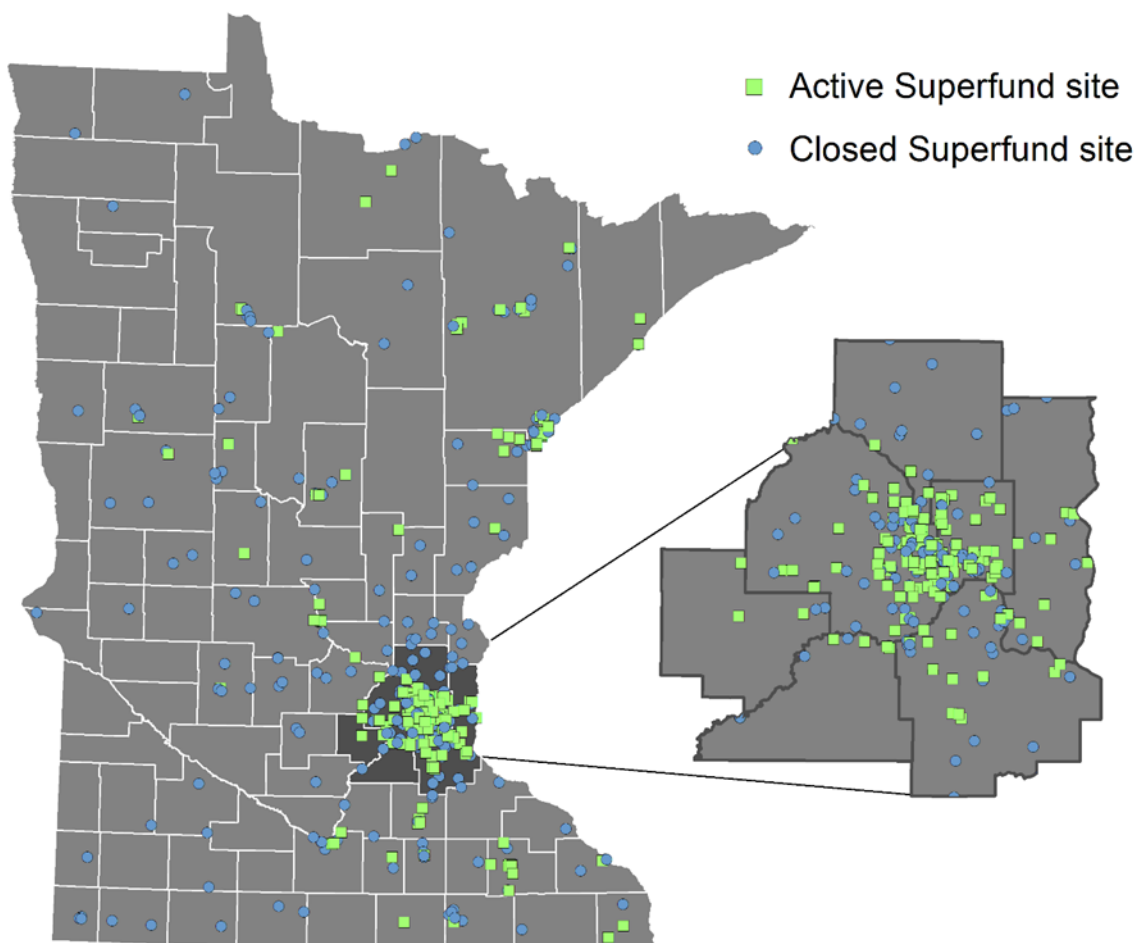
The primary purpose of the PLP (and NPL) is to identify which sites are eligible for state (or federal) funding for the purpose of the MPCA/MDA (or EPA) to conduct fund-financed response actions. The MPCA does have the authority under Minn. Stat. 115B to provide oversight of investigations and response actions taken by responsible parties. As such and in addition to sites listed on the PLP, the MPCA provides oversight of Superfund actions by responsible parties at 138 other currently active sites. Responsible parties for those other 138 active Superfund sites have entered into the MPCA Voluntary Remediation Program. They agreed to cooperatively work with the MPCA to complete investigation and cleanup activities.

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 needed 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 may 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 lead sites may require ongoing maintenance or monitoring using land use controls after the delisting process to ensure long-term risk reduction.

FY17		FY18		
MPCA	MDA	MPCA	MDA	
216	5	230	5	Active sites
\$6,554,510	\$1,203,531	\$9,807,547	\$1,104,032	Expenditures
14	0	9	0	Sites reaching closure
0	0	0	0	Sites delisted
124	3	138	3	Sites with oversight role
92		92		Sites on MN Permanent List of Priorities (PLP)
25		25		Sites on EPA National Priority List (NPL)



Minnesota's 25 NPL sites are 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>)

The MPCA and the MDA continue to manage site cleanup and move them to a monitoring or maintenance level, as appropriate. 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. Sites that involve issues like perfluorochemicals (PFAS, historically called PFCs) and intrusion of chemical vapors into buildings may require similar actions. Vapor-intrusion issues have become such a growing area of concern at Superfund sites that the EPA has revised its Hazard Ranking System to account for vapor intrusion in the NPL listing process.

Institutional controls

Institutional controls will also help to ensure that exposure to residual contaminants does not occur as a result of inappropriate land use at former Superfund and Brownfields sites. Examples of institutional controls used includes affidavits or restrictive covenants attached to property deeds and zoning, restricting property use. The MPCA has developed institutional control tracking mechanisms for former sites to ensure that citizens and local units of government are aware of, and honor, any controls already in place. The MPCA recently started serving 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>

505	Brownfield site institutional controls
47	RCRA Remediation site institutional controls
70	Superfund site institutional controls

MDA also has one Brownfield institutional control and one RCRA site institutional control.

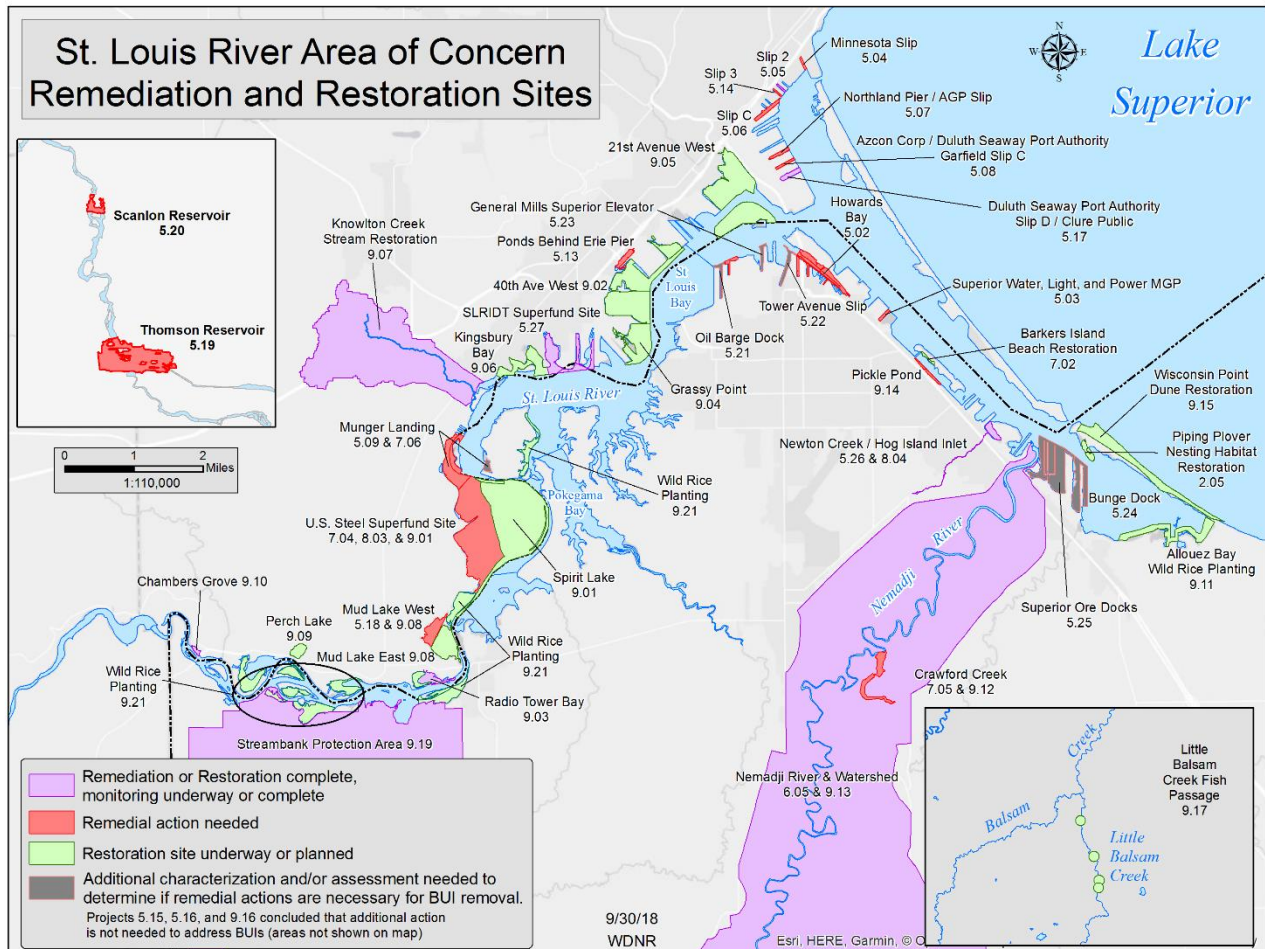
St. Louis River Area of Concern

Remediation work at sediment sites has evolved and grown in the last 20 years, particularly in the St. Louis River Area of Concern (AOC), which stretches from the Duluth harbor to Cloquet. The AOC was designated by the EPA in 1987. Many of the beneficial use impairments are related to contaminated sediments. There have been many small sediment investigations in the past and the MPCA wanted to assess all reaches of the AOC. From 2006 to present, the MPCA has partnered with the EPA and the U.S. Army Corps of Engineers (USACE) to assess the state of the sediment contamination in the St. Louis River. See the map of the AOC Remediation sites below.

In 2013, eight sediment remedial sites were identified in the AOC during a Phase 1 Assessment as needing more investigation and cleanup. Some of these sites have responsible parties that are carrying out the remedial work. Others are being addressed through the Brownfields program as a redevelopment site. The remaining sites were investigated further using EPA Great Lakes Restoration Initiative funds awarded to the MPCA. A Phase 2 Sediment Assessment using EPA Great Lake Legacy funding was completed in late 2014. This work assessed six additional sites for potential cleanup. In 2016, Focused Feasibility Studies (FFS) for each of these remedial sites were completed. The FFS identifies a number of remedial alternatives for each site. The

Partnership Agreement with the USACE for design of restoration projects and Minnesota Slip remedial design has been amended to add the remaining nine remedial sites. The cleanups of the remediation sites is coordinated with EPA Great Lake Legacy funding.

In the fall of 2018, three slips in the Duluth harbor (Minnesota Slip, Slip 3, and Slip C) were remediated. Remediation occurred through Project Agreements with the EPA and funding from the Great Lakes Restoration Initiative and Minnesota General Obligation Bonds. Based on available funding, all cleanup actions will occur by 2022 to meet the St. Louis River AOC delisting goal of 2025.



MPCA and MDA active Permanent List of Priorities sites	County	HRS Score	NPL	PLP List	Site ID
Joslyn Mfg. & Supply Co. OU1	Hennepin	44	Y	10/30/1984	SR0000001
General Mills	Hennepin	39	Y	10/30/1984	SR0000003
Boise Cascade/Onan/Medtronics	Anoka	59	N	10/30/1984	SR0000004
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
Honeywell Inc - Golden Valley Plant	Hennepin	31	N	10/1/1984	SR0000018
Tonka Main Plant	Hennepin	31	N	12/30/1985	SR0000025
FMC	Anoka	66	Y	10/30/1984	SR0000029
3M Chemolite	Washington	33	N	10/30/1984	SR0000033
Bell Lumber & Pole Company	Ramsey	48	Y	10/30/1984	SR0000034
Waite Park Wells	Stearns	32	Y	12/30/1985	SR0000035
Ritari Post & Pole	Wadena	30	Y	10/30/1984	SR0000039
Long Prairie Groundwater Contamination	Todd	32	Y	10/30/1984	SR0000040
Valentine Clark Corp	Ramsey	4	N	12/30/1988	SR0000044
3M Oakdale Dump Sites	Washington	59	Y	10/30/1984	SR0000055
Perham Arsenic Site	Otter Tail	38	Y	10/30/1984	SR0000056
Reilly Tar & Chem Saint Louis Park	Hennepin	59	Y	10/30/1984	SR0000060
Isanti Solvent (Aka Charles Schumaker Farm)	Isanti	30	N	10/30/1984	SR0000063
Arrowhead Refinery Co.	St. Louis	40	Y	10/30/1984	SR0000067
NIROP OU1	Anoka	63	Y	10/30/1984	SR0000072
Baytown Twp Groundwater Contamination	Washington	38	Y	12/30/1988	SR0000084
Cedar Services	Hennepin	17	N	12/30/1990	SR0000087
Cedar Services Inc.	Beltrami	17	N	2/1/2014	SR0001051
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
Freeway Sanitary Landfill	Dakota	46	Y	10/30/1984	SR0000098
Old Freeway Dump	Dakota	65.64	N	6/30/1993	SR0000099
Pollution Controls Inc. (A.K.A. Pci)	Scott	52	N	10/30/1984	SR0000107
Brooklyn Park Dump	Hennepin	35.5	N	12/30/1989	SR0000112
Pig's Eye Landfill	Ramsey	43	N	12/30/1989	SR0000117
Highway 96 Dump	Ramsey	31	N	10/15/1984	SR0000122
Superior Plating Inc	Hennepin	6	N	10/30/1984	SR0000131
Electric Machinery	Stearns	38	Y	4/30/1986	SR0000136
Lakeland Ground Water Contamination	Washington	16	N	6/24/2014	SR0000145
St. Louis/Interlake/Duluth/Tar Site - OU Sed	St. Louis	32	Y	10/30/1984	SR0000149
Minnegasco OU-1 Soils	Hennepin	42	N	10/30/1984	SR0000155
Schloff Chemical	Hennepin	7	N	12/30/1989	SR0000175
Mankato Plating Company	Blue Earth	8	N	5/30/1995	SR0000176
Mibco Site	Hennepin	40	N	5/30/1992	SR0000177
West Duluth Industrial Site	St. Louis	11	N	10/30/1984	SR0000179

Winona Groundwater Contamination	Winona	25	N	12/30/1989	SR0000181
St. Louis River/Us Steel OU-P Wire Mill P	St. Louis	32	Y	10/30/1984	SR0000190
Pine Street Dump	Dakota	32	N	12/30/1991	SR0000192
St. Paul Levee Property	Ramsey	20	N	5/30/1992	SR0000198
Littlefork GW Contamination Site	Koochiching	22.56	N	5/30/1995	SR0000199
MacGillis and Gibbs Waste Site	Ramsey	48	Y	10/30/1984	SR0000200
Finland Air Force Station (Former)	Lake	13	N	6/30/1996	SR0000205
Pilgrim Cleaners	Hennepin	12.2	N	12/30/1996	SR0000206
Precision Plating, Inc.	Hennepin	4	N	12/1/2014	SR0000249
D's Fabric Care	Carlton	5.81	N	8/24/2016	SR0000264
Ashland Oil - Park Penta	Washington	32	N	4/30/1986	SR0000278
TCAAP General	Ramsey	59	Y	10/30/1984	SR0000313
Farmington Ground Water Plume	Dakota	5.62	N	6/30/1999	SR0000329
CMC Heartland Lite Yard	Hennepin	13	Y	4/15/2002	SR0000348
Kettle River Company - Creosote	Pine	35	N	6/30/2002	SR0000349
Peter Pan	St. Louis	3	N	1/30/2003	SR0000350
Reserve Mining Silver Bay Scrapyard & Dro Plume	Lake	10	N	10/30/2003	SR0000351
Edina Well Field Site	Hennepin	50	N	7/6/2006	SR0000358
Rochester Groundwater Plume	Olmsted	50	N	7/6/2006	SR0000359
Minnesota Valley Landfill	Scott	14	N	7/6/2006	SR0000360
Hibbing Gas Manufacturing Plant Site	St. Louis	11	N	7/6/2006	SR0000361
Esko Groundwater Contamination Site	Carlton	8	N	8/15/2006	SR0000369
Capri Beauty Salon	Olmsted	4	N	4/20/2010	SR0000372
Hmong Shopping Center/Pilgrim Cleaners	Hennepin	3	N	4/1/2010	SR0000373
Southview Boulevard	Dakota	3	N	4/2/2010	SR0000375
Fish Hatchery Dump	Ramsey	22	N	8/1/2007	SR0000376
St. Louis Park Solvent Plume	Hennepin	3	N	4/15/2010	SR0000377
Brainerd Foundry	Crow Wing	2	N	4/1/2010	SR0000378
Centerville Road Dump	Ramsey	9	N	8/1/2010	SR0000379
Bulinski Point - Wittrup	St. Louis	5	N	2/28/2014	SR0000381
Rice County Dump (Former, Comus)	Rice	12	N	2/1/2014	SR0000382
Chemical Marketing Corp Of America	Hennepin	23.22	N	6/30/1999	SR0001009
Poplar Hill Solvent Site	St. Louis	6	N	8/1/2013	SR0001273
Main Street Solvent Plume	St. Louis	2	N	8/1/2013	SR0001281
White Way Cleaners	Hennepin	4	N	6/30/1998	SR0001293
Exclusive Cleaners Worthington	Nobles	6	N	8/1/2014	SR0001339
Spring Park Municipal Wells	Hennepin	50	Y	8/27/2014	SR0001349
Ace Signs, Inc	Kandiyohi	3	N	2/25/2014	SR0001351
Clothing Care Cleaners	Olmsted	14	N	3/4/2014	SR0001353
Page & Hill	Koochiching	17	N	9/1/2010	SR0001354
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
Arcade & Hawthorne Ave E	Ramsey	24	N	9/30/2015	SR0001403
55th St & Lyndale Ave S	Hennepin	17	N	9/24/2015	SR0001404
University Ave & Pascal St	Ramsey	18	N	8/15/2016	SR0001405
Hospital Linen	Ramsey	50	N	8/15/2016	SR0001406
Pure Oil Bulk Facility	Hennepin	7	N	8/15/2016	SR0001430
West Broadway Ground Water Contamination	Steele	6	N	6/30/1999	SR0001503
Boise Cascade Medtronic	Anoka	59	N	10/1/1984	SR0001522

Dry Cleaner Fund

The Dry Cleaner Environmental Response and Reimbursement Account (Drycleaner Fund) 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 Drycleaner Fund 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 for the dry cleaner fund. The program moves dry cleaners individual responsibility for the investigation and cleanup into a system of collective responsibility. Where there is not a viable party to do the cleanup, the MPCA covers the cost.

Due to the amount of funding taken into the account each year, there is currently a backlog of applications waiting to be reimbursed. The current wait time for reimbursement is approximately three years. Due to a decrease in the number of dry cleaner operators in recent years, these fees have increased significantly on the remaining operators.

The FY16 amendments to the Dry Cleaner Environmental Response and Reimbursement Law directed the MPCA to adopt rules defining reasonable costs and ineligible costs for reimbursement, application requirements, and a process to adjust reimbursement rates. Those rules were promulgated in FY18. The rules are similar to the Petro Fund rules, however the petro fund has significantly more resources on which to draw.

Since establishment of the Drycleaner Fund, 71 facilities have received approximately \$11.5 million in full or partial reimbursement.

FY17	FY18	
\$910,263.96	\$1,281,583.97	Amount reimbursed

Harmful substance compensation program

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. 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. However, since FY14 the

number of claims received has increased, primarily related to the lower drinking water standards for trichloroethylene (TCE) and PFAS compounds.

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. To date, there has not been a claim for reimbursement under this provision.

The MPCA will also utilize funding under this program to provide bottled water or carbon filter systems when there is no responsible party identified. When there is a responsible party identified, as there is with the PFAS releases, the MPCA will seek cost recovery for reimbursement payments made.

The MPCA received no requests from local units of government for such reimbursements in either FY17 or FY18.

FY17	FY18	
14	33	Number claims
\$55,388	\$158,755	Amount associated with claims

Perfluorochemicals at Superfund sites

Perfluorochemicals (PFAS) are a family of chemicals 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. They were not known to cause environmental problems until 2004, when the MPCA found PFAS in drinking water supplies in parts of the eastern Twin Cities Metropolitan Area.

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 (CO) negotiated between MPCA staff and 3M. The CO 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. Because the Washington County site is in the Closed Landfill Program, 3M has no legal liability for the site, but did agree under the CO 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.

On Feb. 20, 2018, the state of Minnesota settled its lawsuit against the 3M Company in return for a grant of \$850 million. Minnesota's attorney general sued 3M in 2010 alleging that the company's production of chemicals known as PFAS had damaged drinking water and natural resources in the east 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.

How the grant will be used

The agreement 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 drinking water and enhance natural resources – 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 a working group to guide use of the funds.

Priority one — Ensure safe drinking water

With PFCs having contaminated domestic water supplies in a number of east metro communities, the top priority for grant funds will be projects aimed at providing a clean, sustainable supply of drinking water in the area. These projects include, but are not necessarily limited to the cities of Afton, Cottage Grove, Lake Elmo, Newport, Oakdale, St. Paul Park, Woodbury and the townships of Grey Cloud Island and West Lakeland. Funded projects will help provide residents and businesses with enough clean drinking water to meet current and future needs. Such efforts could include providing alternative sources of drinking water for cities or private well owners, treating drinking water from existing wells, or connecting homes served by private wells to municipal drinking water systems. Grant funds also could support efforts to assure a sustainable supply of drinking water, with projects such as promoting water conservation or acquiring open spaces that help recharge drinking water sources more quickly.

Priority two — Enhance natural resources

The second priority for grant spending is to enhance aquatic resources, wildlife habitat, and outdoor recreational opportunities in the east metropolitan area, or downstream of the area on the Mississippi and St. Croix Rivers. Such projects might include restoring and protecting fish and wildlife habitat, building boat ramps and fishing piers to provide access to fish unaffected by PFC contamination, or cleaning up contaminated river sediments. The MPCA and DNR will have immediate access to \$20 million in grant funds for projects in this priority category. After the safe drinking water goals of the first priority are reasonably achieved, more grant money can be used for natural resource projects.

Remaining grant funds

If funds remain after the first two priority goals are met, they can be used for statewide environmental projects. Only projects that benefit statewide water resources, habitat restoration, open space preservation, recreation improvements, or other sustainability projects will be considered.

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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.

The MPCA also coordinates closely with the EPA on public meetings held for Federal Lead superfund sites listed on the NPL. One example is the public meeting held by EPA for the St. Regis Superfund site in Cass Lake. The St. Regis superfund site is located within the boundaries of the Leach Lake Band of Ojibwe (LLBO) Reservation, and is funded by a responsible party. The public meeting was designed to

discuss the EPA's proposed plan for the remediation of contaminated soils on residential properties. A second meeting was held to insure that as many band members were able to attend as possible. MPCA staff and management attended these meetings to participate and provide information as needed.

In the past, the main way to communicate with the public and promote public participation was through traditional media like news releases. Now that has changed. The MPCA uses multiple forms of outlets, both traditional and social media, to engage the public, including Facebook, Twitter, GovDelivery (news releases, email updates, newsletters), and YouTube. By using a combination of media, we are able to share details of upcoming outreach activities, answer project and issue questions in real time, and engage citizens in the conversation.

During the last biennium, the MPCA also developed a framework for integrating environmental justice principles into the agencies public communications 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 are being placed into practice by the MPCA Superfund Program.

Priorities for the Superfund Program

The MPCA and the Superfund Program need to have adequate capacity to respond to a number of emerging environmental health priorities and lowering of several standards that will require significant attention over the next several years. These issues will necessitate (1) additional assessments and work at currently active sites, (2) greater degree of investigations and cleanups at a larger number of future sites than had been anticipated, and; (3) reassessment of closed sites to ensure that they do not pose a continued threat to public health and the environment.

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 MDH have been collaborating to investigate and determine the best course to cleanup and protect public and private water supplies that have been impacted by releases of hazardous substances.

Currently, the two agencies have prioritized 36 community water supply wells with detections of Volatile Organic Compounds. Volatile Organic Compounds were detected at 11 of these wells at levels that exceed a state health based drinking water guidance value requiring the MPCA Superfund Program to investigate and, if required, provide short-term drinking water treatment while a long-term groundwater remedy is developed. These 36 community wells are broken into three priority levels: Priority 1 (four wells) have levels consistently above guidance values, Priority 2 (seven wells) have levels detected above guidance values but not consistently, and Priority 3 (25 wells) have levels with detections but levels below guidance values.

These wells were not prioritized for investigation and treatment since they met the legally required federal drinking water standards, but exceeded state of Minnesota guidance values that are more stringent. 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.

As part of this effort, the MPCA has engaged with the EPA to complete a National Priority Listing of Spring Park Municipal Wells. This is the first listing on the NPL for the MPCA in 19 years. By listing the

site on the NPL, MPCA maximizes the resources available to expedite the investigation and cleanup at the site.

Perfluorochemicals

Per- and polyfluoroalkyl substances are a group of man-made chemicals that includes PFOA, PFOS, PFBS, and several others. This group of chemicals are commonly used in non-stick and stain resistant consumer products, food packaging, fire-fighting foam, and industrial processes. These chemicals 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 five different PFAS compounds. In response to these published criteria, MPCA developed a PFAS Program 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.

MPCA and MDH also prioritized wells with PFAS impacts into three priority levels. MDH has identified 59 community supply wells across nine Minnesota communities. Most are in the east metro area. Priority 1 (26 wells) are above the Health Risk Index. The Health Risk Index is a cumulative exposure risk calculated number that is used to compare to sample data. The Health Risk Index is the baseline for issuing a well advisory. All the Priority 1 wells do have a well advisory. Priority 2 (three wells) and Priority 3 (30 wells) do not have a well advisory, but they are on the list to monitor and manage appropriately.

Another initiative was the start of the pilot PFAS source location inventory. The primary objective of the inventory is to develop a protocol to evaluate and prioritize PFAS source locations that is defensible, well documented, reproducible, financially feasible, and transparent. Initially it will start out by piloting a method to complete an inventory in four counties. A Risk Communication Plan was developed in support of the PFAS Program to establish a clear communication strategy prior to executing the protocol. The risk communication plan includes a stakeholder evaluation and analysis, a decision framework for execution, and supporting tools. Conceptual site models were developed for several types of sites to better understand potential fate and transport pathways and exposure scenarios for PFAS in the environment. MPCA has also reached out to other states to understand what protocols and actions other states are taking regarding PFAS contamination. The protocol will develop over the next few fiscal years.

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 drinking water standard of 1 part per billion. During the last biennium the advancement of laboratory testing methods used to report 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, of those two are actively being monitored by the MDH.

1,4 dioxane has been identified as a contaminant of concern in the deep groundwater (at depths of 80 feet) associated with the former Twin Cities Army Ammunition Plant (TCAAP) Superfund site. Affected by this contamination, two municipalities have drinking water treatment systems in place for 1,4 dioxane: the city of New Brighton and village of St. Anthony. 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.

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.

Chlorinated Solvents

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 compounds that are worked on include tetrachloroethylene (PCE) and trichloroethylene (TCE).

Backlog

The Superfund program is working on a backlog of 2055 previously closed Superfund sites that require re-examination due to changes in standards used to evaluate risk from chlorinated solvents. Of the sites previously closed by the MPCA, 1,429 sites have the potential for vapor intrusion – the migration of vapor-forming chemicals from a subsurface source into an overlying building – and 200 of those sites are located near sensitive populations (schools and day care facilities). The next step is to examine sites in residential, environmental justice areas affected by TCE vapors. Additionally, 626 closed groundwater contamination sites will be reevaluated where drinking water has the potential to be contaminated by trichloroethylene (TCE), which is a toxic chemical used as an industrial cleaning/degreaser solvent. Since these sites' were closed, the health values for drinking water have become more stringent requiring additional assessment. Under the current rate of funding, reviews to determine whether the closed sites are further impacting human health and the environment will not be completed until sometime after the year 2061.

Vapor intrusion

Chlorinated solvents such as PCE and TCE can migrate into buildings from the source of the contamination through the soil. These vapors can degrade the quality of the indoor air and sometimes pose risks to human health. 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.

Data Accessibility

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 Superfund Program is half way through a three-year project funded by the Environmental and Natural Resources Trust Fund (ENRTF) to harvest data from files and place data into a statewide enterprise database. Then use the data to develop a web-based interactive map showing areas of groundwater contamination at Superfund sites. Work is also under way to capitalize on the investment in groundwater data sharing to ensure all future data are collected and maintained in easily accessible, electronic formats. MPCA is adopting new processes and training contractors and staff to use data management tools that will allow our stakeholders to access our data through a self-service web portal.

Increased data accessibility will lead to better-informed stakeholders, more transparency and accountability and is consistent with the MPCA 2018-2022 Strategic Plan to “Accelerate the availability of data and information in a self-service format.”

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.