



# 2021 Stormwater Pollution Prevention Plan Annual Report

## Ramsey County Municipal Separate Storm Sewer System Permit

June 23, 2022



## Ramsey County Public Works

### 2021 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 = 1,339,490

ii. Communications to underserved target communities (Spanish and Hmong speaking) = 201,951

##### iii. Other media

Media Type	Number of Impressions <sup>1</sup>		
	2019	2020	2021
Billboards (static and digital)	44,087,230	6,282,797	6,282,797 <sup>3</sup>
Bus Sides	33,417,913	N/A	N/A <sup>3</sup>
Transit	6,383,686	9,713,540	9,713,540 <sup>3</sup>
Online Banner & Mobile Ads	3,686,694 <sup>2</sup>	1,902,853	1,902,853 <sup>3</sup>
Radio/Television	N/A <sup>3</sup>	41,786,078	41,786,078 <sup>3</sup>
Skyway & Public Space Ads	12,379,000 <sup>2</sup>	2,025,000	2,025,000 <sup>3</sup>
Bars, Restaurants, & CHS Field	5,352,000 <sup>2</sup>	N/A	N/A <sup>4</sup>
Twitter (YW & HHW Topics)	53,754	624,319	58,087
Facebook & Instagram (YW & HHW)	35,940	255,183	N/A
<b>Total</b>	<b>105,396,217</b>	<b>62,589,770</b>	<b>61,768,355</b>

<sup>1</sup>estimated number instances people see the ads

<sup>2</sup>Used 2018 numbers. We switched marketing firms, but efforts didn't change from 2018.

<sup>3</sup>Used 2020 numbers

## iv. Ramsey County Website Statistics

## a) Ramsey County Stormwater Website hits:

Page Title	2016 hits	2017 hits	2018 hits	2019 hits	2020 hits	2021 hits
Stormwater Main Page	160	662	691	667	545	488
Illicit Discharge	77	70	128	130	133	105
Report Illicit Discharge	N/A	108	111	87	79	140
RCPW Construction Page	24,888	14,879	14,944	17,756	7,818	4,631
RC Public Health Household Hazardous Waste Page	12,834	>10,000	>10,000	52,615	70,894	67,966
RC Public Health Yard Waste Page	51,523	>50,000	>50,000	138,980	209,646	164,874
RC Public Health – Source Separated Organic Waste	4,558	>4,000	>4,000	8,226	29,936	21,791
RC Public Health A to Z Waste Disposal Guide	20,695	>20,000	>20,000	65,707	77,081	65,550

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

2017 Subscribers	2018 Subscribers	2019 Subscribers	2020 Subscribers	2021 Subscribers
N/A	17,282	6,676	16,009	24,198

## c) Comments/Reports received on stormwater/IDDE website = 4 plus 1 through the general public works complaints portal.

## 1b-1: Implement an Educational Program

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

## a. Annual visitors:

2014	2015	2016	2017	2018	2019	2020	2021
116,932	117,588	132,695	137,000	133,775	173,228	N/A <sup>2</sup>	115,000

## b. Water Quality Education &amp; Interpretive Programs participants:

2014	2015	2016	2017	2018	2019	2020	2021
12,572	1,276	3,015	1,795 <sup>1</sup>	1,824	2,229	N/A <sup>2</sup>	30,557 <sup>3</sup>

<sup>1</sup>Participation numbers reduced due to a wetland drawdown

<sup>2</sup>Covid restrictions required cancelling WQ programs and prevented collecting visitor data.

<sup>3</sup>Data for 2021 included all programs, not just WQ programs.

- ii. Master Gardener Program/Event Attendees: Master Gardeners interacted with the public at the County Yard Waste Sites. The topics promoted were:
  - a. *Organics (food waste and non-recyclable paper products) Recycling*
  - b. *Protect Our Water: Reduce Runoff Rainwater; Reduce Garden Chemicals; Plant Rain Gardens*
  - c. *Reduce Waste: Compost or Recycle Organics, Properly Prune, Leave Grass Clippings on lawn*
  - d. *Grow Your Own Food: For Exercise, Good Health, and a Better Budget*
  - e. *Reduce Chemicals: Reduce Chemicals in Your Yard and Home and properly dispose any leftovers*
- iii. Public presentations about shorelines / rain gardens conducted by RCD:

Year	# Presentations	Total Attendance
2015	6	240
2016	Not Reported	565
2017	5	N/A
2018 <sup>1</sup>	0	0
2019	3	174
2020 <sup>2</sup>	4	50
2021 <sup>3</sup>	0	0

<sup>1</sup>No presentations in 2018 due to agency transition

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

<sup>3</sup>No presentations in 2021.

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

	2017			2018				2019				2020							
	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	20.0	375	132	57	29.56	352	154	42	10.5	260	203	56	18.5	332	124	80	28
Shoreline																			
WCA-DNR Consults/Incidents /TEP	Consults			Consults				Consults	Incidents	TEP Reviews		Consults	Incidents	TEP Reviews		Consults	Incidents	TEP Reviews	
	86			60				68	2	30		49	6	44		62	4	48	

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

Year	2015	2016	2017	2018	2019	2020	2021 <sup>1</sup>
Call Total	15,788	24,156	>20,000	>20,000	>17,200	26,293	5,400

<sup>1</sup>Only yard waste and household hazardous waste were reported.

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	2014	20	403
	2015	25	870
	2016	19	558
	2017	19	554
	2018	24	684
	2019	25	684
	2020	1	75
	2021	2	119

ii. Ramsey County Soil and Water Conservation Division

a. Conservation Forums (attendance per forum)

i. January – AIS in Review (10)

ii. December – AIS in Review (10)

b. Rain Garden / Shoreline Projects:

Activity		Total
Consults/Design Projects	Rain Gardens	124
	Shorelines	
Completed / Installed Projects	Rain Gardens	80
	Shorelines	

iii. Ramsey County Public Works

a. Usually provide financial and staff support for Phalen WaterFest. Due to Covid protocol, 2021 WaterFest was held in a virtual format.

b. Hosted 2021 Utility Meeting

- iv. Ramsey-Washington Watershed District Public Works Forum
  - a. Hosted public education exhibits for 2021 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 = 488

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 = 883,744
- iv. Cities working w/ Ramsey County Public Health for City cleanup activities = not tracked in 2021
- v. IDDE Public Reports = 5

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

- i. RCPW Pre-Construction Meetings in 2021

<b>Project</b>	<b>Attendance</b>
Larpenteur Culvert Repair	15
County B2 – Fairview to Snelling	20
McKnight – Burns to Minnehaha	17
2021 Bituminous Overlays	20

- ii. RCPW Active projects in 202 requiring weekly meetings

<b>Project</b>	<b># Meetings</b>	<b>Avg. Attendance</b>
County B2 – Fairview to Snelling	10	6-11
McKnight – Burns to Minnehaha	4	3-4
2021 Bituminous Overlays	4	3-4

- iii. Public comment of Construction Project SWPPPs = 0
- iv. County staff attending Erosion Control Training = 10 people totaling 168 hours
- v. See item 1a-1-ii-b): Ramsey County Website - Construction Update Subscriptions
- vi. Total new permitted construction projects in 2021 = 2  
 Total active permitted construction projects = 4

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

- i. Stormwater structure maintenance flyers: No new structure flyers distributed in 2021
- ii. 2021 New Stormwater Structures / BMPs = 5 (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 2021 due to COVID-19 Protocols. Ramsey County did not participate. We used the public comment period for our 2020-2025 MS4 permit re-application as our public forum. We received no comments on our new SWPPP.

1d-1: Coordination of Education Program

- i. Outside agency programs that Ramsey County participates in = 13
  - 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,
  - 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: Not advertised in paper
- ii. Lillie Suburban Newspaper: No Longer in Print
- iii. Ramsey County Website & Social Media: Posted on Ramsey County website on August 8, promoted on Ramsey County’s Twitter Feed.
- iv. MPCA: public comment period announced by the MPCA on August 3

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

#0 Public comments related to Ramsey County’s SWPPP in 2021.  
 Ramsey County did not host an in-person public forum due to Covid-19 protocols. The public comment period for the new SWPPP under the 2020-2025 MS4 Permit was used as our public forum.

2c-1: Consider Public Input

# 0 comments or changes to the SWPPP following public comments in 2021.

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

3a-1: Storm Sewer System Map

- i. GIS Mapping Updates to System in 2021:
  - 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 2021

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
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
2021	661	475	9	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 = 1,490
- ii. Outfalls inspected in 2021 = 356
- iii. Outfalls requiring removal of illicit discharges = 0
- iv. Outfalls requiring maintenance = 29
- v. The Ramsey County Household Hazardous Waste Collection Program serves 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.

**2021 HHW Collection results:**

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

<b>Year</b>	<b>Operating Hours</b>	<b>Total Households</b>
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
2021	1,923	30,577

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

<b>Year</b>	<b>Residents #</b>	<b>Amount Collected (lbs)</b>
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
2021	>6,800	13,040

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

Waste Item	2015 (lbs)	2016 (lbs)	2017 (lbs)	2018 (lbs)	2019 (lbs)	2020 (lbs)	2021 (lbs)	
Aerosols	39,100	45,289	45,284	45,396	53,068	39,547	43,961	
Antifreeze	21,360	21,594	26,225	30,508	26,048	32,408	37,230	
Batteries	Lead acid	43,740	30,174	46,911	30,174	48,497	67,531	63,990
	Non-rechargeable	2,727	4,436	2,118	4,436	6,527	17,118	21,406
	Rechargeable	5,857	11,083	14,173	11,083	10,956	8,712	5,652
Compressed gas cylinders	15,164	27,741	32,750	17,180	38,810	18,565	28,114	
Corrosive (acids & bases)	8,651	14,663	17,569	7,689	10,540	26,388	10,665	
Flammable solvents	93,038	107,734	106,267	107,612	118,365	130,445	123,158	
Flammables (liquid & solid)	49,020	83,089	99,555	102,896	133,371	150,237	60,435	
Fluorescent & HID lamps	94,045	69,186	91,687	133,022	86,720	64,899	42,754	
Latex driveway sealer	10,140	10,440	12,015	11,020	11,020	10,943	9,860	
Latex paint	526,603	620,355	643,744	641,450	637,094	739,166	673,259	
Lead paint chips	2,070	299	571	1,901	1,349	3,227	2,214	
Mercury	307	409	651	421	357	3,751	1,013	
Oil paint	170,214	185,047	167,265	159,551	154,218	179,002	168,981	
Other	6,939	5,172	9,535	31,701	10,583	18,822	21,651	
Pesticides	45,300	53,619	52,062	55,517	67,005	71,090	69,389	
Used motor oil	133,525	130,138	136,271	136,593	133,741	146,878	143,614	
Used motor oil filters	5,349	4,563	5,222	5,249	4,979	4,444	4,386	
<b>Total HHW</b>	<b>1,425,028</b>	<b>1,498,993</b>	<b>1,425,028</b>	<b>1,550,908</b>	<b>1,553,248</b>	<b>1,733,173</b>	<b>1,531,732</b>	

Ramsey County Public Works oil collection facility

	2014	2015	2016	2017	2018	2019	2020	2021
Used Oil Volume (gallons) <sup>1</sup>	24,085	26,710	38,671	43,520	36,419	41,437	22,811	29,767
Used Oil Filters (lbs.)	17,125	19,870	19,250	19,175	18,750	14,523	20,250	19,750
Antifreeze (gallons)	1,480	845	1,865	1,200	1,390	1,865	1,150	1,315

<sup>1</sup>Used oil volume total is combination of public collection and PW Vehicle Maintenance Dept

Compost/Yard Waste Collected

	2014	2015	2016	2017	2018	2019	2020	2021
Volume Yard Waste / Brush (yd <sup>3</sup> )	295,646	281,532	270,431	267,927	243,219	288,880**	266,062**	256,463**
Total Operating Hours/Site	--	1,508	1,495	>1,428	>1,428	>1,428	>1,428	>1,428
Volume Compost Produced (yd <sup>3</sup> )	5,509	5,414	3,700	4,400	3,950	3,425	5,144	2,577
Source Separated Organics Participation (visits)	--	45,636	51,813	59,114	70,333	86,611	N/A	114,339
Source Separated Organics Collected (tons)	--	237.46	304.80	362.29	348.50	409.82	832.84	3,033

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

\*\*Estimated volume – leaf/grass was reported in tons, used 350lbs/yd<sup>3</sup> conversion

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

2021 Call Results:

Topic	2014 Calls	2015 Calls	2016 Calls	2017 Calls	2018 Calls	2019 Calls	2020 Calls	2021 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	>2,200
Compost Sites / Yard Waste	5,261	5,255	6,787	5,294	3,620	3,714	9,087	>3,200
Other Topics	4,467	4,180	2,368	4,069	4,840	1,886	6,152	
<b>Total Calls</b>	<b>15,976</b>	<b>15,788</b>	<b>19,673</b>	<b>12,428</b>	<b>18,297</b>	<b>18,743</b>	<b>19,417</b>	<b>&gt;5,400</b>

\*Only HHW and YW calls were tracked in 2021

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 2
  - a. Through the IDDE program = 2
  - b. Identified by County staff = 0
  - c. Notification from municipality/state = 0
- ii. Ramsey County shares or refers reported illicit discharges to local MS4s if they have jurisdiction
  - a. Notifications forwarded to cities = 2
  - b. Notifications received from cities = 0
  - c. Notifications forwarded to Watershed Districts = 0

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) = 661
- ii. Percent of right-of-way permits requiring drainage evaluation and/or connection to Ramsey County’s MS4:  $7/661 = 1.06\%$

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

- i. RCPW staff attending Erosion Control Training = 7 people totaling 128 hours
- ii. Permits obtained for Ramsey County Construction/Maintenance Projects:

Project	NPDES	Department	Watershed District (Permit?)
Highland Arena	Y	RC Parks	CRWD
Larpenteur Culvert Repair	N	RCPW	CRWD

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 = 10
- ii. Construction permits obtained: See 4b-1
- iii. Stormwater modeling projects completed/reviewed = ~8
- iv. Applicable reviews for each project are required as part of the NPDES permitting process
- v. Impaired waters/stream reaches in Ramsey County in 2021 = 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 2021 = 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. 2021 Complaints = 2

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

- i. Ramsey County Public Works: Total permitted construction sites = 5
  - a. Active Sites = 2
  - b. Site monitored for vegetation/completion & closed = 0
  - c. Total construction site inspections performed by RCPW staff & contractors in 2021 = 46
  - d. Ramsey County Parks active NPDES permitted sites = 5
    - 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 = 396
  - b. Total inspections requiring corrective action = 95
- iii. Ramsey County Right-of -Way Permit Inspections
  - a. Total Permits = 661
  - b. Inspections = 475
  - c. Total inspections requiring correction = 9

4g-1: Erosion Control for Maintenance Activities

Maintenance project erosion control inspections = 122 inspections of 35 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**

<b>Project</b>	<b>BMP Description</b>	<b>Maintenance Responsibility</b>
Dale St Bridge	Underground Filtration Trench	RCPW
Highland Arena	Underground Filtration Trench	RC Parks
Highland Arena	Infiltration Basin	RC Parks
Lexington @ W 7 <sup>th</sup>	Tree Trench #1	RCPW
Lexington @ W 7 <sup>th</sup>	Tree Trench #2	RCPW

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: 18

<b>Name</b>	<b>Maintenance Description</b>
Arlington Filter Pond	Invasive brush treatment
Como Pond #1	Cleaned out diversion structures
County C @ 35W Roundabout Pond	Vegetation maintenance
County H Roundabout Pond	Vegetation maintenance
County I @ Lexington Pond	Bank mowing and inlet cleanouts
County I Roundabout Pond	Vegetation maintenance
Hwy 96 @ Hwy 10 Pond	Brushing/mowing
Koehler @ Centerville Pond	Vegetation Maintenance
Larpenteur/Gottfried Pond	Outlet structure repaired and reinforced
Marsden Pond	Removed car bumper
Mermaid Pond	Removed inlet trash rack and cleaned out the apron
Moundview Pond	Removed inlet trash rack and cleaned out the apron, mowed banks
Salvation Army Mitigation Wetland	Inlet cleanout
Silver Lake Rd @ Rice Creek Pond	Bank mowing and tree removal
South Heights Pond	Inlet culvert repair
Warner Bridge Pond	Outlet sinkhole repair
Wheelock Filter Pond	Outlet trash removal
Whitaker Forebay	Vegetation Maintenance

b. Pollution Control Structures/Infiltration BMPs: 296

<b>BMP Name</b>	<b>Maintenance Description</b>
Bald Eagle Ave @ 10 <sup>th</sup> St Basin	Media replacement and replanting
Ben Franklin Ditch	Removed sediment at ditch inlet
Central Corridor Tree Trenches (277)	Catch basin inlet sump cleanouts and weed removal
County F @ Centerville Sediment Sump	New maintenance access pad completed
County F Rain Gardens (5)	Vegetation maintenance
Hwy 96 & Hwy 10 Filtration Basin	Vegetation maintenance
Kath Filtration Basin	Vegetation maintenance
Larpenteur/Prosperity EFB	Bank vegetation maintenance, removal of vegetation from basin bottom
Maryland @ Westminster Infiltration Basin	Vegetation maintenance
Oxford @ County C Filtration Basin	Vegetation maintenance
Park Ave Infiltration Basin	Media replacement and replanting
PW Garage Backlot wash pad	Sediment removal
PW Garage wash pad sediment sump	Sediment removal
RWM Filtration Basin	Vegetation maintenance
County H Roundabout Infiltration Basin	Vegetation maintenance
Vadnais Inn Infiltration Basin	Vegetation maintenance

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

<b>Year</b>	<b>Agency</b>	<b>Amount</b>
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.)
2021	RWMWD / Contractor	\$9,280.00

## ii. Maintenance Agreements for 2021:

<b>BMP</b>	<b>Maintenance Responsibility</b>	<b>Agency</b>
Highland Arena	Underground Filtration Trench	RC Parks, CRWD
Highland Arena	Infiltration Basin	RC Parks, CRWD
Lexington @ W 7 <sup>th</sup>	Tree Trench #1	RCPW, CRWD
Lexington @ W 7 <sup>th</sup>	Tree Trench #2	RCPW, CRWD

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

6a-1: Municipal Operations and Maintenance Program

- i. Ramsey County staff trained in Spill Prevention = 0 (Covid-19 restrictions disrupted the normal training schedule in 2021).
- ii. Erosion Control Installers trained in 2021 = 5

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
County E – Stinson to Silver Lake Rd	0.83
County F – McKnight to E County Line	1.95
Minnehaha – McKnight to E County Line	1.62
Phalen Blvd – Johnson Pkwy to Maryland Ave	1.38

- iv. Sand applied in 2021 = 0 tons (Ramsey County is a salt-only applicator)
- v. Material recovered during sweeping events:

Year	Amount Recovered (tons)
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
2021	560.5**

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

\*\*Spring recovery total only.

## 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
2021-2022	3,552	160	33	48.0

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

- i. Structural Pollution Control Device Inspections: 22/22 = 100%
- ii. Devices requiring maintenance: 8
- iii. New devices added: 8 – Dale St Bridge Filter Trench Diversion Sump, Lexington @ W 7<sup>th</sup> Tree Trenches – 7 sumps

## 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: 356/1490 = 23.9%  
Sediment Basins: 6/11 = 54.5%  
Ponds – 20/20 = 100%
- ii. Percentage targeted on a five-year basis  
Outfalls = 100.0%  
Ponds / Sediment Basins – 26/31 = 83.9%

## 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 2021 = 78
- ii. Repairs not completed in 2021:

<b>Structure</b>	<b>Problem</b>	<b>Scheduled Completion of Repair</b>
2875 County H Culvert	Washout below culvert, separation	Late Summer 2022 – Contractor
5492 East Bald Eagle Blvd Washout	Culvert replacement and structure repair needed.	2023 contract
Bald Eagle Ave @ 10th St	Drainage issues in ROW to private property.	TBD
Bald Eagle Ave @ Soo Line west side basins	Cross culvert may have failed	2023 Contract
Battle Creek Mitigation Wetland culverts	Failing culverts on Parks property draining mitigation wetland	Pending
Cnty C east of Victoria	Culvert apron has separated from pipe.	Summer 2022 – Contractor
County C cross culvert - east of Linden Lane	Culvert outlet blocked by a large sediment delta	Summer 2023 contract
County D Outfall	Large washout below the storm outlet	Repaired in May 2022
County E2 @ RC Ditch #4	Culvert may have a void	2022 - Televising
County H Roundabout Diversion Sump	Sump was not installed during construction. New structure to be added.	Fall 2022
Eagle St @ County Ditch #11 culvert extension	The slope above the repaired culvert is too steep. Culvert extension planned.	Fall 2022 - Contractor
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 2022 – Contractor
Lexington Ave @ County C Sediment Sump	Basin cleanout needed. Easement access from railroad needed.	Summer 2022

Maryland @ Westminster Infiltration Basin	Diversion weir was built 2.5" too low	Repair completed May 2022
New Brighton Rd @ RR culvert	Failing culvert. Preliminary cleanout and televising needed.	Fall 2022
Old Hwy 10 Ditch realignment	The ditch has meandered too close to the road. It needs to be moved.	Summer 2022
Outfall #4878h - Larpenteur Ave to Woodview Marsh	Failing culvert. Televising needed.	Televising Completed April 2022 Replacement planned under 2023 contract
Outfalls from MS4 at multiple (29) locations	Various needs including debris removal, culvert repair, etc.	Summer/Fall 2022
South Heights Pond	1.North slope repair and reinforcement needed 2.Basin bottom sediment cleanout needed	1.Repair Summer 2022 2.Cleanout in 2023 or 2024 contract.
Vadnais Blvd west of Edgerton culvert	Failed culvert discharging to East Vadnais Lake	Fall 2022 – Contractor
Whitaker Pond Weir	Weir boards are coming loose with debris stuck in and on the weir	Full assessment Summer 2022, repair in 2023 contract

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 2021 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	07010206-0	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	07010206-0	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	07010206-0	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	62-0038-00	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	07010206-0	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	62-0075-00	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	62-0075-00	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	2Bq, 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	2Bq, 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	2Bq, 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	2Bq, 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	2Bq, 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	2Bq, 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	2Bq, 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	2Bq, 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	2Bq, 3C	Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Fecal coliform
North Long	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	62-0087-00	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, 2Bdq, 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 lk (02-0041-00) to Long Lk	Stream	2004	Upper Mississippi River, Upper Portion	07010206-1C, 2Bdg, 3C		Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Fish bioassessments
Snail	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	62-0073-002B, 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	62-0067-002B, 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	62-0067-002B, 3C		Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Chloride
South Long	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	62-0067-002B, 3C		Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients
Sucker	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	62-0028-001C, 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	62-0061-002B, 3C		Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue
Unnamed	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	62-0022-002B, 3C		Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients
Unnamed	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	62-0126-002B, 3C		Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients
Unnamed	Lake or Reservoir	Lake	2008	Upper Mississippi River, Upper Portion	62-0237-002B, 3C		Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue
Unnamed	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	62-0237-002B, 3C		Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	PCBs in fish tissue
Unnamed creek	Unnamed lk (62-0205-00) to Little Lk Johanna	Stream	2014	Upper Mississippi River, Upper Portion	07010206-2Bg, 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	07010206-2Bg, 3C		Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Fecal coliform
Valentine	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	62-0071-002B, 3C		Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Life	Chloride
Valentine	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	62-0071-002B, 3C		Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients
Wakefield	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	62-0011-002B, 3C		Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients
West Vadnais	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	62-0038-001C, 2Bd, 3C		Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Recreation	Nutrients
White Bear	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	82-0167-002B, 3C		Ramsey	07010206	Mississippi River - Twin Cities		Aquatic Consumption	Mercury in fish tissue
Wilkinson	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	62-0043-001C, 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	07010206-6	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	07010206-6	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	07010206-6	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	07010206-6	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	07010206-6	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	07010206-6	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	07010206-6	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	07010206-6	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

# Department Summary



**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**

		2019	2020	2021	2022	2023
#	Performance Measures	Actual	Actual	Actual	Estimate	Estimate
1	Lake Water Quality Score	2.77	2.74	2.95	2.80	2.80

**PERFORMANCE MEASURES - DISCUSSION**

Public Works has developed a water quality database for recreational lakes in Ramsey County since 1981. In 2021, 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, 2021 lake water quality scores were the highest since 2007 when we began using this metric. Eleven lakes’ overall grade level increased by a single letter overall, while three decreased. One lake, Island North, increased by two letter grades, going from a D to an B. Below average precipitation levels and decreased rain events lead to unfavorable conditions for 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. Island North is no longer treated to remove vegetation. 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