

2020 Stormwater Pollution Prevention Plan Annual Report

Ramsey County Municipal Separate Storm Sewer System Permit

June 30, 2021



Ramsey County Public Works

2020 Stormwater Pollution Prevention Program Annual Report

Minimum Control Measure 1: **PUBLIC EDUCATION AND OUTREACH**

1a-1: Distribute Educational Materials

i. Brochures, Newsletters, Posters, and Utility Bill Inserts related to Stormwater, Household Hazardous Waste Collection, Used Oil and Used oil recycling, Master Gardener, Yard Waste disposal, Construction Project updates, and Rain garden construction. Material distributed by Ramsey County Public Works, Ramsey County Public Health Dept., and Ramsey Conservation District = ~1,280,183

ii. Other media

Media Type	Number of Impressions ¹		
	2018	2019	2020
Billboards (static and digital)	44,087,230	44,087,230	6,282,797
Bus Sides	33,417,913	33,417,913	N/A
Transit	6,383,686	6,383,686	9,713,540
Online Banner & Mobile Ads	3,686,694	3,686,694*	1,902,853
Radio/Television	N/A	N/A*	41,786,078
Skyway & Public Space Ads	12,379,000	12,379,000*	2,025,000
Bars, Restaurants, & CHS Field	5,352,000	5,352,000*	N/A
Twitter/YouTube/ Other Digital (YW & HHW Topics)	N/A	53,754 ²	624,319
Facebook & Instagram (YW & HHW)	N/A	35,940	255,183
Total	105,306,523	105,396,217	62,589,770

¹estimated number instances people see the ads

²Twitter only

*Used 2018 numbers. We switched marketing firms, but efforts didn't change from 2018.

iii. Ramsey County Website Statistics

a) Ramsey County Stormwater Website hits:

Page Title	2015 hits	2016 hits	2017 hits	2018 hits	2019 hits	2020 hits
Stormwater Main Page	356	160	662	691	667	545
Illicit Discharge	60	77	70	128	130	133
Report Illicit Discharge	N/A	N/A	108	111	87	79
RCPW Construction Page	8,442	24,888	14,879	14,944	17,756	7,818
RC Public Health Household Hazardous Waste Page	39,749	12,834	>10,000	>10,000	52,615	70,894
RC Public Health Yard Waste Page	170,676	51,523	>50,000	>50,000	138,980	209,646
RC Public Health – Source Separated Organic Waste	9,638	4,558	>4,000	>4,000	8,226	29,936
RC Public Health A to Z Waste Disposal Guide <i>*Only tracked for partial year due to system upgrade</i>	201,213	20,695	>20,000	>20,000	65,707	77,081

b) Ramsey County Website Construction Page Update Subscribers (Updates often include environmental permit details and erosion control/stabilization updates)

2016 Subscribers	2017 Subscribers	2018 Subscribers	2019 Subscribers	2020 Subscribers
17,655	N/A	17,282	6,676	16,009

c) Comments/Reports received on stormwater/IDDE website = 1

1b-1: Implement an Educational Program

i. Tamarack Nature Center - Water Quality Exhibits, Brochures & Educational Programs:

a. Annual visitors:

2013	2014	2015	2016	2017	2018	2019	2020
99,352	116,932	117,588	132,695	137,000	133,775	173,228	N/A ²

b. Water Quality Education & Interpretive Programs participants:

2013	2014	2015	2016	2017	2018	2019	2020
12,709	12,572	1,276	3,015	1,795 ¹	1,824	2,229	N/A ²

¹Participation numbers reduced due to a wetland drawdown

²Covid restrictions required cancelling WQ programs and prevented collecting visitor data.

- ii. Master Gardener Program/Event Attendees: Master Gardeners interacted at County Yard Waste Site ~7,000 residents
- iii. Public presentations about shorelines / rain gardens conducted by RCD:

Year	# Presentations	Total Attendance
2014	7	136
2015	6	240
2016	Not Reported	565
2017	5	N/A
2018 ¹	0	0
2019	3	174
2020 ²	4	50

¹No presentations in 2018 due to agency transition

²Lower attendance presumably due to Covid-19 restrictions switching presentations to web-based format.

- iv. Shoreline vegetation & Rain garden projects by RCD:

	2016			2017			2018				2019				2020			
	Consults	Installations	TP removed (est. lbs/yr.)	Consults	Installations	TP removed (est. lbs/yr.)	Consults	Project Designs	Installations	TP removed (est. lbs/yr.)	Consults	Project Designs	Installations	TP removed (est. lbs/yr.)	Consults	Project Designs	Installations	TP removed (est. lbs/yr.)
Rain Gardens	263	60	11.5	263	60	20.0	375	132	57	29.56	352	154	42	10.5	260	203	56	18.5
Shoreline																		
WCA-DNR Consults/Incidents /TEP	Consults			Consults			Consults				Consults	Incidents	TEP Reviews		Consults	Incidents	TEP Reviews	
	86			86			60				68	2	30		49	6	44	

- v. 633-EASY Hotline calls (*Detailed in MCM 3c-1.vi*)

Year	2014	2015	2016	2017	2018	2019	2020
Call Total	15,976	15,788	24,156	>20,000	>20,000	>17,200	26,293

1c-1: Education Program – Public Education and Outreach

i. Ramsey County Dept. of Health (Haz Waste, HHW, Chemical Safety, Yard Waste Mgmt)

Activity/Training	Year	Sessions	Attendance
Hazardous Waste Generator	2013	27	690
	2014	20	403
	2015	25	870
	2016	19	558
	2017	19	554
	2018	24	684
	2019	25	684
	2020	1	75

ii. Ramsey County Soil and Water Conservation Division

a. Conservation Forums (attendance per forum)

- i. January – AIS in Review (15)
- ii. April – AIS Planning (10)
- iii. June – Rain Gauge Network Forum (15)
- iv. December – AIS in Review (10)

b. Rain Garden / Shoreline Projects:

Activity		Total
Consults/Design Projects	Rain Gardens	203
	Shorelines	
Completed / Installed Projects	Rain Gardens	56
	Shorelines	

iii. Ramsey County Public Works

- a. Usually provide financial and staff support for Phalen WaterFest. Due to Covid protocol, 2020 WaterFest was held in a virtual format.
- b. Hosted 2020 Utility Meeting

iv. Ramsey-Washington Watershed District Public Works Forum

- a. Hosted public education exhibits for 2020 Phalen Virtual WaterFest

v. Rice Creek Watershed District Public Works Forum - No activity

1c-2: Education Program – Public Participation

- i. Annual SWPPP Public Meeting Attendance –*Covered in Section #2*
- ii. Visits to RCPW Storm water Website = 545

1c-3: Education Program – Illicit Discharge Detection and Elimination

- i. IDDE training presentation at annual Public Works Maintenance Dept. Spring Safety Meeting
- ii. Parks and Rec Staff receiving annual training in IDDE identification = N/A
- iii. Household Hazardous Waste Collection Flyers = 917,218
- iv. Cities working w/ Ramsey County Public Health for City cleanup activities = not tracked in 2020
- v. IDDE Public Reports = 6

1c-4: Education Program – Construction Site Run-off Control

i. RCPW Pre-Construction Meetings in 2020

Project	Attendance
Silver Lake Rd @ Mn COMM RR	15
2019 Drainage Repair	14
Larpenteur @ Prosperity Pond	7
Larpenteur /Dale to I35E 4 to 3	26
Dale St – Inglehart to University	53
Lexington @ West 7 th	20
County Rd H2 – Peterson to Lakeview	5
2020 ADA Pedestrian Ramps	7
2020 Bituminous Overlays	8
Battle Creek Play Area	N/A

ii. RCPW Active projects in 2020 requiring weekly meetings

Project	# Meetings	Avg. Attendance
Rice St @ I694	21	6-24
2019 Concrete Rehab	4	4-5
Silver Lake Rd @ Mn COMM RR	5	7-8
2019 Drainage Repair	4	4-5
Larpenteur /Dale to I35E 4 to 3	7	5-8
Dale St – Inglehart to University	33	10-20
Lexington @ West 7 th	18	6-12
2020 ADA Pedestrian Ramps	2	2
2020 Bituminous Overlays	14	4-7
Battle Creek Play Area	N/A	N/A
Rice Creek Site & Roadway	N/A	N/A

iii. Public comment of Construction Project SWPPPs = 0

iv. County staff attending Erosion Control Training = 15 people totaling 152 hours

- v. See item 1a-1-ii-b): Ramsey County Website - Construction Update Subscriptions
- vi. Total new permitted construction projects in 2020 = 4
Total active permitted construction projects = 5

1c-5: Education Program – Post-Construction Stormwater Management in New Development and Redevelopment

- i. Stormwater structure maintenance flyers: No new structure flyers distributed in 2020
- ii. 2020 New Stormwater Structures / BMPs = 2 (Detailed list under MCM 5a-1)
- iii. Public comments on new stormwater structures = 0

1c-6: Education Program – Pollution Prevention/Good Housekeeping for Municipal Operations

- i. Number of electronic comments received on Annual Report = # 0
- ii. Interactions at WaterFest (annual forum) = # 0 (Note: WaterFest was a virtual festival in 2020 due to COVID-19 Protocols. Ramsey County did not participate.

1d-1: Coordination of Education Program

- i. Outside agency programs that Ramsey County participates in = 14
 - RWMWD Watershed Management Plan TAC,
 - Rice Creek Watershed District TAC,
 - Como Lake TMDL, MPCA Chloride TMDL TAC,
 - Turtle and White Bear Lake augmentation TAC,
 - USGS WBL/TCMA Surface/Groundwater Modeling TAC,
 - Salt Tolerant Roadside Grasses TAP,
 - North and East Metro GWMA Advisory Team,
 - RWMWD Water Fest,
 - Bald Eagle TMDL TAC,
 - Silver West Carp Removal/Lake Improvement TAC,
 - Ramsey County Aquatic Invasive Species TAC,
 - MN Bighead Carp TAC
 - MnDOT Infiltration BMP Design TAC
 - Road Salt Symposium
- ii. Public Works Forum attendance numbers and seminar/workshop information posted under 1c-1

1e-1: Annual Public Meeting

Details contained in MCM-2

Minimum Control Measure 2: **PUBLIC PARTICIPATION/INVOLVEMENT**

2a-1: Comply with Public Notice Requirements

- i. St. Paul Pioneer Press: Published on May 24, June 7, June 14, & June 21
- ii. Lillie Suburban Newspaper: No Longer in Print
- iii. Ramsey County Website & Social Media:
 - a. Posted on Ramsey County website on May 30, promoted on Ramsey County's Twitter Feed.
 - b. Promoted on Ramsey County construction updates email newsletter on June 19.

2b-1: Solicit Public Input and Opinion on the Adequacy of the SWPPP

#0 Public comments related to Ramsey County's SWPPP in 2020.

Ramsey County did not host an in-person public forum due to Covid-19 protocols.

The public comment was changed to an online review and comment period.

2c-1: Consider Public Input

0 comments or changes to the SWPPP following public comments in 2020.

Minimum Control Measure 3: **ILLICIT DISCHARGE DETECTION AND ELIMINATION**

3a-1: Storm Sewer System Map

- i. GIS Mapping Updates to System in 2020:
 - a. Updated GPS coordinates on structures
 - b. Updated inspection records
 - c. Added new structures
 - d. Updated MS4 data and merged all municipality pipe data into one shapefile
 - e. Mapped reported illicit discharges from 2020

3b-1: Regulatory Control Program

i. Ramsey County Right-of Way Permit

Year	Excavation/ROW Permits Issued	# of Inspections (est.)	Violation Notices	Revocation of Permits
2013	397	~450	10-20	0
2014	459	~500	12	0
2015	678	700+	5	0
2016	640	423	26	0
2017	701	654	36	0
2018	713	500	11	0
2019	1,117	474	4	0
2020	650	702	12	0

- ii. The County Right-of-Way Ordinance was revised to include more stringent erosion control provisions in 2009 and adopted by the Ramsey County Board on January 19, 2010. A copy of the ordinance is available at:

<https://www.ramseycounty.us/sites/default/files/Right%20of%20Way%20Ordinance.pdf>

3c-1: Illicit Discharge Detection and Elimination Plan

- i. Outfalls identified in the Ramsey County's MS4 = 2,075
- ii. Outfalls inspected in 2020 = 545
- iii. Outfalls requiring removal of illicit discharges = 0
- iv. Outfalls requiring maintenance = 129
- v. The Ramsey County Household Hazardous Waste Collection Program served to prevent illegal dumping by providing a location for the public to dispose of waste that may have otherwise made its way into Ramsey County's MS4.

2020 HHW Collection results:

- a. Total HHW sites (year-round, satellite, and stand-alone collections): 11
- b. Total HHW site operating hours & household participation:

Year	Operating Hours	Total Households
2011	2,360	26,963
2012	1,871	25,540
2013	1,871	25,851
2014	N/A	27,264
2015	1,871	28,987
2016	1,920	27,902
2017	1,927	27,963
2018	1,974	28,642
2019	1,974	27,021
2020	1,971	32,590

c. Pharmaceutical collection at the Ramsey County Sheriff's Patrol Station

Year	Residents #	Amount Collected (lbs)
2013	2,843	5,228
2014	3,538	5,987
2015	4,238	8,402
2016	4,951	9,394
2017	6,158	11,700
2018	5,337	10,140
2019	>5,000	10,020
2020	>5,000	10,220

d. Volumes by major category of HHW:
Permanent & Satellite HHW Facilities

Waste Item		2014 (lbs)	2015 (lbs)	2016 (lbs)	2017 (lbs)	2018 (lbs)	2019 (lbs)	2020 (lbs)
Aerosols		38,285	39,100	45,289	45,284	45,396	53,068	39,547
Antifreeze		19,625	21,360	21,594	26,225	30,508	26,048	32,408
Batteries	Lead acid	30,174	43,740	30,174	46,911	30,174	48,497	67,531
	Non-rechargeable	4,436	2,727	4,436	2,118	4,436	6,527	17,118
	Rechargeable	11,083	5,857	11,083	14,173	11,083	10,956	8,712
Compressed gas cylinders		24,384	15,164	27,741	32,750	17,180	38,810	18,565
Corrosive (acids & bases)		7,923	8,651	14,663	17,569	7,689	10,540	26,388
Flammable solvents		90,863	93,038	107,734	106,267	107,612	118,365	130,445
Flammables (liquid & solid)		44,897	49,020	83,089	99,555	102,896	133,371	150,237
Fluorescent & HID lamps		49,259	94,045	69,186	91,687	133,022	86,720	64,899
Latex driveway sealer		9,835	10,140	10,440	12,015	11,020	11,020	10,943
Latex paint		649,615	526,603	620,355	643,744	641,450	637,094	739,166
Lead paint chips		1,460	2,070	299	571	1,901	1,349	3,227
Mercury		232	307	409	651	421	357	3,751
Oil paint		228,881	170,214	185,047	167,265	159,551	154,218	179,002
Other		4,805	6,939	5,172	9,535	31,701	10,583	18,822
Pesticides		49,208	45,300	53,619	52,062	55,517	67,005	71,090
Used motor oil		135,232	133,525	130,138	136,271	136,593	133,741	146,878
Used motor oil filters		5,396	5,349	4,563	5,222	5,249	4,979	4,444
Total HHW		1,363,233	1,425,028	1,498,993	1,425,028	1,550,908	1,553,248	1,733,173

Ramsey County Public Works oil collection facility

	2013	2014	2015	2016	2017	2018	2019	2020
Used Oil Volume (gallons) ¹	26,102	24,085	26,710	38,671	43,520	36,419	41,437	22,811
Used Oil Filters (lbs.)	23,500	17,125	19,870	19,250	19,175	18,750	14,523	20,250
Antifreeze (gallons)	1,565	1,480	845	1,865	1,200	1,390	1,865	1,150

¹Used oil volume total is combination of public collection and PW Vehicle Maintenance Dept

Compost/Yard Waste Collected

	2013	2014	2015	2016	2017	2018	2019	2020
Volume Yard Waste / Brush (yd ³)	283,984	295,646	281,532	270,431	267,927	243,219	288,880**	266,062**
Total Operating Hours/Site	1,230	--	1,508	1,495	>1,428	>1,428	>1,428	>1,428
Volume Compost Produced (yd ³)	4,106	5,509	5,414	3,700	4,400	3,950	3,425	5,144
Source Separated Organics Participation (visits)	--	--	45,636	51,813	59,114	70,333	86,611	N/A
Source Separated Organics Collected (tons)	--	--	237.46	304.80	362.29	348.50	409.82	832.84

*Leaves/Grass data only. Brush was not included in the final volume

**Estimated volume – leaf/grass was reported in tons, used 350lbs/yd³ conversion

- vi. Ramsey County Department of Public Health operates a solid waste disposal hotline providing advice on all aspects of waste disposal.

2020 Call Results:

Topic	2014 Calls	2015 Calls	2016 Calls	2017 Calls	2018 Calls	2019 Calls	2020 Calls
Recycling	1,461	1,895	1,816	6,566	7,004	7,723	6,342
Food Waste/Organics	65	180	292	322	334	420	340
Medicine Collection	451	526	462	339	204	175	194
Other waste	0					2,525	
HHW	3,257	3,604	4,358	3,065	2,295	2,300	4,178
Compost Sites / Yard Waste	5,261	5,255	6,787	5,294	3,620	3,714	9,087
Other Topics	4,467	4,180	2,368	4,069	4,840	1,886	6,152
Total Calls	15,976	15,788	19,673	12,428	18,297	18,743	19,417

3d-1: Public and Employee Illicit Discharge Information Program
Details covered in 1c-3

3e-1: Identification of Non-Storm Water Discharges and Flows

- i. Non-storm water discharge reporting 13
 - a. Through the IDDE program = 6
 - b. Identified by County staff = 3
 - c. Notification from municipality/state = 4
- ii. Ramsey County shares or refers reported illicit discharges to local MS4s if they have jurisdiction
 - a. Notifications forwarded to cities = 8
 - b. Notifications received from cities = 3
 - c. Notifications forwarded to Watershed Districts = 1

Minimum Control Measure 4: **CONSTRUCTION SITE STORMWATER RUNOFF CONTROL**

4a-1: Ordinance or other Regulatory Mechanism

- i. Right-of-way permits issued (Excavation or Driveway) = 650
- ii. Percent of right-of-way permits requiring drainage evaluation and/or connection to Ramsey County's MS4: $33/650 = 5.08\%$

4b-1: Construction Site Implementation of Erosion and Sediment Control BMPs

- i. RCPW staff attending Erosion Control Training = 15 people totaling 150 hours
- ii. Permits obtained for Ramsey County Construction/Maintenance Projects:

Project	NPDES	Department	Watershed District (Permit?)
Lexington @ W 7 th St	Y	RCPW	CRWD - Y
Larpenteur @ Prosperity Pond	N	RCPW	RWMWD - Y
Battle Creek Play Area	Y	RC-Parks	RCWD - Y
2019 Drainage Repair	N	RCPW	RCWD - Y

4c-1: Waste Controls for Construction Site Operators

- i. Waste control is required for all Ramsey County construction projects under each individual project's SWPPP
- ii. Ramsey County Ordinance #2001-287 was amended in 2009 and adopted on January 19, 2010. It includes waste control requirements for Right-of-Way permitted projects.

4d-1: Procedure for Site Plan Review

- i. Construction project plans prepared/reviewed = 9
- ii. Construction permits obtained: See 4b-1
- iii. Stormwater modeling projects completed/reviewed = ~15
- iv. Applicable reviews for each project are required as part of the NPDES permitting process
- v. Impaired waters/stream reaches in Ramsey County in 2020 = 41 with 67 total impairments.
New waters listed in 2020*: Zero
Waters delisted in 2020*: 2 = Lake Johanna and Lake Owasso (Mercury in Fish TMDL implementation plans approved in 2020 = 0
 *TMDL list is updated in even years only. 2020 List results are included here.

See Appendix A - Ramsey County 2020 Impaired-TMDL Waters List for details

4e-1: Establishment of Procedures for the Receipt and Consideration of Reports of Stormwater Noncompliance

- i. The public may report illicit discharges using an email form on the Ramsey County website: <https://www.ramseycounty.us/residents/environment/stormwater-management/illicit-discharge/report-illicit-discharge>
The report is automatically forwarded to the Environmental Services Division
- ii. 2020 Complaints = 6

4f-1: Establishment of Procedures for Site Inspections and Enforcement

- i. Ramsey County Public Works: Total permitted construction sites = 6
 - a. Active Sites = 5
 - b. Site monitored for vegetation/completion & closed = 0
 - c. Total construction site inspections performed by RCPW staff & contractors in 2020 = 139
 - d. Ramsey County Parks active NPDES permitted sites = 2
 - i. Total inspections = 13 (one site)
 - e. Other Ramsey County facility permitted sites = 0
- ii. Ramsey County Soil and Water Conservation Division Performing Contracted Inspections on the behalf of municipalities:
 - a. Inspections performed = 253
 - b. Total inspections requiring corrective action = 51
- iii. Ramsey County Right-of -Way Permit Inspections
 - a. Total Permits = 650
 - b. Inspections = 702
 - c. Total inspections requiring correction = 12

4g-1: Erosion Control for Maintenance Activities

Maintenance project erosion control inspections = 85 inspections of 43 sites

Minimum Control Measure 5: **POST-CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT**

5a-1: Development and Implementation of Structural and/or Non-structural BMPs

New Ramsey County Public Works Structural BMPs

Project	BMP Description	Maintenance Responsibility
Rice St @ I694	Kath Infiltration Basin	RCPW
Rice St @ I694	Vadnais Inn Filtration Basin	RCPW
Larpenteur @ Prosperity	L/P Enhanced Biofiltration Basin	RCPW
Rice Creek Site & Roadway	Infiltration Basin	RC Parks
Rice Creek Site & Roadway	Grass Swale	RC Parks
Keller Golfview	Unnamed	RC Parks
Keller Golfview	Unnamed	RC Parks
Battle Creek Playground	Unnamed	RC Parks
Battle Creek Playground	Unnamed	RC Parks

5b-1: Regulatory Mechanism to Address Post Construction Runoff from New Development and Redevelopment

- i. Ramsey County Right-of-Way permits requiring review for post-construction BMPs = N/A

5c-1: Long-term Operation and Maintenance of BMPs

- i. Maintenance Operations by BMP type:
 - a. Ponds / Sediment Basins: 9

Name	Maintenance Description
Arlington Filter Pond	Filter media restoration Invasive/noxious brush removal
Lexington @ County I Pond	Vegetation maintenance
Lexington Ditch Basin/Trash Weir	Rebuilt basin
Marsden Pond	Sediment delta removals Vegetation maintenance
Moundsview Pond	Vegetation maintenance
South Heights Pond	Inlet repairs
Wakefield Pond	Vegetation maintenance
Whitaker Forebay	Vegetation maintenance
Warner Bridge Pond	Vegetation maintenance

b. Pollution Control Structures/Infiltration BMPs: 20

BMP Name	Maintenance Description
Bald Eagle Ave @ 10 th St Basin	Supplemental seeding
Beisswenger's Pond Infiltration Bench	Vegetation maintenance
Ben Franklin Ditch	Sediment and Vegetation removal
County C @ Cleveland IB	Cleanout and inlet repair
County F Rain Gardens (5)	Inlet Upgrades Media and vegetation restoration
Ford Parkway Tree Trenches (3)	Underdrain adjustment Inlet sump cleanouts
Hawthorne Infiltration Trench	Inlet sump cleanout
Hwy 96 & Hwy 10 Filtration Basin	Vegetation maintenance
Maryland @ Westminster Infiltration Basin	Diversion structure modification Vegetation maintenance
Oxford @ County C Filtration Basin	Vegetation maintenance
Prosperity @ Barclay Infiltration Trench	Inlet sump cleanout
Randolph Ave Tree Trenches (3)	Underdrain adjustment Inlet sump cleanouts

c. Infiltration BMP Vegetation Maintenance Performed by the MN Conservation Corps / RWMWD / Contractor

Year	Agency	Amount
2012	MCC	\$2,925.00
2013	MCC	\$6,581.25
2014	MCC	\$6,093.75
2015	MCC	\$4,840.47
2016	RWMWD	\$1,126.25
2017	RWMWD	\$1,428.00
2018	RWMWD / Contractor	\$10,073.00
2019	RWMWD / Contractor	\$8,743.00
2020	RWMWD / Contractor	\$500.00 (est.)

ii. Maintenance Agreements for 2020:

BMP	Maintenance Responsibility	Agency
Rice St @ I694 Interchange – Kath Filtration Basin	RCPW	RWMWD / MnDOT
Rice St @ I694 Interchange – Vadnais Inn Infiltration Basin	RCPW	
Larpenteur @ Prosperity BMP	RCPW	RWMWD
Dale St Bridge Project- Infiltration Trench	RCPW	CRWD / MnDOT
Lexington Ave – Unnamed Filtration Basin	RCPW	Arden Hills/Shoreview/RCWD
Parkview Center School BMP – Volume Reduction Credit	Roseville	CRWD
County Rd D reconstruction – Stormwater BMPs to be maintained by the city	Little Canada	Little Canada
Seminary Pond – Cost Share, Volume Reduction Credit	Lauderdale	Lauderdale, Falcon Heights, CRWD

Minimum Control Measure 6: **POLLUTION PREVENTION/GOOD HOUSEKEEPING**

6a-1: Municipal Operations and Maintenance Program

i. Ramsey County staff trained in Spill Prevention = 12 (Covid-19 restrictions disrupted the normal training schedule in 2020. New and summer employees only underwent training. The schedule resumed in 2021).

ii. Erosion Control Installers trained in 2020 = 0

6a-2: Road Surface Sanding, Salting, and Sweeping

i. Ramsey County MS4 routine miles swept:

a. Ramsey County has 295 miles of roadway and 935 lane miles.

b. Two sweeping events = 1,870 total lane miles swept.

ii. RCPW employees trained in salt application = 2 (Covid-19 restrictions disrupted the normal training schedule in 2020. New employees only underwent training. The schedule resumed in 2021).

iii. Sections and miles of road targeted for additional sweeping

Road Section	Lane Miles
Bald Eagle Blvd – CR H2 to Buffalo	2.6
Carver Ave – TH61 to Century	2.6
Century Ave – CR E to CR F	2.0
County Rd B – Edgerton to Henry	7.8
County Rd H – Silver Lake Rd to Old 8	2.4
County Rd H2 – Centerville Rd to Bald Eagle Blvd	3.0
Energy Park Dr – UP RR to Lexington	10.4
Otter Lake Rd – Scheunemann to Hwy 96	1.8
Plato Blvd – Water to Fillmore	5.2
White Bear Ave – Frost to Radatz	8.0

iv. Sand applied in 2020 = 0 tons (Ramsey County is a salt-only applicator)

v. Material recovered during sweeping events:

Year	Amount Recovered (tons)
2011	1,107
2012	406.5
2013	1,060
2014	1,384
2015	1,425
2016	1,185
2017	1,368
2018	1,286
2019	581*
2020	1,827

*Amount recovered was lower in 2019 due to equipment needing maintenance.

vi. Ramsey County Salt Usage per Event

Winter	Season Usage (Tons)	Lbs / lane mile per event	# of Events	Total Snowfall (in)
2010-2011	6,000	703	24	86.6
2011-2012	3,505	536	14	23.0
2012-2013	8,656	561	33	71.0
2013-2014	10,491	607	37	67.7
2014-2015	6,209	428	31	32.0
2015-2016	2,867	321	18	30.1
2016-2017	4,697	419	24	32.0
2017-2018	13,683	770	38	77.4
2018-2019	5,899	422	30	68.8
2019-2020	3,610	334	28	47.0
2020-2021	3,047	269	25	51.0

6b-2: Annual Inspection of All Structural Pollution Control Devices

- i. Structural Pollution Control Device Inspections: 22/22 = 100%
- ii. Devices requiring maintenance: 9
- iii. New devices added: 1 – Larpenteur @ Prosperity EFB Sump

6b-3: Inspection of a Minimum of 20 percent of the MS4 Outfalls, Sediment Basins and Ponds Each Year on a Rotating Basis

- i. Outfalls: 545/2075 = 26.0%
- Sediment Basins: 6/13 = 46%
- Ponds – 21/24 = 87.5%
- ii. Percentage targeted on a five-year basis
- Outfalls = 100.0%
- Ponds / Sediment Basins – 37/37 = 100%

6b-4: Annual Inspection of All Exposed Stockpile, Storage, and Material Handling Areas

- i. RCPW Garage Facility - 4 inspections
- ii. Kent St Storage Site - 4 inspections
- iii. TCAAP Stockpiles – 4 inspections
- iv. NPDES Industrial Stormwater Permit was reissued in 2010. All Ramsey County Facilities were determined to be exempt or were certified as No-Exposure

6b-5: Inspection Follow-up Including the Determination of Whether Repair, Replacement, or Maintenance Measures are Necessary and the Implementation of the Corrective Measures

- i. Corrective actions determined based on inspection in 2019 = 210
- ii. Repairs not completed in 2020:

Structure	Problem	Scheduled Completion of Repair
2388 Taylor Ave drainage	Roadside flow entering private property.	Resolved by homeowner.
2875 County H Culvert	Washout below culvert, separation	Late Summer 2021 – Contractor
5492 East Bald Eagle Blvd Washout	Culvert replacement and structure repair needed.	Summer 2022 contract
Bald Eagle Ave @ 10th St	Drainage issues in ROW to private property.	Summer 2022 – Infiltration BMP
Bald Eagle Ave @ Soo Line west side basins	Cross culvert may have failed	2021
Battle Creek Mitigation Wetland culverts	Failing culverts on Parks property draining mitigation wetland	Pending
Centerville Rd @ Specialty Manufacturing	Ditch cleanout needed	Summer/Fall 2021
Cnty C east of Victoria	Culvert apron has separated from pipe.	Summer 2021 – Contractor
County 10/Moundsvie Blvd - Spring Lake Park Road to east of Groveland Ave	Multiple drainage issues including culverts in poor condition and ditches full of sediment	Summer/Fall 2021
County C cross culvert - east of Linden Lane	Culvert outlet blocked by a large sediment delta	Summer 2022 contract
County E2 @ RC Ditch #4	Culvert may have a void	Late 2021 - Televising
County I flood control weir	Structure repairs need	Completed Spring 2021
Eagle St @ County Ditch #11 culvert extension	The slope above the repaired culvert is too steep. Culvert extension planned.	Late Summer 2021 - Contractor
Fairview Ditching - Larpenteur to Roselawn	Install new catch basin to improve ditch drainage	Fall 2021
Hwy 10 culvert	Failing culvert needs replacement	Pending
Kohlman Ponding Area Dike	Dike deteriorating	Pending
Lambros Ditch	Failing wall along ditch on private property	Late 2021 – Contractor
Larpenteur Ave Ditch work - East of Sterling Ave	Ditch cleanout needed	Partial completion May 2020. Remainder pending.

Lexington Ave @ County C Sediment Sump	Basin cleanout needed. Easement access from railroad needed.	Pending
Lexington Ave @ Little Josephine South Ditch	Ditch cleanout needed	Summer 2021
Marsden Pond Sediment Deltas	Small sediment deltas need removal	Summer 2020
New Brighton Rd @ RR culvert	Failing culvert. Preliminary cleanout and televising needed.	Late Summer 2021
Northwest Ave ditch - Stillwater Ave to 2nd St	Ditch repairs, tree removal	Pending
Old Hwy 10 Ditch realignment	The ditch has meandered too close to the road. It needs to be moved.	Summer 2021
Old Snelling north of County E drainage	Large sediment delta below outfalls	Completed Spring 2021
Otter Lake Rd Ditching - Hwy 96 to Scheunemann Rd	Ditch cleanout needed	Delayed due to local complications
Outfall #4878h -Larpenteur Ave to Woodview Marsh	Failing culvert. Televising needed.	Pending
Outfalls from MS4 at multiple (129) locations	Various needs including debris removal, culvert repair, etc.	Summer/Fall 2021
Rice St @ Dennison Ave	Roadway drainage scouring private driveway. Reinforced swale needed.	Completed Spring 2021
Salvation Army Wetland - Inlet cleanout	Inlet partially blocked by sediment and debris.	Completed June 2021
Silver Lake Rd @ County I Finger Drain	Debris and sediment blockage	Summer 2021
Vadnais Blvd west of Edgerton culvert	Failed culvert discharging to East Vadnais Lake	Late Summer 2021 – Contractor

6b-6: Record Reporting and Retention of all Inspections and Responses to the Inspections

All required inspection reports are kept on file for required time durations

6b-7: Evaluation of Inspection Frequency

- i. County facilities under the NPDES Industrial Stormwater Permit were required to be inspected 5 times per year between April & October.
 - a. As of June 2010, these facilities are no longer required to have NPDES Permits.
 - b. Inspection schedule alterations:
 - Inspection frequency was reduced to quarterly inspections (4) beginning in 2014

6b-8: Lake Water Quality Monitoring

30 lakes are monitored 6-8 times per year for nutrients, suspended solids, clarity, chlorophyll, wet chemistry, pH, and beach E-coli testing (weekly in summer).
See *Appendix B - Ramsey County 2020 Lake Water Quality Score* for details.

Appendix A. Ramsey County Impaired-TMDL Waters List

Minnesota's Draft 2020 Impaired Waters List

Ramsey County 2020 Impaired Waters Inventory

Water body name	Water body description	Water body type	Year added to List	Basin	AUID	Use Class	County	HUC 8	Watershed name	Partial tribal designation	Affected designated use	Pollutant or stressor
Battle Creek	Battle Creek Lk to Pigs Eye Lk	Stream	2014	Upper Mississippi River, Upper Portion	07010206-2Bg, 3C	2Bg, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Benthic macroinvertebrates bioassessments
Battle Creek	Battle Creek Lk to Pigs Eye Lk	Stream	2008	Upper Mississippi River, Upper Portion	07010206-2Bg, 3C	2Bg, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Chloride
Battle Creek	Battle Creek Lk to Pigs Eye Lk	Stream	2014	Upper Mississippi River, Upper Portion	07010206-2Bg, 3C	2Bg, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Fish bioassessments
Beaver	Lake or Reservoir	Lake	2008	Upper Mississippi River, Upper Portion	62-0016-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue
Bennett	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	62-0048-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue
Bennett	Lake or Reservoir	Lake	2006	Upper Mississippi River, Upper Portion	62-0048-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients
Como	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	62-0055-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue
Como	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	62-0055-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Chloride
Como	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	62-0055-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients
East Vadnais	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	62-0038-01	1C, 2Bd, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue
Fish Creek	Carver Lk to Unnamed (North Star) Lk	Stream	2014	Upper Mississippi River, Upper Portion	07010206-2Bg, 3C	2Bg, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Escherichia coli (E.coli)
Gervais	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	62-0007-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue
Gillfillan	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	62-0027-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients
Goose	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	62-0034-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients
ISLAND (BASIN N. OF I-694)	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	62-0075-02	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue
ISLAND (BASIN N. OF I-694)	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	62-0075-02	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients
Island (Basin S. of I-694)	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	62-0075-01	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue
Island (Basin S. of I-694)	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	62-0075-01	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients
Johanna	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	62-0078-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Perfluorooctane sulfonate (PFOS) in fish tissue
Jones	Wetland	Wetland	2008	Upper Mississippi River, Upper Portion	62-0076-00	2D, 3D, 4C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Aquatic plant bioassessments
Jones	Wetland	Wetland	2008	Upper Mississippi River, Upper Portion	62-0076-00	2D, 3D, 4C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Benthic macroinvertebrates bioassessments
Josephine	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	62-0057-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue
Kasota Pond North	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	62-0280-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Chloride
Kasota Pond West	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	62-0281-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Chloride

Appendix A. Ramsey County Impaired-TMDL Waters List

Ramsey County 2020 Impaired Waters Inventory

Water body name	Water body description	Water body type	Year added to List	Basin	AUID	Use Class	County	HUC 8	Watershed name	Partial tribal designation	Affected designated use	Pollutant or stressor
Kohlman	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	62-0006-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Chloride
Kohlman	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	62-0006-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients
Little Johanna	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	62-0058-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Perfluorooctane sulfonate (PFOS) in fish tissue
Little Johanna	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	62-0058-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Chloride
Little Johanna	Lake or Reservoir	Lake	2004	Upper Mississippi River, Upper Portion	62-0058-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients
Mallard Marsh	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	62-0259-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Chloride
McCarron	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	62-0054-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue
Mississippi River	Upper St Anthony Falls to St Croix R	Stream	1998	Upper Mississippi River, Upper Portion	07010206	2Bg, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue
Mississippi River	Upper St Anthony Falls to St Croix R	Stream	1998	Upper Mississippi River, Upper Portion	07010206	2Bg, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in water column
Mississippi River	Upper St Anthony Falls to St Croix R	Stream	1998	Upper Mississippi River, Upper Portion	07010206	2Bg, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	PCBs in fish tissue
Mississippi River	Upper St Anthony Falls to St Croix R	Stream	2014	Upper Mississippi River, Upper Portion	07010206	2Bg, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Perfluorooctane sulfonate (PFOS)
Mississippi River	Upper St Anthony Falls to St Croix R	Stream	2008	Upper Mississippi River, Upper Portion	07010206	2Bg, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Perfluorooctane sulfonate (PFOS) in fish tissue
Mississippi River	Upper St Anthony Falls to St Croix R	Stream	2020	Upper Mississippi River, Upper Portion	07010206	2Bg, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Aluminum
Mississippi River	Upper St Anthony Falls to St Croix R	Stream	2016	Upper Mississippi River, Upper Portion	07010206	2Bg, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Nutrients
Mississippi River	Upper St Anthony Falls to St Croix R	Stream	2014	Upper Mississippi River, Upper Portion	07010206	2Bg, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Total suspended solids (TSS)
Mississippi River	Upper St Anthony Falls to St Croix R	Stream	1994	Upper Mississippi River, Upper Portion	07010206	2Bg, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Fecal coliform
North Long	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	62-0087-01	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue
Phalen	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	62-0013-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue
Pike	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	62-0069-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Chloride
Pike	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	62-0069-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients
Pleasant	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	62-0046-00	1C, 2Bd, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue
Pleasant	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	62-0046-00	1C, 2Bd, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients
Priebe	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	62-0036-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients
Rice Creek	Unnamed lk (02-0041-00) to Long Lk	Stream	2006	Upper Mississippi River, Upper Portion	07010206	1C, 2Bdg, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Benthic macroinvertebrates bioassessments

Appendix A. Ramsey County Impaired-TMDL Waters List

Ramsey County 2020 Impaired Waters Inventory

Water body name	Water body description	Water body type	Year added to List	Basin	AUID	Use Class	County	HUC 8	Watershed name	Partial tribal designation	Affected designated use	Pollutant or stressor
Rice Creek	Unnamed Ik (02-0041-00) to Long Lk	Stream	2004	Upper Mississippi River, Upper Portion	07010206-01	1C, 2Bdg, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Fish bioassessments
Snail	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	62-0073-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue
South Long	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	62-0067-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue
South Long	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	62-0067-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Chloride
South Long	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	62-0067-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients
Sucker	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	62-0028-00	1C, 2Bd, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue
Turtle	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	62-0061-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue
Unnamed	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	62-0022-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients
Unnamed	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	62-0126-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients
Unnamed	Lake or Reservoir	Lake	2008	Upper Mississippi River, Upper Portion	62-0237-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue
Unnamed	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	62-0237-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	PCBs in fish tissue
Unnamed creek	Unnamed Ik (62-0205-00) to Little Lk Johanna	Stream	2014	Upper Mississippi River, Upper Portion	07010206-02	2Bg, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Chloride
Unnamed creek (Lambert Creek)	Highway 96 to Vadnais Lk	Stream	2008	Upper Mississippi River, Upper Portion	07010206-02	2Bg, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Fecal coliform
Valentine	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	62-0071-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Chloride
Valentine	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	62-0071-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients
Wakefield	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	62-0011-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients
West Vadnais	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	62-0038-00	1C, 2Bd, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients
White Bear	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	62-0167-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue
Wilkinson	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	62-0043-00	1C, 2Bd, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients

Appendix A. Ramsey County Impaired-TMDL Waters List

Ramsey County 2020 TMDL List

Water body name	Water body description	Water body type	Year added to List	Basin	AUID	County	HUC 8	Watershed name	Partial tribal designation	Affected designated use	Pollutant or stressor
ISLAND (BASIN N. OF I-694)	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	62-0075-02	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue
Island (Basin S. of I-694)	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	62-0075-01	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue
Johanna	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	62-0078-00	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Perfluorooctane sulfonate (PFOS) in fish tissue
Jones	Wetland	Wetland	2008	Upper Mississippi River, Upper Portion	62-0076-00	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Aquatic plant bioassessments
Jones	Wetland	Wetland	2008	Upper Mississippi River, Upper Portion	62-0076-00	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Benthic macroinvertebrates bioassessments
Little Johanna	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	62-0058-00	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Perfluorooctane sulfonate (PFOS) in fish tissue
Mississippi River	Upper St Anthony Falls to St Croix R	Stream	1998	Upper Mississippi River, Upper Portion	07010206-5	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	PCBs in fish tissue
Mississippi River	Upper St Anthony Falls to St Croix R	Stream	2014	Upper Mississippi River, Upper Portion	07010206-5	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Perfluorooctane sulfonate (PFOS)
Mississippi River	Upper St Anthony Falls to St Croix R	Stream	2008	Upper Mississippi River, Upper Portion	07010206-5	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Perfluorooctane sulfonate (PFOS) in fish tissue
Mississippi River	Upper St Anthony Falls to St Croix R	Stream	2020	Upper Mississippi River, Upper Portion	07010206-5	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Aluminum
Mississippi River	Upper St Anthony Falls to St Croix R	Stream	2016	Upper Mississippi River, Upper Portion	07010206-5	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Nutrients
Mississippi River	Upper St Anthony Falls to St Croix R	Stream	1994	Upper Mississippi River, Upper Portion	07010206-5	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Fecal coliform
Pleasant	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	62-0046-00	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients
Priebe	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	62-0036-00	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients
Rice Creek	Unnamed lk (02-0041-00) to Long Lk	Stream	2006	Upper Mississippi River, Upper Portion	07010206-5	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Benthic macroinvertebrates bioassessments
Rice Creek	Unnamed lk (02-0041-00) to Long Lk	Stream	2004	Upper Mississippi River, Upper Portion	07010206-5	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Fish bioassessments
Turtle	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	62-0061-00	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue
Unnamed	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	62-0022-00	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients
Unnamed	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	62-0237-00	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	PCBs in fish tissue
West Vadnais	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	62-0038-02	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients

Appendix A. Ramsey County Impaired-TMDL Waters List

Ramsey County Delisted Impaired Waters

Delist year	Water body name	Water body description	Water body type	Year added to List	Basin	AUID	Use Class	County	HUC 8	Watershed name	Partial tribal designation	Affected designated use	Pollutant or stressor	Reason for delisting
2020	Owasso	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	62-0056-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue	Delisting: Applicable WQS attained; due to unknown reasons
2020	Johanna	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	62-0078-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue	Delisting: Applicable WQS attained; due to unknown reasons
2018	Gem	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	62-0037-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients	Delisting: Applicable WQS attained, due to restoration activities
2014	Mississippi River	Minnesota R to Metro WWTP (RM 844 to 835)	Stream	2008	Upper Mississippi River, Upper Portion	07010206-505	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Perfluorooctane sulfonate (PFOS) in fish tissue	Delisting: Applicable WQS attained, due to restoration activities
2014	Mississippi River	L & D #1 to Minnesota R	Stream	2008	Upper Mississippi River, Upper Portion	07010206-514	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Perfluorooctane sulfonate (PFOS) in fish tissue	Delisting: Applicable WQS attained, due to restoration activities
2014	Keller (main bay)	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	62-0010-02	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients	Delisting: Applicable WQS attained, due to restoration activities
2014	Beaver	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	62-0016-00	2B, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients	Delisting: Applicable WQS attained, due to restoration activities

Appendix B. Ramsey County 2020 Lake Water Quality Score



CRITICAL SUCCESS INDICATOR & PERFORMANCE MEASURES

DEPARTMENT

INSERT & CENTER A CRITICAL SUCCESS INDICATOR

NATURAL RESOURCES ARE MANAGED TO SUSTAIN AND ENHANCE THE ENVIRONMENT.

PERFORMANCE MEASURES – HIGHLIGHTS

This measure tracks the summer average water quality in Ramsey County lakes for three important water quality parameters: water transparency, nutrients (phosphorus), and algae (measured as chlorophyll). Water quality data provide an important measure of the overall effectiveness of lake management efforts and help direct regulatory efforts of State and local units of government.

PERFORMANCE MEASURES

		2018	2019	2020	2021	2022
#	Performance Measures	Actual	Actual	Actual	Estimate	Estimate
1	Lake Water Quality Score	2.68	2.77	2.74	2.80	2.80

PERFORMANCE MEASURES - DISCUSSION

Public Works has developed a water quality database for recreational lakes in Ramsey County since 1981. In 2020, water sampling was completed on 29 lake basins during the summer (May through September). This measure is based on the Metropolitan Council's Lake Water Quality Report Card. For each lake, a score is assigned for the average summer water transparency, Total Phosphorus concentration, and Chlorophyll *a* concentration. The scores correspond to ranges in values for each parameter such that a score of '4' or 'A' represents the best water quality and '0' or 'F' represents the poorest water quality. The average water quality score is calculated for each lake and a grade is assigned. This measure reports the overall average numeric score for all County lakes sampled.

Overall, 2020 lake water quality scores increased relative to 2019. Three lakes' overall grade level increased by a single letter overall, while two decreased. Above average lake temperatures lead to unfavorable conditions for s lakes. Carp removal efforts were performed on Silver W, Long, Owasso, and the Gervais chain of lakes. An in-lake alum treatment was performed on Como lake. A new holding pond and sediment chamber, both containing spent lime to bind phosphorus, were installed at Wakefield Lake. These environmental factors and best management practices contributed to the continued high water quality scores.

Lake water quality reflects land use and activities within the watershed of a lake as well as internal factors. Ramsey County is a NPDES MS4 permit holder and has developed a Storm Water Pollution Prevention Plan (SWPPP) to reduce water quality impacts. The County's management efforts described in the SWPPP contribute to the reduction of pollutant loading to our lakes and continued improvement in water quality is expected over time.

The lake water quality database is used by the MN Pollution Control Agency to identify Impaired Waters. The County contributes to Total Maximum Daily Load (TMDL) studies for lakes identified as Impaired Waters. State and Water Management Organization (WMO) regulatory requirements related to water quality protection and the management of impaired waters are increasing. County road construction and maintenance projects must meet specific criteria related to erosion control, wetland impacts and mitigation, storm water volume reduction, and water quality.