



# 2019 Stormwater Pollution Prevention Plan Annual Report

## Ramsey County Municipal Separate Storm Sewer System Permit

May 29, 2020



## Ramsey County Public Works

### 2019 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 = >1,386,119

##### ii. Other media

Media Type	Number of Impressions <sup>1</sup>		
	2017	2018	2019
Billboards (static and digital)	54,000,000	44,087,230	44,087,230
Bus Sides	40,000,000	33,417,913	33,417,913
Bus/Train Interiors	7,500,000	6,383,686	6,383,686
Bus Shelters	7,500,000	N/A	N/A
Online Banner & Mobile Ads	20,320,000	3,686,694	3,686,694*
Cable Television	1,700,000	N/A	N/A*
Public Radio/Television	250,000	N/A	N/A*
Skyway Ads	5,000,000	12,379,000	12,379,000*
Bars, Restaurants, & CHS Field	900,000	5,352,000	5,352,000*
Twitter (YW Topics)	N/A	N/A	<b>53,754</b>
Facebook (YW & HHW)	N/A	N/A	<b>35,940</b>
<b>Total</b>	<b>137,170,000</b>	<b>105,306,523</b>	<b>105,396,217</b>

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

\*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	2014 hits	2015 hits	2016 hits	2017 hits	2018 hits	2019 hits
Stormwater Main Page	226	356	160	662	691	667
Illicit Discharge	68	60	77	70	128	130
Report Illicit Discharge	N/A	N/A	N/A	108	111	87
RCPW Construction Page	10,474	8,442	24,888	14,879	14,944	17,756
RC Public Health Household Hazardous Waste Page	37,187	39,749	12,834	>10,000	>10,000	52,615
RC Public Health Yard Waste Page	134,541	170,676	51,523	>50,000	>50,000	138,980
RC Public Health – Source Separated Organic Waste	Not tracked	9,638	4,558	>4,000	>4,000	8,226
RC Public Health A to Z Waste Disposal Guide <i>*Only tracked for partial year due to system upgrade</i>	79,216	201,213	20,695	>20,000	>20,000	65,707

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

2015 Subscribers	2016 Subscribers	2017 Subscribers	2018 Subscribers	2019 Subscribers
7,224	17,655	N/A	17,282	6,676

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

## 1b-1: Implement an Educational Program

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

## a. Annual visitors:

2012	2013	2014	2015	2016	2017	2018	2019
80,193	99,352	116,932	117,588	132,695	137,000	133,775	173,228

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

2012	2013	2014	2015	2016	2017	2018	2019
12,447	12,709	12,572	1,276	3,015	1,795 <sup>1</sup>	1,824	2,229

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

- ii. Master Gardener Program/Event Attendees: Master Gardeners interacted at County Yard Waste Site >3,000 residents
- iii. Public presentations about shorelines / rain gardens conducted by RCD:

Year	# Presentations	Total Attendance
2013	6	N/A
2014	7	136
2015	6	240
2016	Not Reported	565
2017	5	N/A
2018 <sup>1</sup>	0	0
2019	3	174

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

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

	2015			2016			2017			2018				2019			
	Consults	Installations	TP removed (est. lbs/yr.)	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.)
Rain Gardens	254	23	11.5	263	60	11.5	263	60	20.0	375	132	57	29.56	352	154	42	10.5
Shoreline	24																
WCA-DNR Consults/Incidents/TEP	Consults			Consults			Consults			Consults				Consults	Incidents	TEP Reviews	
	61			86			86			60				68	2	30	

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

Year	2013	2014	2015	2016	2017	2018	2019
Call Total	16,736	15,976	15,788	24,156	>20,000	>20,000	>17,200

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	2012	20	588
	2013	27	690
	2014	20	403
	2015	25	870
	2016	19	558
	2017	19	554
	2018	24	684
	2019	25	684

ii. Ramsey County Soil and Water Conservation Division

- a. Conservation Forums (attendance per forum)
  - i. March - Harmful Algal Blooms (45)
  - ii. May – Pollinators and Composting (47)
  - iii. November – Aquatic Invasive Species (82)

b. Rain Garden / Shoreline Projects:

Activity		Total
Consults/Design Projects	Rain Gardens	352/154
	Shorelines	
Completed / Installed Projects	Rain Gardens	52
	Shorelines	

iii. Ramsey County Public Works

- a. Provided financial and staff support for 2019 RWMWD Waterfest
- b. Hosted 2019 Utility Meeting

iv. Ramsey-Washington Watershed District Public Works Forum

- a. Hosted public education exhibits at 2019 RWMWD 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 = 667

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 = 925,848
- iv. Cities working w/ Ramsey County Public Health for City cleanup activities = not tracked in 2019
- v. IDDE Public Reports = 5

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

i. RCPW Pre-Construction Meetings in 2019

<b>Project</b>	<b>Attendance</b>
Rice St @ I694	53
2019 Concrete Rehab	25
2019 ADA Pedestrian Ramps	18
2019 Bit Overlays	24
County Road C Reconstruction	32

ii. RCPW Active projects in 2019 requiring weekly meetings

<b>Project</b>	<b># Meetings</b>	<b>Avg. Attendance</b>
Rice St @ I694	43	6-24
2019 Concrete Rehab	18	5-11
2019 ADA Ped Ramps	5	4-5
2019 Bit Overlays	7	4-5
County Road C Reconstruction	45	10-15

- iii. Public comment of Construction Project SWPPPs = 0
- iv. County staff attending Erosion Control Training = 8 people totaling 120 hours
- v. See item 1a-1-ii-b): Ramsey County Website - Construction Update Subscriptions
- vi. Total new permitted construction projects in 2019 = 5  
Total active permitted construction projects = 8

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

- i. Stormwater structure maintenance flyers: No new structure flyers distributed in 2019
- ii. 2019 New Stormwater Structures / BMPs = 0 (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) = # 53

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: Data not available
- ii. Lillie Suburban Newspaper: No Longer in Print
- iii. Ramsey County Website & Social Media:
  - a. Posted on Ramsey County website on May 29, promoted on Ramsey County's Twitter Feed.
  - b. WaterFest event promoted by RWMWD on multiple media types prior to the event.

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

#53 visits to the Ramsey County MS4 Booth at Phalen Park WaterFest on 6/1/2019  
 No official comments were made

### 2c-1: Consider Public Input

# 0 comments or changes to the SWPPP following public comments in 2019.

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

### 3a-1: Storm Sewer System Map

- i. GIS Mapping Updates to System in 2018:
  - 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 2019

### 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
2012	370	~400	20-30	0
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

- 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 = 1,995
- ii. Outfalls inspected in 2019 = 584
- iii. Outfalls requiring removal of illicit discharges = 0
- iv. Outfalls requiring maintenance = 153
- 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.

### **2019 HHW Collection results:**

- a. Total HHW sites (year-round, satellite, and stand-alone collections): 14
- b. Total HHW site operating hours & household participation:

<b>Year</b>	<b>Operating Hours</b>	<b>Total Households</b>
2010	1,777	26,716
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

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

<b>Year</b>	<b>Residents #</b>	<b>Amount Collected (lbs)</b>
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

d. Volumes by major category of HHW:  
Permanent & Satellite HHW Facilities (2017- 2019 Totals include re-use)

Waste Item	2013 (lbs)	2014 (lbs)	2015 (lbs)	2016 (lbs)	2017 (lbs)	2018 (lbs)	2019 (lbs)
Aerosols	34,908	38,285	39,100	45,289	45,284	45,396	53,068
Antifreeze	23,080	19,625	21,360	21,594	26,225	30,508	26,048
Batteries	Lead acid	41,880	30,174	43,740	30,174	46,911	48,497
	Non-rechargeable	8,607	4,436	2,727	4,436	2,118	6,527
	Rechargeable	2,005	11,083	5,857	11,083	14,173	10,956
Compressed gas cylinders	26,593	24,384	15,164	27,741	32,750	17,180	38,810
Corrosive (acids & bases)	6,519	7,923	8,651	14,663	17,569	7,689	10,540
Flammable solvents	82,337	90,863	93,038	107,734	106,267	107,612	118,365
Flammables (liquid & solid)	36,942	44,897	49,020	83,089	99,555	102,896	133,371
Fluorescent & HID lamps	51,431	49,259	94,045	69,186	91,687	133,022	86,720
Latex driveway sealer	11,600	9,835	10,140	10,440	12,015	11,020	11,020
Latex paint	608,468	649,615	526,603	620,355	643,744	641,450	637,094
Lead paint chips	2,493	1,460	2,070	299	571	1,901	1,349
Mercury	34	232	307	409	651	421	357
Oil paint	199,306	228,881	170,214	185,047	167,265	159,551	154,218
Other	18,788	4,805	6,939	5,172	9,535	31,701	10,583
Pesticides	34,038	49,208	45,300	53,619	52,062	55,517	67,005
Used motor oil	144,881	135,232	133,525	130,138	136,271	136,593	133,741
Used motor oil filters	6,375	5,396	5,349	4,563	5,222	5,249	4,979
<b>Total HHW</b>	<b>1,273,084</b>	<b>1,363,233</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>

Ramsey County Public Works oil collection facility

	2012	2013	2014	2015	2016	2017	2018	2019
Used Oil Volume (gallons) <sup>1</sup>	33,000	26,102	24,085	26,710	38,671	43,520	36,419	41,437
Used Oil Filters (lbs.)	28,500	23,500	17,125	19,870	19,250	19,175	18,750	14,523
Antifreeze (gallons)	1,725	1,565	1,480	845	1,865	1,200	1,390	1,865

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

Compost/Yard Waste Collected

	2012	2013	2014	2015	2016	2017	2018	2019
Volume Yard Waste / Brush (yd <sup>3</sup> )	148,811*	283,984	295,646	281,532	270,431	267,927	243,219	288,880**
Total Operating Hours/Site	1,354	1,230	--	1,508	1,495	>1,428	>1,428	>1,428
Volume Compost Produced (yd <sup>3</sup> )	3,690	4,106	5,509	5,414	3,700	4,400	3,950	3,425
Source Separated Organics Participation (visits)	--	--	--	45,636	51,813	59,114	70,333	86,611
Source Separated Organics Collected (lbs)	--	--	--	474,910	609,590	724,588	697,000	819,640

\*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.

2019 Call Results:

Topic	2013 Calls	2014 Calls	2015 Calls	2016 Calls	2017 Calls	2018 Calls	2019 Calls
Recycling	1,786	1,461	1,895	1,816	6,566	7,004	7,723
Food Waste/Organics	7	65	180	292	322	334	420
Medicine Collection	444	451	526	462	339	204	175
Other waste	59	0					2,525
HHW	3,493	3,257	3,604	4,358	3,065	2,295	2,300
Compost Sites / Yard Waste	6,726	5,261	5,255	6,787	5,294	3,620	3,714
Other Topics	3,447	4,467	4,180	2,368	4,069	4,840	1,886
<b>Total Calls</b>	<b>17,221</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>

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 11
  - a. Through the IDDE program = 5
  - b. Identified by County staff = 5
  - c. Notification from municipality = 1
- ii. Ramsey County shares or refers reported illicit discharges to local MS4s if they have jurisdiction
  - a. Notifications forwarded to cities = 5
  - b. Notifications received from cities = 1
  - c. Notifications forwarded to Watershed Districts = 2

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) = 1,117
- ii. Percent of right-of-way permits requiring drainage evaluation and/or connection to Ramsey County’s MS4:  $59/1,117 = 5.3\%$

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

- i. RCPW staff attending Erosion Control Training = 8 people totaling 120 hours
- ii. Permits obtained for Ramsey County Construction/Maintenance Projects:

Project	NPDES	Department	Watershed District
0 Lafayette St	Y	Property Management	CRWD
County Road C Reconstruction	Y	Public Works	RCWD - Y
Dale St Bridge	Y	Public Works	CRWD - Y
Battle Creek Regional Park Playground	Y	Parks	RWMWD - Y
TCAAP Trailhead – Phase 1	Y	Parks	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 now includes waste control for right-of-way projects.

4d-1: Procedure for Site Plan Review

- i. Construction project plans prepared/reviewed = 15
- 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 = 40 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 2019 = 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. 2019 Complaints = 5

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

- i. Ramsey County Public Works: Total permitted construction sites = 7
  - a. Active Sites = 3
  - b. Site monitored for vegetation/completion & closed = 5
  - c. Total construction site inspections performed by RCPW staff & contractors in 2019 = 71
  - d. Ramsey County Parks active NPDES permitted sites = 2
    - i. Total inspections = 13
  - e. Other Ramsey County facility permitted sites = 1
- ii. Ramsey County Soil and Water Conservation Division Performing Contracted Inspections on the behalf of municipalities:
  - a. Inspections performed = 846
  - b. Total inspections requiring corrective action = 84
- iii. Ramsey County Right-of -Way Permit Inspections
  - a. Total Permits = 1,117
  - b. Inspections = 474
  - c. Total inspections requiring correction = 4

4g-1: Erosion Control for Maintenance Activities

Maintenance project erosion control inspections = 105 inspections of 42 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
	No BMP's added in 2019	

### 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: 10

Name	Maintenance Description
Arlington Filter Pond	190-200 yds <sup>3</sup> sediment removed
Battle Creek YW Site	Regraded basin and repaired outlet
Kohler/Centerville Basin	Debris and sediment delta removal
Larpenteur Pond	Accumulated sediment and erosion repairs Outlet structure repairs
Silverwood Pond Basin #1	Removed sediment delta
Silverwood Pond Basin #3	Removed sediment delta
Tamarack Mitigation Wetland	Reseeded area following buckthorn removal
Tamarack Wetland Bank Site	Repaired outlet weir Herbicide treatment
Wakefield Pond	Removed sediment delta
Wheelock Filter Pond	Dredged out 300 yds <sup>3</sup> accumulated sediment
Whitaker Pond Forebay	Dredged out 30 yds <sup>3</sup> accumulated sediment

- b. Pollution Control Structures/Infiltration BMPs: 20

BMP Name	Maintenance Description
Bald Eagle Ave @ 10 <sup>th</sup> St Basin	Vegetation maintenance
Bald Eagle Ave @ Soo Line Basin	Vegetation maintenance
Beisswenger's Pond Infiltration Bench	Vegetation maintenance
County F Rain Gardens (5)	Vegetation maintenance

<b>BMP Name</b>	<b>Maintenance Description</b>
County F & Hoffman Basin	Vegetation maintenance
Ford Parkway Tree Trenches (3)	Underdrain Adjustment
Hwy 96 & Hwy 10 Filtration Basin	Vegetation maintenance
Maryland & Arkwright Basin	Soil amendment/ regrading Trash removal and veg maintenance
Oxford @ County C Filtration Basin	Underdrain Adjustment Sediment delta removal Vegetation maintenance
Park Ave IB	Vegetation maintenance
Randolph Ave Tree Trenches (3)	Underdrain Adjustment
White Bear Twp. YW Site 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

ii. Maintenance Agreements for 2019:

<b>BMP</b>	<b>Agency</b>
Old Snelling Trail Improvements	Arden Hills
County C – Hwy 88 to Long Lake Rd	Roseville / Hennepin County
County B @ Dale St Stormwater BMP	CRWD / Roseville
Silver Lake Rd near Silver Lane	St Anthony



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

### 6a-1: Municipal Operations and Maintenance Program

- i. Ramsey County staff trained in Spill Prevention = 9
- ii. Erosion Control Installers trained in 2019 = 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 = 84

iii. Sections and miles of road targeted for additional sweeping

<b>Road Section</b>	<b>Lane Miles</b>
Bald Eagle Blvd – County H2 to County J	2.80
Centerville Rd – Edgerton St to County F	3.68
Century Ave – Carver Ave to Lindwood Ave	3.68
Edgerton St – Little Canada Rd to Centerville Rd	3.28
Energy Park Dr – Hwy 280 to east of Raymond Ave	1.60
Larpenteur Ave – Hazel St to Hwy 120	3.61
Lexington Ave – County C2 to County E	4.80
Long Lake Rd – Rice Creek bridge to County H2	3.60
McMenemy St – Koehler Rd to County F	1.50
Payne Ave - 7 <sup>th</sup> St to Edgerton St	1.60
Silver Lake Rd – County D to Interstate 694	9.60
White Bear Ave – Upper Afton Rd to Interstate 94	1.60

iv. Sand applied in 2019 = 0 tons (Ramsey County is a salt-only applicator)

v. Material recovered during sweeping events:

<b>Year</b>	<b>Amount Recovered (tons)</b>
2010	1,443
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*

\*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)
2009-2010	4,775	718	20	40.7
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

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

- i. Structural Pollution Control Device Inspections: 25/25 = 100%
- ii. Devices requiring maintenance: 11
- iii. New devices added: 0

## 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: 584/1,945 = 30%
- Sediment Basins: 9/15 = 60%
- Ponds – 22/22 = 100%
- 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 = 261
- ii. Repairs not completed in 2019:

Structure	Problem	Scheduled Completion of Repair
2388 Taylor Ave drainage	Flow in the ditch bypasses the property running along the road and floods the property owner's eastern yard.	Plan being developed
2895 Victoria drainage	Extra runoff from the ditch to the north has been eroding and flooding the property.	Summer 2020
3190 Victoria culvert	Cross culvert running under Victoria Ave at #3190 has a severely degraded bottom. It drains our ROW on the east side before running under Victoria into a City owned parcel on the west side	June 2020
3397 Victoria culvert	Washout on road shoulder leading to the culvert apron. The apron may be partially separated from the culvert.	June 2020
5235 Bald Eagle Blvd	General drainage issue for side street storm sewer. Repair being coordinated with White Bear Twp	Pending
Arlington Filter Pond - Filtration area	Filter media clogged with sediment and vegetation and not draining properly	Summer 2020
Bald Eagle Ave @ 10th St	Drainage issues in ROW to private property	Summer 2020
Bald Eagle Ave @ Soo Line west side basins	Cross culvert may have failed	2020
Battle Creek Mitigation Wetland culverts	Failing culverts on Parks property draining mitigation wetland	Pending
Ben Franklin Ditch	Ditch filling with sediment	Completed May 2020
Birch Lake Inlet	Sediment blocking cross culvert	Summer 2020
Centerville @ County F cross culvert	Culvert under Centerville in poor condition	Summer 2021
Centerville @ County F sediment sump	Cleanout needed	Completed May 2020

Cnty C east of Victoria	Culvert apron has separated from pipe.	Summer 2021 – Design plan being completed
Como Primary and Secondary Ponds	Sediment dredging is needed (Primary pond has Tier 2 Arsenic levels)	Winter 2021
County 10/Moundsview 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 B2 west of Rice St / 194 County B2 drainage	Poor drainage to roadside structure	Pending
County F @ Myrle St Basin / Trees & outfalls	Pond inlets in poor condition. Work being coordinated with White Bear Lake	Summer 2020
County H @ 35W Sediment Sumps	SAFL Baffle Sumps need cleanouts	Completed Spring 2020
County H2 Ditching - 35E to Otter Lake El.	Grading repair job eroded following stabilization	Completed May 2020
County J ditching - Turtle Lake Rd to #266 County J	Ditch cleanout needed	Summer 2020
Dale & Hwy 96 Pond	Southwest bank has heavy sinkhole damage (possibly from burrowing animals)	City Project
Eagle Ave @ County Ditch 11	Culvert extension to prevent eroding of the roadside and for public safety.	Completing June 2020
Edgerton @ Roselawn sinkhole	Failing culvert needs to be lined	June 2020
Fairview Ditching - Larpenteur to Roselawn	Install new catch basin to improve ditch drainage	Fall 2020
Ford Parkway Tree Trenches	Sediment cleanout needed	Completed Spring 2020
Hawthorne Infiltration Trench	Sediment cleanout needed	Completed Spring 2020
Hwy 96 @ Chatsworth / Greenhaven Printing	Drainage problems in easement	June 2020
Kohlman Ponding Area Dike	Dike deteriorating	Pending
Lake Wabasso Outlet	Voids under headwall allowing water seepage	August 2020
Lambros Ditch	Inlet structures are partly blocked by vegetation. Channel walls are slumping.	Vegetation Removed April 2020 Channels Repairs Planned
Larpenteur Ave Ditch work - East of Sterling Ave	Ditch cleanout needed	Partial completion May 2020. Remainder pending.

Lexington @ RC Trail Mitigation Wetland	Outlet needs a trash rack installed to prevent clogging	Pending
Lexington Ave @ County C Sediment Sump	Sump cleanout needed. Access issues.	Pending
Lexington Ave Dog park Wetland Outlet	Outlet structure clogs with debris Trash rack needed.	Pending
Lexington Ditch N of Josephine Inlet	Sediment basin failure	June 2020
Lower Afton @ Londin Lane culvert inlet	Slope is degrading and filling inlet	Completed Spring 2020
Marsden Pond Sediment Deltas	Small sediment deltas need removal	Summer 2020
New Brighton Rd @ RR culvert	Failing culvert. Preliminary cleanout and televising needed.	Summer/Fall 2020
Northwest Ave ditch - Stillwater Ave to 2nd St	Cross culvert installation	Pending
Old Snelling Pond Inlet	Large sediment delta below outfall	Summer 2020 – City Project
Otter Lake Rd Ditching - 5860 Otter Lake Rd	Ditch cleanout needed	Summer 2020
Otter Lake Rd Ditching - Hwy 96 to Scheunemann Rd	Ditch cleanout needed	Summer 2020
Outfall #4878h -Larpenteur Ave to Woodview Marsh	Failing culvert. Televising needed.	Pending
Outfalls from MS4 at multiple (153) locations	Various needs including debris removal, culvert repair, etc.	Summer/Fall 2020
Portland @ Buffalo drainpipe	Drainpipe from roadway to ditch failing.	Completed April 2020
Prosperity @ Barclay Infiltration Trench	Sediment cleanout needed	Completed May 2020
Randolph Ave Tree Trenches	Sediment cleanout needed	Completed May 2020
Rice St @ Dennison Ave	Drainage modifications needed.	Pending
Southshore Blvd Drainage	Multiple Locations with degrading culverts and structures	Pending - Work plan still in development for Lake Links trail Project
Southshore east of Summit Lane ditching	Ditch cleanout needed.	Summer 2020
Vadnais Blvd west of Edgerton - culvert failure	Failing culvert needs repair plan created.	Summer/Fall 2020

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 2019 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	07010206-00	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	07010206-00	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	07010206-00	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	07010206-00	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	62-0075-00	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	62-0075-00	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	07010206-00	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	07010206-00	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	07010206-00	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	07010206-00	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	07010206-00	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	07010206-00	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	07010206-00	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	07010206-00	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	07010206-00	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	07010206-00	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	<a href="#">62-0056-00</a>	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	<a href="#">62-0078-00</a>	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	<a href="#">62-0037-00</a>	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	<a href="#">07010206-505</a>	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	<a href="#">07010206-514</a>	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	<a href="#">62-0010-02</a>	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	<a href="#">62-0016-00</a>	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**

		2017	2018	2019	2020	2021
#	Performance Measures	Actual	Actual	Actual	Estimate	Estimate
1	Lake Water Quality Score	2.90	2.68	2.77	2.90	2.90

**PERFORMANCE MEASURES - DISCUSSION**

Public Works has developed a water quality database for recreational lakes in Ramsey County since 1981. In 2019, 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, 2019 lake water quality scores increased relative to 2018. Three lakes’ overall grade level increased by a single letter overall, while two decreased. Above average temperatures and precipitation were unfavorable conditions for lakes. 2019 was the wettest year on record in the Twin Cities. Carp removal efforts were performed on Silver W, Long, Owasso, and the Gervais chain of lakes. An alum treatment was performed on Bald Eagle 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.