



2017 Stormwater Pollution Prevention Plan Annual Report

Ramsey County Municipal Separate Storm Sewer System Permit

June 2, 2018



Ramsey County Public Works

2017 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 = >1,110,500

ii. Other media

Media Type	Number of Impressions*		
	2015	2016	2017
Billboards (static and digital)	28,466,030	54,000,000	54,000,000
Bus Sides	35,146,800	40,000,000	40,000,000
Bus/Train Interiors	2,824,250	7,500,000	7,500,000
Bus Shelters	7,500,000	7,500,000	7,500,000
Online Banner Ads	18,567,954	20,320,000	20,320,000
Cable Television	1,620,536	1,700,000	1,700,000
Public Radio/Television	1,400,000	250,000	250,000
Skyway Ads	N/A	5,000,000	5,000,000
CHS Field	N/A	900,000	900,000
Streaming Radio	4,025,732	N/A	N/A
Total	99,551,302	137,170,000	137,170,000

*estimated number instances people see the ads

iii. Ramsey County Website Statistics

a) Ramsey County Stormwater Website hits:

Page Title	2012 hits	2013 hits	2014 hits	2015 hits	2016 hits	2017 hits
Stormwater Main Page	262	248	226	356	160	662
Illicit Discharge	179	128	68	60	77	70
Report Illicit Discharge	N/A	N/A	N/A	N/A	N/A	108
RCPW Construction Page	4,902	6,624	10,474	8,442	24,888	14,879
RC Public Health Household Hazardous Waste Page	31,705	26,735	37,187	39,749	12,834	>10,000
RC Public Health Yard Waste Page	73,534	110,633	134,541	170,676	51,523	>50,000
RC Public Health – Source Separated Organic Waste	Not tracked	Not tracked	Not tracked	9,638	4,558	>4,000
RC Public Health A to Z Waste Disposal Guide <i>*Only tracked for partial year due to system upgrade</i>	5,368*	22,757	79,216	201,213	20,695	>20,000

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

2013 Subscribers	2014 Subscribers	2015 Subscribers	2016 Subscribers	2017 Subscribers
1,916	3,797	7,224	17,655	N/A

c) Comments/Reports received on stormwater/IDDE website = 2

1b-1: Implement an Educational Program

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

a. Annual visitors:

2010	2011	2012	2013	2014	2015	2016	2017
39,000	40,000	80,193	99,352	116,932	117,588	132,695	137,000

b. Water Quality Education & Interpretive Programs participants:

2010	2011	2012	2013	2014	2015	2016	2017
12,000	750	12,447	12,709	12,572	1,276	3,015	1,795 ¹

¹Participation numbers reduced due to a wetland drawdown

ii. +

iii. Master Gardener Program/Event Attendees: Master Gardeners interacted at County Yard Waste Site >3,000 residents

iv. Public presentations about shorelines / rain gardens conducted by RCD:

Year	# Presentations	Total Attendance
2011	16	580
2012	25	560
2013	6	N/A
2014	7	136
2015	6	240
2016	Not Reported	565
2017	5	N/A

v. Shoreline vegetation & Rain garden projects by RCD:

	2013			2014			2015			2016			2017		
	Consults	Installations	TP removed (est. lbs/yr.)	Consults	Installations	TP removed (est. lbs/yr.)	Consults	Installations	TP removed (est. lbs/yr.)	Consults	Installations	TP removed (est. lbs/yr.)	Consults	Installations	TP removed (est. lbs/yr.)
Rain Gardens	284	37	7.9	294	52	13	264	37	11	254	23	11.5	263	60	19.98
Shoreline	21	7	1.2	19	5	1	61			24					
Erosion/Drainage	3														
WCA/ DNR	39			54			65			61			86		

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

Year	2011	2012	2013	2014	2015	2016	2017
Call Total	14,546	18,355	16,736	15,976	15,788	24,156	>20,000

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	2010	14	356
	2011	7	253
	2012	20	588
	2013	27	690
	2014	20	403
	2015	25	870
	2016	19	558
	2017	19	554

ii. Ramsey Conservation District

- a. Conservation Forums (attendance per forum)
 - i. Aquatic Invasive Species - AIS (39)
 - ii. Severe Weather Preparation (47)
 - iii. Healthy Soil, Plants, and People (44)
 - iv. AIS Early Detection (13)

b. Rain Garden / Shoreline Projects:

Activity		Total
Consults/Design Projects	Rain Gardens	263
	Shorelines	
Completed / Installed Projects	Rain Gardens	60
	Shorelines	

iii. Ramsey County Public Works

- a. Provided financial and staff support for 2017 RWMWD Waterfest
- b. Hosted Winter Maintenance Salt Application Course (30 attended)
- c. Hosted 2017 Utility Meeting (37 attended)

iv. Ramsey-Washington Watershed District Public Works Forum

- a. Hosted public education exhibits at 2017 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 = 662

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 = 40
- iii. Household Hazardous Waste Collection Flyers = 577,000
- iv. Cities working w/ Ramsey County Public Health for City cleanup activities = not tracked in 2017
- v. IDDE Public Reports = 4

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

i. RCPW Pre-Construction Meetings in 2017

Project	Attendance
Long Lake Rd @ County 10	13
Old 8 – H to I	38
Ford Erosion	21
2017 Ped Ramps	N/A
Lexington Cross Walks	20
2017 Bituminous Overlay	23

ii. RCPW Active projects in 2017 requiring weekly meetings

Project	# Meetings	Avg. Attendance
County H @ I 35W	30	7
Ford Erosion	7	8
Old 8 – H to I	22	10
Lake Owasso County Park ¹	0	0
Hwy 96 @ I35W Interchange ²	0	0
ADC Deconstruction	N/A	N/A
¹ Permit began in December, construction not yet active.		
² Project awaiting full vegetation		

iii. Public comment of Construction Project SWPPPs = 0

iv. County staff attending Erosion Control Training = 8 people totaling 64 hours

v. See item 1a-1-ii-b): Ramsey County Website - Construction Update Subscriptions

vi. Total new permitted construction projects in 2017 = 3

Total active permitted construction projects = 19

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

i. Stormwater structure maintenance flyers: No new structure flyer distributed in 2017

ii. 2017 New Stormwater Structures / BMPs = 34 (Final # pending data from other Ramsey County departments / 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. Comments at annual meeting = # 0

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, MN DOT Concrete Slurry Management TAC, Bald Eagle TMDL TAC, Silver West Carp Removal/Lake Improvement TAC, Ramsey County Aquatic Invasive Species TAC, MN Bighead Carp TAC
- ii. Public Works Forum attendance numbers and seminar/workshop information posted under 1c-1

1e-1: Annual Public Meeting

Details contained in MCM-2 below

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

2a-1: Comply with Public Notice Requirements

- i. St. Paul Pioneer Press: Request sent 5/12/2017 for 3 listings:
 - a. 1st available
 - b. Week of June 5
 - c. Last issue before June 21
 - d. No affidavit was received, but Ramsey County received an invoice
- ii. Lillie Suburban Newspaper: May 24, June 7, and June 14
- iii. Ramsey County Website & Social Media: Week of May 10, May 27, June 14

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

0 comments received at the public meeting on June 21, 2017

2c-1: Consider Public Input

0 comments or changes to the SWPPP following public comments in 2017.

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

3a-1: Storm Sewer System Map

- i. GIS Mapping Updates to System in 2017:
 - a. Updated GPS coordinates on structures
 - b. Updated inspection records
 - c. Added new structures
 - d. Updated MS4 information from cities
 - e. Mapped reported illicit discharges from 2017

3b-1: Regulatory Control Program

i. Ramsey County Right-of Way Permit

Year	Excavation/ROW Permits Issued	# of Inspections (est.)	Verbal Violation Notices	Revocation of Permits
2010	385	700+	6	1
2011	293	~300	15-20	0
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

- 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 = 2914
- ii. Outfalls inspected in 2017 = 906
- iii. Outfalls requiring removal of illicit discharges = 0
- iv. Outfalls requiring maintenance = N/A
- 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.

2017 results:

- a. Total HHW sites (year-round, satellite, and stand-alone collections): 13
- b. Total HHW site operating hours & household participation:

Year	Operating Hours	Total Households
2006	1,472	21,956
2007	1,441	23,843
2008	1,439	24,089

Year	Operating Hours	Total Households
2009	1,507	27,007
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

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

Year	Residents #	Amount Collected (lbs)
2013	2,843	5,228
2014	3,538	5,987
2015	4,238	8,402
2016	4,951	9,394
2017	6,158	11,700

d. Volumes by major category of HHW:

Permanent & Satellite HHW Facilities (2017 Totals include re-use)

Waste Item	2011 (lbs)	2012 (lbs)	2013 (lbs)	2014 (lbs)	2015 (lbs)	2016 (lbs)	2017 (lbs)
Aerosols	42,436	43,575	34,908	38,285	39,100	45,289	45,284
Antifreeze	23,808	27,635	23,080	19,625	21,360	21,594	26,225
Batteries	Lead Acid	48,744	40,259	41,880	36,392	41,880	43,740
	Non-Rechargeable	9,291	9,686	8,607	5,026	8,607	2,727
	Rechargeable	3,778	3,793	2,005	5,886	2,005	5,857
Compressed gas cylinders	34,314	26,548	26,593	24,384	15,164	27,741	32,750
Corrosive (acids & bases)	8,606	7,620	6,519	7,923	8,651	14,663	17,569
Flammable solvents	105,726	110,550	82,337	90,863	93,038	107,734	106,267
Flammables (liquid & solid)	48,767	43,180	36,942	44,897	49,020	83,089	99,555
Fluorescent & HID lamps	46,960	50,363	51,431	49,259	94,045	69,186	91,687
Latex driveway sealer	16,240	12,760	11,600	9,835	10,140	10,440	12,015
Latex paint	643,500	651,248	608,468	649,615	526,603	620,355	643,744
Lead paint chips	1,473	2,048	2,493	1,460	2,070	299	571
Mercury	69	125	34	232	307	409	651
Oil paint	199,610	222,274	199,306	228,881	170,214	185,047	167,265
Other	5,437	4,715	18,788	4,805	6,939	5,172	9,535
Pesticides	39,104	38,838	34,038	49,208	45,300	53,619	52,062
Used motor oil	154,365	162,237	144,881	135,232	133,525	130,138	136,271
Used motor oil filters	7,500	7,438	6,375	5,396	5,349	4,563	5,222
Total HHW	1,376,389	1,474,983	1,341,530	1,363,233	1,273,084	1,363,233	1,498,993

Ramsey County Public Works oil collection facility

	2010	2011	2012	2013	2014	2015	2016	2017
Used Oil Volume (gallons)	27,890	36,310	33,000	26,102	24,085	26,710	38,671	43,520
Used Oil Filters (lbs.)	21,500	21,225	28,500	23,500	17,125	19,870	19,250	19,175
Antifreeze (gallons)	1,125	690	1,725	1,565	1,480	845	1,865	1,200

Compost/Yard Waste Collected

	2010	2011	2012	2013	2014	2015	2016	2017
Volume Yard Waste / Brush (yd ³)	262,192	307,173	148,811*	283,984	295,646	281,532	270,431	267,927
Total Operating Hours/Site	1,590	1,390	1,354	1,230	--	1,508	1,495	>1,428
Volume Compost Produced (yd ³)	--	--	3,690	4,106	5,509	5,414	3,700	4,400
Source Separated Organics Participation	--	--	--	--	--	45,636	51,813	59,114
Source Separated Organics Collected (lbs)	--	--	--	--	--	474,910	609,590	724,588

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

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

2017 Call Results:

Topic	2011 Calls	2012 Calls	2013 Calls	2014 Calls	2015 Calls	2016 Calls	2017 Calls
Recycling	N/A	2,461	1,786	1,461	1,895	1,816	6,566
Appliances	610	466	401	266	485	665	
City Clean Up	348	190	173	219	125	177	
Compact Fluorescent Bulbs					122	193	
Food Waste/Organics	57	19	7	65	180	292	322
Electronic waste	1,696	737	472	397	588	1,036	
Medicine Collection	188	370	444	451	526	462	339
Solid Waste	520	300	213	126	1,590	1,505	
Other waste		94	59	0			
HHW	4,278	3,615	3,493	3,257	3,604	4,358	3,065
Compost Sites / Yard Waste	6,849	8,509	6,726	5,261	5,255	6,787	5,294
Other Topics			3,447	4,467	4,180	2,368	4,069
Taxes				6			
Total Calls	14,546	16,761	17,221	15,976	15,788	19,673	12,428

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 6
 - a. Through the IDDE program = 5
 - b. Identified by County staff = 1
- ii. Ramsey County did not meet with any municipal or private entities to determine their non-stormwater discharges

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) = 701
- ii. Percent of right-of-way permits requiring drainage evaluation and/or connection to Ramsey County’s MS4: $498/701 = 71\%$

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

- i. RCPW staff attending Erosion Control Training = 8 people totaling 64 hours
- ii. Permits obtained for Ramsey County Construction/Maintenance Projects:

Project	NPDES	Watershed District
County I @ Silver Lake Rd Ditch	N	RCWD
Ford Parkway Bridge	N	CRWD
Lake Owasso County Park	Y	RWMWD
Old 8 – County H to County I	Y	RCWD

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 = 4
- ii. Construction permits obtained: See 4b-1
- iii. Stormwater modeling projects completed/reviewed = 2
- iv. Applicable reviews for each project are required as part of the NPDES permitting process
- v. Impaired waters/stream reaches in Ramsey County in 2017 = 46 with 69 total impairments.

New waters listed in 2017: Zero

TMDL implementation plans approved in 2017:

- 1 – RWMWD Watershed Restoration & Protection Strategy which covers 5 TMDL’s plus a watershed-wide program that protects lakes and streams that currently meet water quality standards.

See Appendix A - Ramsey County 2017 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. 2017 Complaints = 4

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

- i. Ramsey County Public Works: Total permitted construction sites = 13
 - a. Active Sites = 8
 - b. Site monitored for vegetation/completion & closed = 2 (5 pending MPCA Action)
 - c. Total construction site inspections performed by RCPW staff & contractors in 2017 = 156
 - d. Ramsey County Parks active NPDES permitted sites = 8 (4 eligible for closure)
 - e. Other Ramsey County facility permitted sites = 1 (59 Inspections)
- ii. Ramsey Conservation District Performing Contracted Inspections on the behalf of municipalities:
 - a. Inspections performed = 879
 - b. Total inspections requiring corrective action = 319
- iii. Ramsey County Right-of -Way Permit Inspections
 - a. Total Permits = 701
 - b. Inspections = 654
 - c. Total inspections requiring correction = 36

4g-1: Erosion Control for Maintenance Activities

Maintenance project erosion control inspections = 57 inspections of 19 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
ADC Deconstruction	ADC Filtration Basin	RC Property Mgmt
Old 8 – County H to County I	Roundabout Infiltration Basin	RC Public Works
	Old Hwy 8 Pond	RC Public Works

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: 19

Name	Maintenance Description
Arlington Filter Pond	Sediment sampling
Casey Lake Mitigation Wetland	Vegetation
Como Primary Pond	Sediment sampling
Como Secondary Pond	Sediment sampling
Coral Sea Pond	Vegetation
Farm Pond Mitigation Wetland	Vegetation
Farm Pond	Vegetation
Hwy 96 @ Hwy 10 Pond	Vegetation
Kohler @ Centerville Basin	Vegetation
Lexington @ Sherwood Mit Wtld	Vegetation
Mounds View Pond	Vegetation
Naples Pond	Vegetation
Oxford Mitigation Wetland	Vegetation
Park Pond	Fallen tree removal
Silver Lake Rd @ Rice Creek Pond	Vegetation
Tamarack Wtld Bank Site	Vegetation, burn, weir repairs
Wheelock Filter Pond	Sediment sampling
Whitaker Pond Forebay	Sediment sampling
White Bear Twp Mitigation Wetland	Vegetation

b. Pollution Control Structures/Infiltration BMPs: 15

Name	Maintenance Description
Coral Sea Regional Infiltration Pond	Vegetation
County F @ Centerville Sediment Sump	Access pad constructed
County F @ Hoffman Infiltration Basin	Vehicle Damage Repairs
County F Rain Gardens	Cleaned debris off inlet grates
Ford Parkway Tree Trenches	Underdrain valve adjustment
Oxford Infiltration Basin	Vegetation
Randolph Tree Trenches	Sediment removal, underdrain valve adjustment

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

Year	Agency	Amount
2012	MCC	\$2,925.00
2013	MCC	\$6,581.25
2014	MCC	\$6,093.75
2015	MCC	\$4,840.47
2016	RWMWD	\$1,126.25
2017	RWMWD	\$1,428.00

ii. Maintenance Agreements for 2017:

BMP	Agency
ADC Filtration Basin	CRWD
Old Hwy 8 Pond	RCWD
Roundabout Infiltration Basin	RCWD

Minimum Control Measure 6: POLLUTION PREVENTION/GOOD HOUSEKEEPING

6a-1: Municipal Operations and Maintenance Program

- i. Ramsey County staff trained in Spill Prevention = 85-90
- ii. Erosion Control Installers trained in 2017 = 4

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

- i. Ramsey County MS4 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 = 36

iii. Sections and miles of road targeted for additional sweeping

Road Section	Lane Miles
Centerville Rd – CPRR to County H2	2.38
Cleveland Ave – St Paul Rd to Ford Parkway	0.24

Cleveland Ave – Iona Ln to Glennpaul Ave	3.44
Como Ave – Dale St to Marion St	3.33
County B – Sandhurst Dr to Albemarle Ct	1.38
County F – Lexington Ave to Victoria St	2.25
County J – Sherwood Rd to Ash St	2.50
Ford Parkway – Mississippi River Bridge to Howell Ave	3.52
Hodgson Rd – CSAH 96 to Birch Ln N	2.50
Keller Parkway – Edgerton St to Arcade St	1.50
Marshall Ave – Mississippi River Bridge to Snelling Ave	4.95
Maryland Ave – Greenbriar St to Johnson Pkwy	4.72
Minnehaha Ave – Pierce Butler Rt. To Dale St	0.28
Minnehaha Ave – Arundel St to Como Ave	0.50
Pierce Butler Route – Snelling Ave to Minnehaha Ave	6.00
White Bear Ave – Reaney Ave to RR Bridge	2.40

iv. Sand applied in 2017 = 0 tons (Ramsey County is a salt-only applicator)

v. Material recovered during sweeping events:

Year	Amount Recovered (tons)
2010	1,443
2011	1,107
2012	406.5
2013	1,060
2014	1,384
2015	1,425
2016	1,185
2017	1,367.5

vi. Ramsey County Salt Usage per Event

Winter	Season Usage (Tons)	Lbs / lane mile per event	# of Events	Total Snowfall
2008-2009	7,370	821	27	45.0
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

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

- i. Structural Pollution Control Device Inspections: 33/34 = 97%
- ii. Devices requiring maintenance: 10
- iii. New devices added: 10

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: 906/2914 = 31.1%
- Sediment Basins: 0/10 = 0%
- Ponds – 30/30 = 100%
- ii. Percentage targeted on a five-year basis
- Outfalls = 100.0%
- Ponds / Sediment Basins – 40/40 = 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. 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 2017 = 513+
- ii. Repairs not completed in 2017:

Structure	Problem	Scheduled Completion of Repair
Arlington Filter Pond	Sediment dredging needed	Fall 2018
Bald Eagle Ave @ Soo Line IB	Entry swale is clogged with vegetation preventing directed water flow. Replace top 3 feet with millings swale.	Pending
Battle Creek Mitigation Wetland outlet culverts	Pipe separation has created a sinkhole in wetland outlet.	Pending (Parks and Rec)
Battle Creek Lower Pond	Sediment delta & damaged outlet culvert	Pending (Parks and Rec)
Battle Creek South Infiltration Basin	Underdrain is not functioning properly	Pending (City of Maplewood)
Cnty C east of Victoria	Culvert apron has separated from pipe.	Pending
Como Primary and Secondary Ponds	Sediment dredging is needed (Primary pond has Tier 2 Arsenic levels)	Fall 2018
Dale & Hwy 96 Pond	Southwest bank has heavy sinkhole damage (possibly from burrowing animals)	Pending
Eagle Ave @ County Ditch 11	Culvert extension to prevent eroding of the roadside and for public safety.	Fall 2018
Hamline Ave Culvert @ Cnty I	Sinkhole in road from possible culvert failure was patched. Culvert repair still needed.	Pending
Kohler Rd/Edgewood @ Cnty Ditch #14 Culvert	Sinkholes and gullies forming around culvert	Pending
Lambros Ditch	Inlet structures are partly blocked by vegetation. Channel walls are slumping.	Pending
Larpenteur / Gottfried Pond	Northern outfall to pond has erosion & displaced riprap	Spring/Summer 2018
Lexington @ RC Trail Mitigation Wetland	Outlet needs a trash rack installed to prevent clogging	Pending
Lexington Ave @ Spring Haven Ct outfall	Storm sewer outfall into wetland is mostly blocked by accumulated sediment.	Fall 2017

Structure	Problem	Scheduled Completion of Repair
Marsden Pond	Multiple sediment deltas	Fall 2018
Outfalls from MS4 at multiple (513+) locations	Various needs including debris removal, culvert repair, etc.	Summer/Fall 2018
Wheelock Filter Pond	Sediment dredging needed	Fall 2018
Whitaker Pond Forebay	Sediment dredging needed	Fall 2018
Woodview Marsh Outfall #4878h	Large sediment delta removal needed, minor erosion repairs	Fall 2018

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 2017 Lake Water Quality Score* for details.

Appendix A. Ramsey County TMDL Annual Report



Minnesota Pollution Control Agency
 520 Lafayette Road North
 St. Paul, MN 55155-4194

TMDL Annual Report Form

Municipal Separate Storm Sewer Systems (MS4) Program

Doc Type: Annual Report

Form Information

This form is to be completed annually by MS4s in order to track the completed BMP activities and to calculate the cumulative loading reduction for specific pollutants of concern associated with each applicable WLA. Navigate through this form using the tabs at the bottom of the page. All information is collected in accordance with Part III.E of the [MS4 Permit](#).

- Green** Tabs (REQUIRED): user-input worksheet
- Blue** Tabs (hidden*): optional user-input worksheet
- Yellow** Tabs (hidden*): reference worksheet

*Reveal hidden spreadsheet tabs by navigating to Home->Cells->Format->Hide & Unhide->Unhide Sheet

Please refer to the [Guidance for Completing the TMDL Reporting Form](#) in the Minnesota Stormwater Manual for additional assistance and instructions. Sections of the guidance are hyperlinked throughout this spreadsheet.

User Information

Date Updated: 4/4/2018

Permittee: Ramsey County

Permit ID: MS400191

Contact Name: Alan Rupnow

Contact Phone: 651-266-7162

Contact email: Alan.Rupnow@co.ramsey.mn.us

Mailing address: 1425 Paul Kirkwold Drive, Arden Hills, MN 55112

Reporting Year	Data Entry Date	Entered by	Notes
2014	#####	M. Churchich	
2014	7072015	M. Churchich	Removed row 6, 10 and 12 from BMPs Completed tab and row 14 and 16 from C
2015	#####	M. Churchich	Updated BMPs Completed, Cumulative Reductions, Category 3 BMPs, and Adap
2016	5262017	M. Churchich	
2016	5312017	M. Churchich	Updated BMPs Completed, Cumulative Reductions, Category 3 BMPs, and Adap
2017	5072018	M. Churchich	Updated BMPs Completed, Cumulative Reductions, Category 3 BMPs, and Adap

Appendix A. Ramsey County TMDL Annual Report

2017 TMDL report form for MS4 Permittee (to be submitted with Annual Report)

BMP - Activities Completed Spreadsheet													Required: Place an "X" in a cell if the BMP applies to the TMDL shown in the column			
For MPCA use only			Required		Optional	Required						Optional	Bald Eagle Lake: Excess Nutrients TMDL	Como Lake: Excess Nutrients TMDL		
Entry ID	Permittee	MS4 ID	Reporting year	BMP/Activity	BMP Description	Location and ID Information Needed?	BMP ID	y-coord (lat, e.g. 44.9866)	x-coord (long, e.g. -93.2581)	Coordinate system (e.g. lat-long, UTM)	Who owns this BMP/activity?	If applicable, name other owner(s)	Year when BMP was implemented	Note(s)	Bald Eagle Lake - Phosphorus	Como Lake - Phosphorus
MS400191-1	Ramsey County	MS400191	2014	Infiltrator	Infiltration basin	Complete columns H through K	BMP_40c	45.095949	-93.015932	lat-long	Permittee (you)	NA	2010	Construct Bald Eagle Ave @ Soo Line Railroad Infiltration Basin	X	
MS400191-2	Ramsey County	MS400191	2014	Infiltrator	Bioretention with no underdrain (rain garden)	Complete columns H through K	BMP_640c	45.100783	-93.00729579	lat-long	Permittee (you)	NA	2010	Construct Park Avenue @ East St rain garden	X	
MS400191-3	Ramsey County	MS400191	2014	BMP_improvement_enhancement_retrofitti	BMP maintenance	No ID information needed	FDR_Buffal	NA	NA	NA	Permittee (you)	NA	2014	Buffalo St - TH 61 to Portland Ave full depth recycle (FDR)	X	
MS400191-4	Ramsey County	MS400191	2014	BMP_improvement_enhancement_retrofitti	BMP maintenance	No ID information needed	Maint_201	NA	NA	NA	Permittee (you)	NA	2014	Identify drainage improvements or potential BMPs in 5-year major road maintenance program	X	X
MS400191-5	Ramsey County	MS400191	2014	BMP_improvement_enhancement_retrofitti	BMP improvement	No ID information needed	TIP_2014	NA	NA	NA	Permittee (you)	NA	2014	Identify permit requirements and BMPs for projects in 5-year Transportation Improvement Program	X	X
MS400191-6	Ramsey County	MS400191	2014	BMP_improvement_enhancement_retrofitti	Aeration to maintain fish population	No ID information needed	Aeration_C	44.9792	-93.1405	Lat-long	Other MS4 permittee	Capitol Region Watershed District, Saint Paul		Como Lake Aeration System		X
MS400191-7	Ramsey County	MS400191	2014	Supplemental_street_sweeping	Street sweeping	No ID information needed	Sweeping	NA	NA	NA	Permittee (you)	CRWD, Saint Paul, Roseville, Falcon Heights		Street sweeping twice per year on County road system	X	X
MS400191-8	Ramsey County	MS400191	2014	BMP_improvement_enhancement_retrofitti	BMP maintenance	No ID information needed	BMP_Maint	NA	NA	NA	Other MS4 permittee	CRWD, Saint Paul, Roseville, Falcon Heights		Stormwater BMP maintenance	X	X
MS400191-9	Ramsey County	MS400191	2014	BMP_improvement_enhancement_retrofitti	Inspection	No ID information needed	Outfall_Mai	NA	NA	NA	Permittee (you)	NA		Stormsewer outfall inspection and maintenance	X	X
MS400191-10	Ramsey County	MS400191	2014	BMP_improvement_enhancement_retrofitti	Monitoring Lake Water Quality	No ID information needed	Monitoring	NA	NA	NA	Permittee (you)	NA		Conduct growing season water quality monitoring program to track implementation effectiveness	X	X
MS400191-11	Ramsey County	MS400191	2014	BMP_improvement_enhancement_retrofitti	Clean and repair stormwater structures	No ID information needed	NA	NA	NA	NA	Other MS4 permittee	Capitol Region Watershed District, Saint Paul		Como Golf Course Maintenance Dredging		X
MS400191-12	Ramsey County	MS400191	2014	Supplemental_public_education_outreach	Presentations	No ID information needed	NA	NA	NA	NA	Other MS4 permittee	CRWD, Saint Paul, Roseville, Falcon Heights		Public education activities		X
MS400191-13	Ramsey County	MS400191	2014	Supplemental_employee_education_trainin	Staff training	No ID information needed	NA	NA	NA	NA	Other MS4 permittee	CRWD, Saint Paul, Roseville, Falcon Heights		Municipal training on winter road, parking lot and sidewalk maintenance		X
MS400191-14	Ramsey County	MS400191	2014	Infiltrator	Bioretention with no underdrain (rain garden)	Complete columns H through K	04-001CP	44.98149843	-93.16557527	Lat-long	Other MS4 permittee	CRWD, Roseville, Falcon Heights, Saint Paul	2007	Arlington-Pascal Project - Asbury RG South		X
MS400191-15	Ramsey County	MS400191	2014	Infiltrator	Bioretention with no underdrain (rain garden)	Complete columns H through K	04-001CP	44.98165653	-93.16559136	Lat-long	Other MS4 permittee	CRWD, Roseville, Falcon Heights, Saint Paul	2007	Arlington-Pascal Project - Asbury RG North		X
MS400191-16	Ramsey County	MS400191	2014	Infiltrator	Bioretention with no underdrain (rain garden)	Complete columns H through K	04-001CP	44.98260893	-93.15949202	Lat-long	Other MS4 permittee	CRWD, Roseville, Falcon Heights, Saint Paul	2007	Arlington-Pascal Project - Frankson McKinley RG		X
MS400191-17	Ramsey County	MS400191	2014	Infiltrator	Bioretention with no underdrain (rain garden)	Complete columns H through K	04-001CP	44.98445802	-93.16066146	Lat-long	Other MS4 permittee	CRWD, Roseville, Falcon Heights, Saint Paul	2007	Arlington-Pascal Project - Arlington McKinley RG		X
MS400191-18	Ramsey County	MS400191	2014	Infiltrator	Bioretention with no underdrain (rain garden)	Complete columns H through K	04-001CP	44.98545969	-93.1616807	Lat-long	Other MS4 permittee	CRWD, Roseville, Falcon Heights, Saint Paul	2007	Arlington-Pascal Project - Pascal RG South		X
MS400191-19	Ramsey County	MS400191	2014	Infiltrator	Bioretention with no underdrain (rain garden)	Complete columns H through K	04-001CP	44.98564181	-93.16172361	Lat-long	Other MS4 permittee	CRWD, Roseville, Falcon Heights, Saint Paul	2007	Arlington-Pascal Project - Pascal RG Middle		X
MS400191-20	Ramsey County	MS400191	2014	Infiltrator	Bioretention with no underdrain (rain garden)	Complete columns H through K	04-001CP	44.98581128	-93.16169143	Lat-long	Other MS4 permittee	CRWD, Roseville, Falcon Heights, Saint Paul	2007	Arlington-Pascal Project - Pascal RG North		X
MS400191-21	Ramsey County	MS400191	2014	Infiltrator	Bioretention with no underdrain (rain garden)	Complete columns H through K	04-001CP	44.98154397	-93.15628409	Lat-long	Other MS4 permittee	CRWD, Roseville, Falcon Heights, Saint Paul	2007	Arlington-Pascal Project - Hamline Midway RG		X
MS400191-22	Ramsey County	MS400191	2014	Infiltrator	Underground infiltration	Complete columns H through K	04-001CP	44.98437455	-93.15614462	Lat-long	Other MS4 permittee	CRWD, Roseville, Falcon Heights, Saint Paul	2007	Arlington-Pascal Project - Como Golf Course Pond		X
MS400191-23	Ramsey County	MS400191	2014	Infiltrator	Infiltration trench	Complete columns H through K	04-001CP	44.98740987	-93.15284014	Lat-long	Other MS4 permittee	CRWD, Roseville, Falcon Heights, Saint Paul	2008	Arlington-Hamline Facility		X
MS400191-24	Ramsey County	MS400191	2014	Constructed_basin	Wet pond/wet detention pond	Complete columns H through K	04-001CP	44.98637029	-93.16341877	Lat-long	Other MS4 permittee	CRWD, Roseville, Falcon Heights, Saint Paul	2007	Como Park Regional Pond		X
MS400191-25	Ramsey County	MS400191	2014	Infiltrator	Infiltration trench	Complete columns H through K	04-001CP	44.98637788	-93.16273212	Lat-long	Other MS4 permittee	CRWD, Roseville, Falcon Heights, Saint Paul	2007	Infiltration Trench 1		X
MS400191-26	Ramsey County	MS400191	2014	Infiltrator	Infiltration trench	Complete columns H through K	04-001CP	44.98638546	-93.16115499	Lat-long	Other MS4 permittee	CRWD, Roseville, Falcon Heights, Saint Paul	2007	Infiltration Trench 2		X
MS400191-27	Ramsey County	MS400191	2014	Infiltrator	Infiltration trench	Complete columns H through K	04-001CP	44.98638799	-93.1598568	Lat-long	Other MS4 permittee	CRWD, Roseville, Falcon Heights, Saint Paul	2007	Infiltration Trench 3		X
MS400191-28	Ramsey County	MS400191	2014	Infiltrator	Infiltration trench	Complete columns H through K	04-001CP	44.98452632	-93.1650281	Lat-long	Other MS4 permittee	CRWD, Roseville, Falcon Heights, Saint Paul	2007	Infiltration Trench 4		X
MS400191-29	Ramsey County	MS400191	2014	Infiltrator	Infiltration trench	Complete columns H through K	04-001CP	44.98455667	-93.16372991	Lat-long	Other MS4 permittee	CRWD, Roseville, Falcon Heights, Saint Paul	2007	Infiltration Trench 5		X
MS400191-30	Ramsey County	MS400191	2014	Infiltrator	Infiltration trench	Complete columns H through K	04-001CP	44.9845592	-93.16273749	Lat-long	Other MS4 permittee	CRWD, Roseville, Falcon Heights, Saint Paul	2007	Infiltration Trench 6		X
MS400191-31	Ramsey County	MS400191	2014	Infiltrator	Infiltration trench	Complete columns H through K	04-001CP	44.98459461	-93.15859079	Lat-long	Other MS4 permittee	CRWD, Roseville, Falcon Heights, Saint Paul	2007	Infiltration Trench 7		X
MS400191-32	Ramsey County	MS400191	2015	BMP_improvement_enhancement_retrofitti	BMP maintenance	No ID information needed	M&O_2014	44.97040	-93.14671	Lat-long	Permittee (you)	NA	2014	Lexington Parkway- Energy Park Dr to University Ave Mill & Overlay		X
MS400191-33	Ramsey County	MS400191	2015	BMP_improvement_enhancement_retrofitti	BMP maintenance	No ID information needed	M&O_2015	44.97019	-93.14608	Lat-long	Permittee (you)	NA	2015	Front Avenue- Lexington Avenue to Dale Street Mill & Overlay		X
MS400191-34	Ramsey County	MS400191	2016	BMP_improvement_enhancement_retrofitti	BMP maintenance	No ID information needed	M&O_2016	45.10843	-92.98961	Lat-long	Permittee (you)	NA	2016	Portland Avenue- Buffalo Street to County Road J Mill & Overlay	X	
MS400191-35	Ramsey County	MS400191	2015	BMP_improvement_enhancement_retrofitti	BMP maintenance	No ID information needed	Maint_201	NA	NA	NA	Permittee (you)	NA	2015	Identify drainage improvements or potential BMPs in 5-year major road maintenance program	X	X
MS400191-36	Ramsey County	MS400191	2016	BMP_improvement_enhancement_retrofitti	BMP maintenance	No ID information needed	Maint_201	NA	NA	NA	Permittee (you)	NA	2016	Identify drainage improvements or potential BMPs in 5-year major road maintenance program	X	X
MS400191-37	Ramsey County	MS400191	2016	BMP_improvement_enhancement_retrofitti	BMP improvement	No ID information needed	JD11	45.10442	-93.00726	Lat-long	Permittee (you)	NA	2016	Replaced culvert under Bald Eagle Blvd at JD11 and improved slope stabilization	X	
MS400191-38	Ramsey County	MS400191	2016	BMP_improvement_enhancement_retrofitti	BMP maintenance	No ID information needed	Rehab_201	44.99197	-93.16585	Lat-long	Permittee (you)	NA	2016	Larpenteur Avenue- TH S1 to Oxford Street Concrete Rehab		X
MS400191-39	Ramsey County	MS400191	2015	BMP_improvement_enhancement_retrofitti	BMP improvement	No ID information needed	TIP_2015	NA	NA	NA	Permittee (you)	NA	2015	Identify permit requirements and BMPs for projects in 5-year Transportation Improvement Program	X	X

Appendix A. Ramsey County TMDL Annual Report

2017 TMDL report form for MS4 Permittee (to be submitted with Annual Report)

Entry ID	Permittee	MS4 ID	Reporting year	BMP/Activity	BMP Description	Location and ID Information Needed?	BMP ID	y-coord (lat, e.g. 44.9866)	x-coord (long, e.g. -93.2581)	Coordinate system (e.g. lat-long, UTM)	Who owns this BMP/activity?	If applicable, name other owner(s)	Year when BMP was implemented	Note(s)	Bald Eagle Lake - Phosphorus	Como Lake - Phosphorus
MS400191-40	Ramsey County	MS400191	2016	BMP_improvement_enhancement_retrofitti ng	BMP maintenance	No ID information needed	TIP_2016	NA	NA	NA	Permittee (you)	NA	2016	Identify permit requirements and BMPs for projects in 5-year Transportation Improvement Program	X	X
MS400191-41	Ramsey County	MS400191	2016	BMP_improvement_enhancement_retrofitti ng	BMP maintenance	No ID information needed	M&O_2016	45.10465	-93.0053	Lat-long	Permittee (you)	NA	2016	Eagle Street- Park Ave. to Bald Eagle Blvd Mill & Overlay	X	
MS400191-42				BMP_improvement_enhancement_retrofitti ng	BMP maintenance	No ID information needed	TIP_2017	NA	NA	NA	Permittee (you)	NA	2017	Identify permit requirements and BMPs for projects in 5-year Transportation Improvement Program	X	X
MS400191-43				BMP_improvement_enhancement_retrofitti ng	BMP maintenance	No ID information needed	Maint_2017	NA	NA	NA	Permittee (you)	NA	2017	Identify drainage improvements or potential BMPs in 5-year major road maintenance program	X	X

Appendix A. Ramsey County TMDL Annual Report

Cumulative Reductions Spreadsheet

Category 1: Summary of quantitative reductions (Annual Pollutant Load Reduction).											Optional	
<u>Permittee</u>	<u>MS4 ID</u>	<u>TMDL project</u>	<u>Units</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>Calculation method</u>	<u>Notes</u>
Ramsey County	MS400191	Bald Eagle Lake - Phosphorus	pounds reduced	0.8	1.5	1.5	1.5				P8, MIDS	Updated P8 model reflects greater impact in TP removal
Ramsey County	MS400191	Como Lake - Phosphorus	pounds reduced	0	0	0	0				P8, WinSLAMM, MIDS	
Category 2: Summary of qualitative reductions (# of BMPs).											Optional	
<u>Permittee</u>	<u>MS4 ID</u>	<u>TMDL project</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>Notes</u>		
Ramsey County	MS400191	Bald Eagle Lake - Phosphorus	7	7	16	18						
Ramsey County	MS400191	Como Lake - Phosphorus	28	30	35	37						

Appendix A. Ramsey County TMDL Annual Report

Non-implemented activities (BMP Inventory)							Place an "X" in a cell if the activity applies to the TMDL shown in the column	
<u>Permittee</u>	<u>MS4 ID</u>	<u>BMP description</u>	<u>Status</u>	<u>Reporting year</u>	<u>Notes (Optional)</u>	<u>Bald Eagle Lake - Phosphorus</u>	<u>Como Lake - Phosphorus</u>	
Ramsey County	MS400191	Gottfried's Pit Improvement Project	Discontinued	2014	Construction was completed in 2012, however, this project provided primarily flooding reduction benefits		X	
Ramsey County	MS400191	Bald Eagle parking lot modification	Discontinued	2016	Improvements to Bald Eagle parking lot. Postponed until funding is available	X		
Ramsey County	MS400191	Identify BMPs	Under construction	2018	Within 5-year major maintenance plan	X	X	
Ramsey County	MS400191	Identify permit needs	Under construction	2018	Within 5-year Transportation Improvement Program	X	X	
Ramsey County	MS400191	Mill and Overlay	Planned	2018	Como Avenue from Hamline to Lexington Pkwy		X	
Ramsey County	MS400191	Mill and Overlay	Planned	2018	Lexington Avenue from TH 36 to Como Avenue		X	
Ramsey County	MS400191	Mill and Overlay	Planned	2018	County Rd J from Hwy 61 to Portland Avenue	X		
Ramsey County	MS400191	Mill and Overlay	Planned	2018	Stillwater St. from Cottage Ln to Bald Eagle Avenue	X		
Ramsey County	MS400191	BMP Installation	Planned	2018	SAFL Baffle Installation on Park Ave with WBT	X		
Ramsey County	MS400191	Full depth recycle	Planned	2019	Bald Eagle Blvd from Cty Rd H2 to North County Line	X		
Ramsey County	MS400191	Mill and Overlay	Discontinued	2019	Lexington Avenue from Larpenteur Ave to Cty Rd C		X	
Ramsey County	MS400191	Mill and Overlay	Planned	2020	Hugo Road from Park Ave to County Rd J	X		
Ramsey County	MS400191	Mill and Overlay	Planned	2020	County Rd H-2 from Centerville Road to Bald Eagle Blvd	X		
Ramsey County	MS400191	Mill and Overlay	Planned	2021	Energy Park Drive from TH 51 to Lexington Pkwy		X	
Ramsey County	MS400191	Mill and Overlay	Planned	2021	Portland Avenue from Hwy 96 to Taylor Ave	X		
Ramsey County	MS400191							
Ramsey County	MS400191							
Ramsey County	MS400191							
Ramsey County	MS400191							
Ramsey County	MS400191							
Ramsey County	MS400191							

Provide an up-dated narrative describing any adaptive management strategies used (including projected dates) for making progress toward achieving each applicable WLA

Ramsey County, CRWD, Saint Paul, Roseville, Falcon Heights, and Roseville continue to work together to implement cost-effective stormwater best management practices to achieve the categorical wasteload allocation for phosphorus in Como Lake. The partners are conducting subwatershed feasibility studies and other efforts to identify opportunities for implementing stormwater BMPs. Ramsey County continues to implement and maintain best management practices to achieve the categorical wasteload allocation for phosphorus removal in Bald Eagle Lake.

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

		2015	2016	2017	2018	2019
#	Performance Measures	Actual	Actual	Actual	Estimate	Estimate
1	Lake Water Quality Score	2.84	2.93	2.90	2.90	2.90

PERFORMANCE MEASURES - DISCUSSION

Public Works has developed a water quality database for recreational lakes in Ramsey County since 1981. In 2017, water sampling was completed on 30 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, 2017 lake water quality scores decreased slightly relative to 2016. No lakes’ overall grade level changed, but some did decrease in a single parameter. Early ice out and above average precipitation the last three years were favorable conditions for lakes. 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.