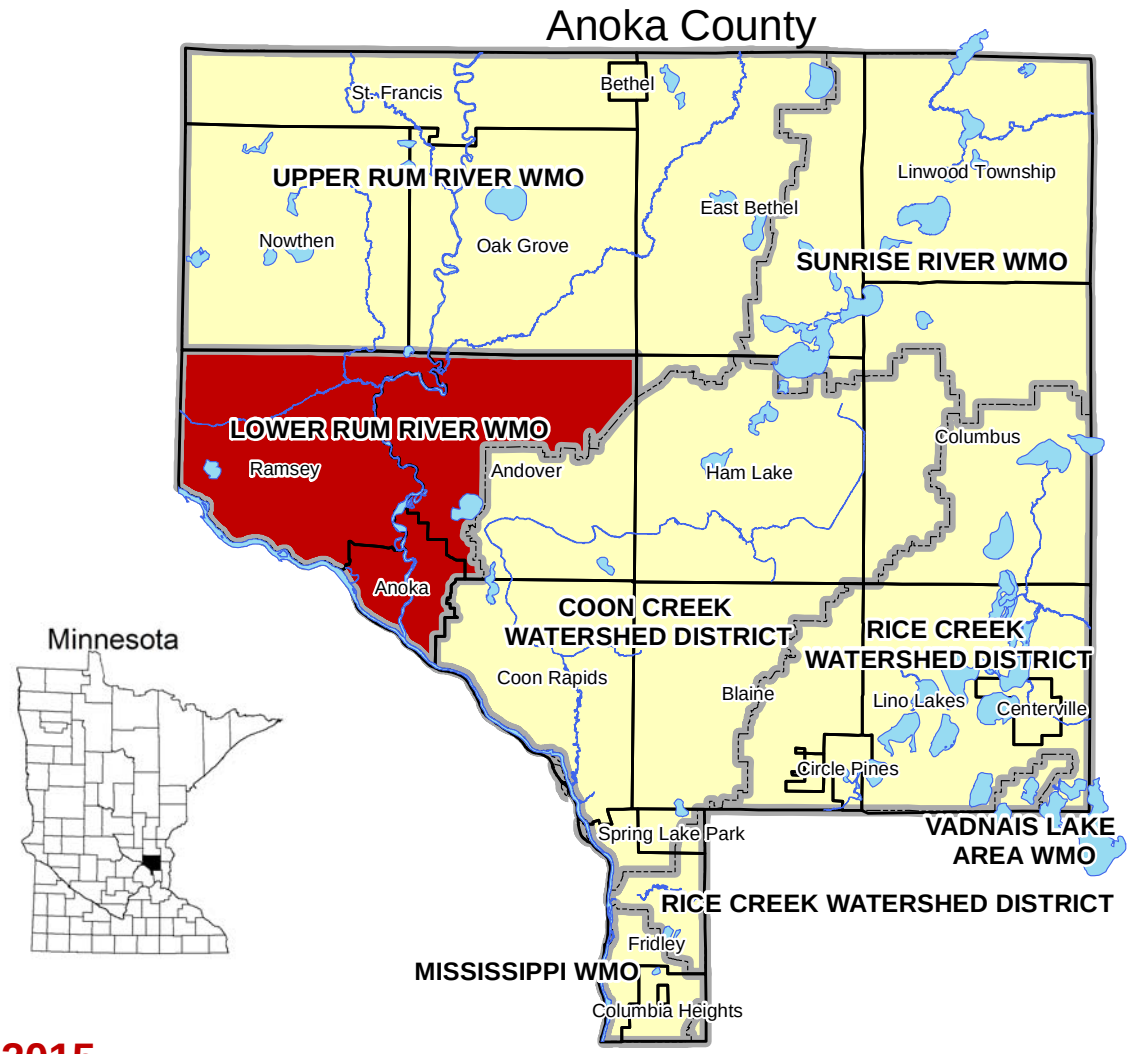
2015 Annual Report

Lower Rum River

Watershed Management Organization

Andover – Anoka – Ramsey



April 27, 2015

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Lower Rum River Watershed Management Organization
2015 First Avenue
Anoka, MN 55303
www.LRRWMO.org

I. Introduction

This report has been prepared to meet the annual watershed management organization reporting requirements of Minnesota Rules 8410.0150. The report is intended to fulfill 2015 reporting requirements.

The Lower Rum River Watershed Management Organization (LRRWMO) is a joint powers organization under Minnesota Statutes, Section 471.59. It is comprised of the cities of Anoka and Ramsey, and portions of Andover. Board members are appointed by the member cities. The organization's direction is laid out in its watershed management plan and the member municipalities' local water plans. The LRRWMO meets every month on the third Thursday at 8:30 am at the Anoka City Hall.

Rum River at the Anoka Dam

II. Activity Report

a. Current Board Members

CITY OF ANDOVER

Todd Haas (Chair)
1685 Crosstown Blvd NW
Andover, MN 55034
763.755.5100
t.haas@andovermn.gov

Mike Knight (Alternate)
4660 175th Ave NW
Andover, MN 55304
763.421.9247
cm.knight@andovermn.gov

CITY OF ANOKA

Carl Anderson (Treasurer)
2015 1st Ave N
Anoka, MN 55303
763.576.2781
carl.anderson.eng@comcast.net

Jeff Weaver (Alternate)
2015 1st Ave N
Anoka, MN 55303
763.421.5522
angler55303@yahoo.com

CITY OF RAMSEY

Mark Kuzma (Vice Chair)
7550 Sunwood Dr NW
Ramsey, MN 55303
763.576.4366
mkuzma@ci.ramsey.mn.us

Chris Riley (Alternate)
7550 Sunwood Dr NW
Ramsey, MN 55303
763.427.1410
criley@ci.ramsey.mn.us

Lake Itasca, City of Ramsey

b. Day to Day Contact

The day to day contact person for the SRWMO who can answer questions about the organization is:

Todd Haas, Chair
1685 Crosstown Blvd NW Andover, MN 55034
phone 763.755.5100 email t.haas@andovermn.gov

c. Employees and Consultants

The LRRWMO does not employ staff, but does utilize consulting services. A description of contracted services is listed below:

Consultant/Partner	Contact	Work Description
Anoka Conservation District	Jamie Schurbon Water Resource Specialist 1318 McKay Dr NW, #300 Ham Lake, MN 55304 763-434-2030 ext. 12 jamie.schurbon@anokaswcd.org	• Water quality and hydrological monitoring, and special studies. • Website maintenance. • Administer the WMO's cost share grant program. • Public outreach. • Assistance preparing annual reports to BWSR. • Assistance reviewing local water plans.
Barr Engineering	Bob Obermeyer Senior Water Resources Engineer 4700 West 77th St Minneapolis, MN 55435-4803 952-832-2857 bobermeyer@barr.com	• Permit reviews. • Technical and engineering guidance. • Assistance reviewing local water plans.
City of Anoka Finance Department	Lori Yager, Finance Director 2015 First Ave North Anoka, MN 55303-2270 763-576-2771 lyager@ci.anoka.mn.us	• Deputy Treasurer.
Kennedy & Graven	470 Pilsbury Center Minneapolis, MN 55402 612-337-9215	• Legal services.
Timesaver Off Site Secretarial Service	Carla Wirth 28601 Hub Dr Madison Lake, MN 56063 612-251-8999 Timesaver02@aol.com	• Administrative secretary. • Recording secretary for meetings.

d. Solicitations for Services

Minnesota Statutes 103B.227 require watershed management organizations to solicit bids for professional services at least once every two years. Most recently, in late 2014 the WMO solicited proposals for professional services as follows:

Legal Services

Proposals received:	Kennedy and Graven
Selected:	Kennedy and Graven
Date of selection:	November 20, 2014

Engineering Services, including permit review and WCA TEP Representative

Proposals received:	Barr Engineering Hydromethods
Selected:	Barr Engineering
Date of selection:	December 18, 2014

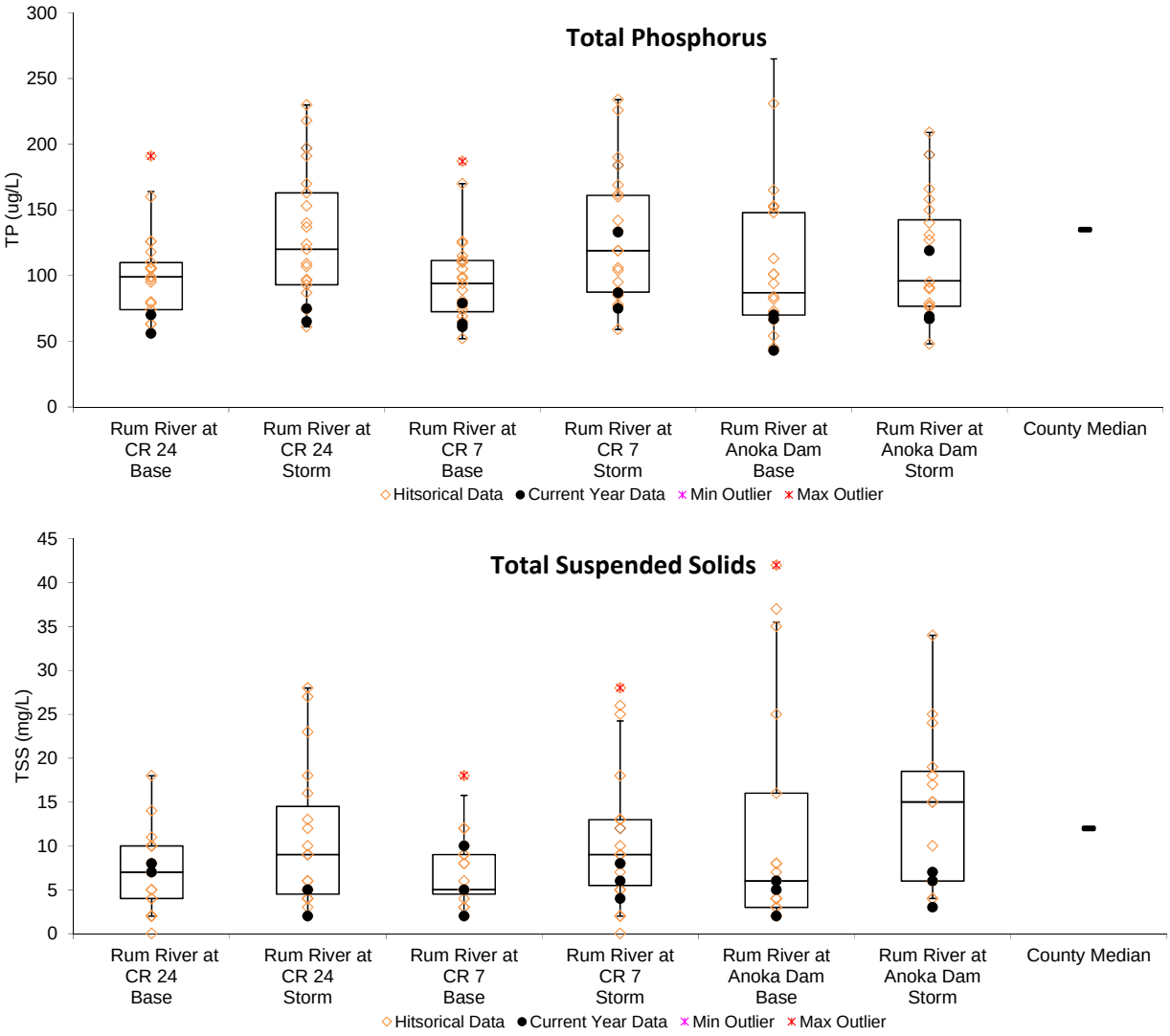
e. Water Quality Trends

The LRRWMO has a long term water quality monitoring program that includes most larger stream and recreational lakes in the watershed. Many waterbodies are monitored every 2-3 years. An important part of evaluating implementation of the watershed management plan is looking at water quality trends. No waterbodies have been noted with statistically significant trends, but it is important to note changes in the Rum River.

While a long term statistical trend for the Rum River has not been found in the LRRWMO's analysis for its reach of the river, there is a general observation of long term water quality improvement for the entire river. An analysis for the Rum River WRAP project, which extends beyond the LRRWMO, found phosphorus concentrations have decreased in the river over time.

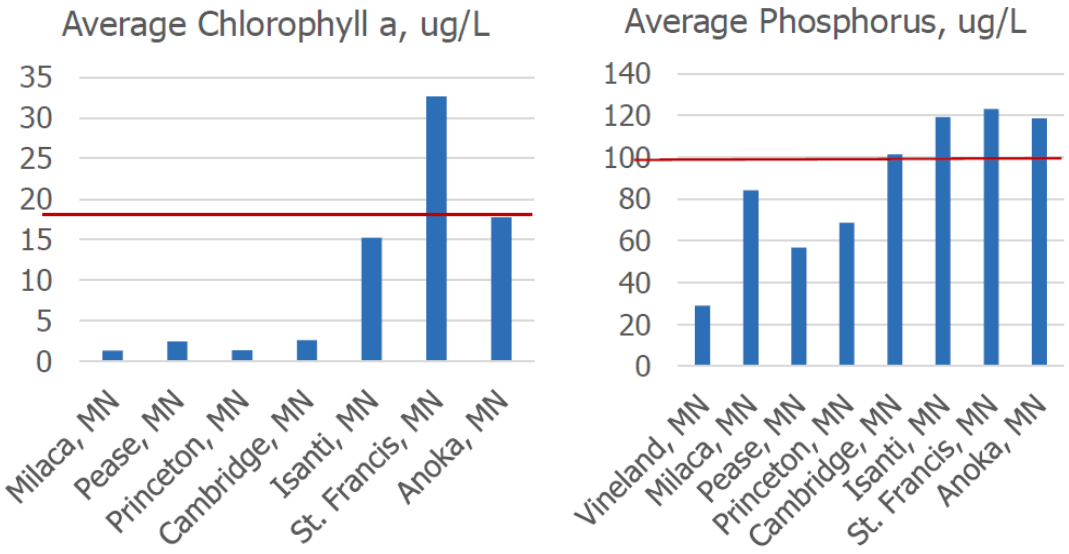
The LRRWMO also takes special interest in how the Rum River's water quality changes longitudinally, particularly within its jurisdictional boundary. The Rum River is monitored most years where it enters and exits the LRRWMO. The figure below provides data for a phosphorus and suspended solids and **Appendix D** provides detailed results for many additional parameters. Rum River water quality does not show any apparent change within the LRRWMO. This is encouraging, because this reach includes many developed and developing areas.

LRRWMO Longitudinal Rum River Water Quality Changes. Orange diamonds are historical data from previous years and black circles are 2015 readings. Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).



Water quality of the river does change in other areas outside the LRRWMO. Water monitoring farther upstream has been sporadic, most recently occurring in 2013-2014. There are water quality declines that generally occur within the Isanti County reaches of the river, which has the most agriculture and impaired waterbodies draining to the lake (see figure below).

Whole Watershed Longitudinal Rum River Water Quality Changes (graphic from RESPEC for the Rum River WRAP)



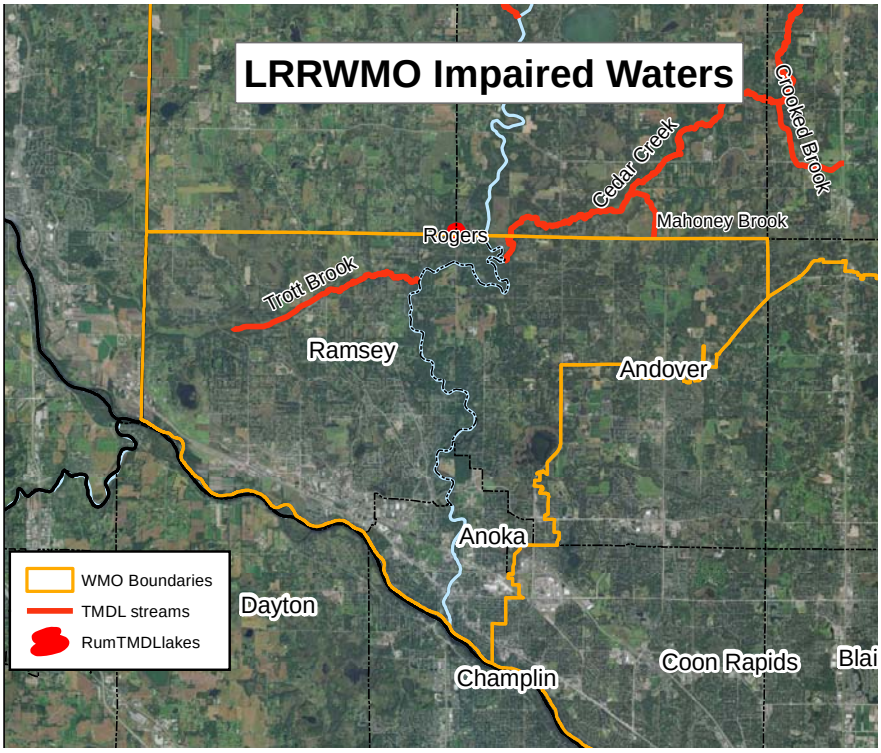
In addition to statistical trend tests, it is often useful to examine graphs of water quality data to look for apparent trends that are not yet statistically significant and may or may not be real. These observations, combined with other knowledge about the waterbody (new invasive species, land use changes, etc) can guide management. For this purpose **Appendix D** presents water monitoring results where no trend is apparent.

Additional water quality data is available online. Annual watershed monitoring reports are available on the LRRWMO website (www. LRRWMO.org). All water quality data collected by the LRRWMO is on the MN Pollution Control Agency's EQuIS database, which is accessible through their website.

f. Impaired Waters

Three impaired waters are of relevance to the LRRWMO: Trott Brook, Mahoney Brook and Rogers Lake. None has an apparent water quality trend. A total maximum daily load (TMDL) study is being completed for each in 2016 as part of the Rum River WRAP project.

Impaired Waterbodies



Trott Brook, a tributary to the Rum River, has an impaired biota. Initial diagnosis as part of the Rum River WRAP project suggests the cause may be wetlands adjacent to Trott Brook. The brook has been channelized/ditched through large wetlands.

Mahoney Brook also has an impaired biota. The impaired stream reach is not in the LRRWMO, but begins at the LRRWMO boundary and flows north. Presumably, a TMDL for the impaired reach would include pollutant allocations for the upstream portions of the watershed in the LRRWMO. Draft analysis for the Rum River WRAP project have concluded that low dissolved oxygen, excess phosphorus and habitat are all stressors to the biological community.

Rogers Lake is impaired for excess nutrients. The lake his half in the LRRWMO and half in the URRWMO. It is small (~42 acres), shallow (< 4ft) and has no public access. Illegal herbicide applications at the lake may have played a role in switching the lake back and forth between turbid open water and clean water with dense macrophytes.

The LRRWMO is active in the discussion and development of these TMDLs as part of the Rum River WRAP. The TMDLs are anticipated to be complete at the end of 2016.

g. Evaluation of Watershed Plan Implementation

The current LRRWMO Watershed Management Plan was approved by the Minnesota Board of Water and Soil Resources (BWSR) in late 2011 and adopted by the LRRWMO on January 19, 2012. Implementation began that same year. The plan contains a detailed schedule of tasks that the LRRWMO should accomplish each year in order to realize its goals.

The LRRWMO deviated from its work plan in 2015 in the following ways:

Change	Removed Trott Brook water quality and hydrology monitoring.
Reason	The LRRWMO Watershed Plan's monitoring schedule states the goal of monitoring Trott Brook is to determine its impairment status and calculate a TMDL. Trott Brook was extensively monitored in 2013-14 as part of the Rum River WRAP and that data is being used for TMDL calculation. MPCA has informed us that additional data would not be used for the TMDL because it is already underway.
Change	Removed Rogers and Sunfish Lake water quality monitoring.
Reason	Sunfish Lake is being monitored by the Anoka Ramsey Community College. Rogers Lake was dropped because the lake is already designated as impaired and efforts should go toward water quality improvement.
Change	Did not monitor groundwater levels or trends.
Reason	Groundwater monitoring is best done at a regional level. The MN DNR has taken the lead.

h. Status of Local Plan Adoption and Implementation

All LRRWMO member cities have local water plans must be updated for consistency with the LRRWMO Watershed Management Plan, which was adopted in January 2012. The status of each is summarized in the table below.

To track member cities' progress on local plan implementation, the LRRWMO requires a brief annual report from each city and provides a template for this report. In addition to serving as a reporting tool, we hope that the template serves as a "to do" list for our cities. These reports are available upon request, and are summarized in the table below.

Status of city local water plans and some recent accomplishments toward plan implementation.

City of Andover	
Local Water Plan Status	Andover's Local Water Plan was approved by the LRRWMO May 21, 2015. They had been granted an extension by the LRRWMO to their local water plan deadline because their city is in both the LRRWMO and Coon Creek Watershed District (CCWD), which recently completed updating its watershed plan. The extension allowed the city to perform updates needed for both watershed organizations simultaneously. The city has all of the ordinances required by the LRRWMO.
Submitted 2015 annual report to LRRWMO?	Yes
Some Recent Implementation Accomplishments	• Street sweeping completed annually. • Water control structures and stormwater treatment basins are inspected ever five years and maintenance action is taken as needed. • Illicit discharge detection and elimination program. • Purchased open spaces called Martin's Meadows and Northwoods Preserve. Efforts underway include prairie establishment, buckthorn control, and scenic overlook site

stabilization.

- In 2014 reached 3,300 households repeatedly with multiple public education efforts including newsletter articles, brochures available at city hall, website posting, local television announcements about storm water quality, and similar information at the North Suburban Home Show. Topics have included groundwater protection, adopt-a-park, picking up pet waste, wetland protection BMPs, controlling invasive species, water conservation, and yard waste management.
- During a 2015 street reconstruction additional stormwater treatment was added, including stabilizing a ditch and adding catch basin sumps.
- Andover is actively inspecting its outfalls into the Rum River and other public waters. Records are maintained in city GIS software.
- Periodic inspections of active developments to ensure adequate erosion and sediment controls are in place.
- Habitat improvement projects such as Kelsey Round Lake Park are ongoing and include 15 acres of buckthorn control and establishing a native prairie.

City of Anoka

Local Water Plan Status

The City of Anoka's local water plan was approved by the LRRWMO May 21, 2015.

The city has all of the ordinances required by the LRRWMO, except stormwater standards and wetland standards. Both of these ordinances are in draft format and likely to be approved in 2016.

Submitted 2015 annual report to LRRWMO?

Yes

Some Recent Implementation Accomplishments

- Street sweeping the city three times annually and the downtown weekly in season.
- Inspected water level controls and basins every 5 years.
- Illicit discharge detection and elimination program.
- In 2015 planted 500+ seedlings for riverbank stabilization along the Mississippi River.
- In 2015 installed two stormwater treatment structures on a city project.
- In 2015 replace an existing outfall on the Rum River.
- In 2015 installed a rain garden on a city project.
- Public education which in 2015 included 2 newsletter articles, one brochure, 2 web postings, an Arbor Day tree program and social media. Topics included water conservation, hazardous waste disposal and yard waste management. 7,000 residents were reached.
- Stormwater outfall inspections every other year and corresponding maintenance.
- Identify and address stormwater issues during each roadway project.
- Gathering information to use in consideration of a no wake rule to reduce bank erosion.

City of Ramsey

Local Water Plan Status

The City of Ramsey's local water plan was approved by the LRRWMO September 17, 2015.

Ramsey has all of the ordinances required by the LRRWMO.

Submitted 2015 annual report to LRRWMO?

Yes

Some Recent Implementation

- Annual street sweeping.
- Implementing a five year plan for inspecting stormwater ponds.

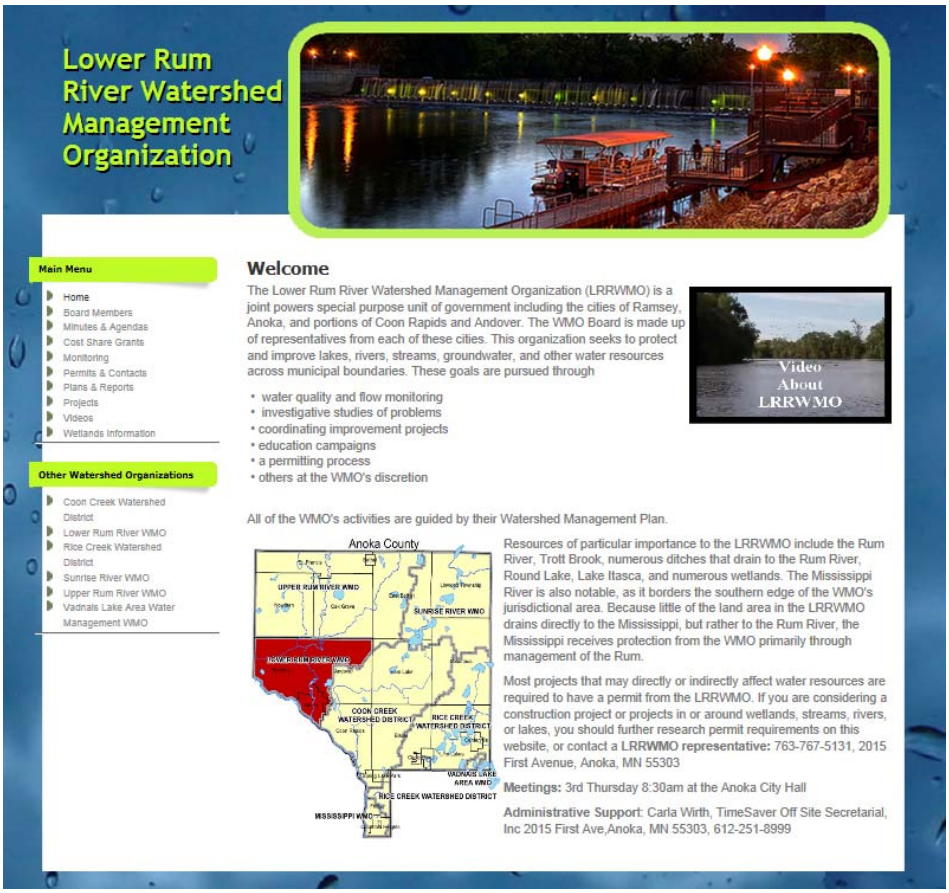
Accomplishments

- Illicit discharge detection and elimination program.
- Reached 9,500 households in 2015 with 4 newsletter articles. Topics of education efforts included wetland protection, controlling invasive species, water conservation, hazardous waste disposal, yard waste management, and pet waste disposal.
- Hold an annual environmental expo community event.

i. Public Outreach

The LRRWMO and its member cities do regular public outreach and education projects. These include:

- **WMO website**, including general information about the organization, the watershed management plan, meeting agendas and minutes, water monitoring results, profiles of WMO projects, access to mapping and data access tools, and others.



- **Web videos** – To bolster the content of the website the LRRWMO creates web videos. They include:

2012	About the LRRWMO
2013-14	Water conservation
2014-15	Wetland regulation, correcting riverbank erosion

- **Newsletter articles** – Articles are published by each of the member cities and printed in their newsletters. Copies of several of these articles are provided in **Appendix C**.
- **Public officials meetings** – Approximately every 5 years the LRRWMO hosts a dinner meeting for local officials. The purpose is to educate elected officials about the role of the WMO, discuss upcoming projects, and consider the overall direction of the WMO. These meetings were last held in 2008 and 2013.
- **Bi-annual river float with city officials and staff** – Every other year the WMO Board, along with city staff and officials, float the Rum River. The trip is an opportunity to inspect for violations or problems, as well as share an appreciation of the river with decision-makers. A float was last done in fall 2013. A float was attempted in fall 2015, however weather conditions forced cancellation.
- **A wetland education series –** From 2013 to 2020 the LRRWMO is conducting a six-part education program about wetlands. The purpose is to improve public understanding of wetland values and rules. It includes on-line resources, property owner packets, newsletters, signage near public wetlands, elected officials workshops, and local events exhibits.

  In 2013 the LRRWMO produced a map about wetland regulation and mailed it to over 2,000 landowners who own land with or adjacent to wetlands. Each brochure included a custom neighborhood level map.

  We also created a one-stop shop of wetland regulatory information website in 2013. This was done on the Anoka Conservation District's website so it could serve parts of our communities that are not in the LRRWMO, as well as surrounding areas.

  In 2014 two newsletter articles and one web video were produced.

  In 2015 30 wetland interpretive signs of four different designs were produced. In early 2016 the member cities are installing the signs along trails and other prominent areas near wetlands or shoreline.

j. Permits, Variances, and Enforcement Actions

The LRRWMO's 2015 permit activity is summarized in the table below.

Permit Name	Permit #	City	Summary
Sunwood Village	2015-01	Ramsey	3-story multi-family apartment building within the COR Development site is within the City Drinking Water Supply Management Area (DWSMA) prohibiting on-site volume through infiltration. Water quality and rate control requirements met on-site. **Project was approved.**
Anoka Mini-Storage	2015-02	Anoka	Site located at 500 Bunker Lake Road. Stormwater management for the 3.9-acre site provided in a constructed stormwater basin. **Project was approved.**
Brookfield 6th Addition	2015-03	Ramsey	6.3-acre, 18-lot single-family residential subdivision. Stormwater infrastructure in-place to direct runoff to two existing basins that provide rate control, volume retention, and water quality management to comply with LRRWMO requirements. **Project was approved.**
Site Grading and Filling for Future Public Works Facility	2015-04	Anoka	State-wide approximately 25,000 cubic yards of material on a 3.4-acre site for Anoka's future Public Works Facility. **Project was approved.**
Harvest Estates	2015-05	Ramsey	Redevelopment of the former Ramsey City Hall site. 44 single-family residential lots on the 38-acre site. Two stormwater basins to be constructed to comply with the LRRWMO stormwater requirements. **Project was approved.**
Green Haven Golf Course Fairway Improvements	2015-06	Anoka	6 acres of site altered. No new impervious area. **Permit required for erosion and sediment control.**
Garnet Street and West 168th Avenue Reconstruction	2015-07	Ramsey	Permit submitted for project. Project will not increase the existing impervious by more than 1 acre, therefore **LRRWMO permit not required.**
Parkview East Apartments	2015-08	Ramsey	5.7-acre site located in the former Ramsey Town Center development. Project within DWSMA, therefore volume retention on-site through infiltration prohibited. Ramsey is to provide the LRRWMO an agreement stating that the LRRWMO storm water requirements will be provided off-site by the City. **Project was approved.**

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Permit Name	Permit #	City	Summary
Walker Plaza II Senior Living Facility	2015-09	Anoka	3-story, 72-unit apartment complex. Site is 1.4 acres. Three stormwater basins are to provide rate control, volume retention, and water quality management. **Project was approved.**
Sutton Deck Construction 7516 163rd Avenue NW	2015-10	Ramsey	**A wetland no-loss determination was approved for the project**.
MSA Road between Country Oakes North development and Hansen Boulevard.	2015-11	Andover	The project proposes wetland impacts of 1.48 acres. Mitigation of 3.09 acres is to be provided through the purchase of wetland credits from Wetland Bank #136. **The wetland permit application for the project was approved.**
Life Fitness Expansion	2015-12	Ramsey	A proposed 48,000 square foot expansion to the existing warehouse. The existing on-site basin is to be expanded with an infiltration basin constructed to comply with the LRRWMO stormwater requirements. **Project was approved.**
Woodlands	2015-13	Ramsey	Sanitary sewer crossing of a wetland on the former Country Club Hills development. Temporary wetland impact of 16,000 square feet. **Project was approved. (formally Permit #2014-06)**
Dedicated Networks Building Addition	2015-15	Ramsey	19,500 square-foot building addition and associated parking improvements at 14000 Unity Street NW. Two infiltration basins to be constructed for volume retention and water quality treatment. Rate control to be provided on a downstream regional basin. **Project was approved.**
Eagle Brook Church	2015-16	Anoka	Demolition of a portion of the existing building with renovation of the remaining portion of the building for the church. Since less than 50% of the project site is to be disturbed, volume retention is not required. A reduction in the site impervious area complies with the rate control requirement. Water quality management is provided within an existing downstream regional basin. **Project was approved.**
Paul Johnson Lot-Split	2015-17	Ramsey	**Wetland delineation and de minimus exemption approved**.
Anoka Station Park	2015-18	Anoka	**Wetland delineation for the site approved.**

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Permit Name	Permit #	City	Summary
Northfork Alpine Addition	2015-19	Ramsey	9.6 acre, 4-lot single-family residential subdivision. **Two stormwater basins to be constructed to comply with the LRRWMO stormwater requirements.**
Boulder Estates	2015-20	Andover	Permit submitted for the construction of a single-family home on a 1.3-acre site. Since the land alteration is less than 1 acre (0.8 acres) the **project does not meet the criteria requiring compliance with the LRRWMO Stormwater requirements.**
Country Oaks North	2014-03	Andover	83 acres, 100-lot single-family residential development. Five stormwater basins are to be constructed to comply with the LRRWMO stormwater management requirements. The low floor elevations of the homes adjacent to the basins are 2 feet above the calculated 100-year frequency flood elevation of the basins. **Project was approved.**

k. 2016 Work Plan

Planned 2016 activities are listed in the table below. Most routine administrative tasks are excluded.

Task	Purpose	Description	Locations or Action	Cost
Lake Level Monitoring	To understand lake hydrology, including the impact of climate or other water budget changes. These data are useful for regulatory, building/development, and lake management decisions.	Weekly water level monitoring in lakes by volunteers. All are available on the Minnesota DNR website using the "LakeFinder" feature (www.dnr.mn.us.state \lakefind\index.html).	Itasca Lake Round Lake Sunfish Lake Rogers Lake	$1,000
Lake Water Quality Monitoring	To detect water quality trends and diagnose the cause of changes.	May through September lake water quality monitoring conducted every two weeks and including total phosphorus, chlorophyll-a and transparency.	Sunfish Lake Round Lake	$3,350
Stream Water Quality Monitoring	To detect water quality trends and diagnose the cause of changes. Rum River monitoring is done where the river enters and leaves the WMO.	Eight water samples are taken throughout the open water season. Parameters tested include total phosphorus, total suspended solids, turbidity, conductivity, dissolved oxygen and others. Hydrology data is provided by the USGS station near St. Francis for the Rum River.	Rum River at Anoka Dam Rum River at CR7	$2,450
Rum River Invertebrate Biomon-itoring	To assess overall river health. To provide a hands-on educational experience to high school students.	Facilitated by the ACD, science classes from Anoka High School assess aquatic insect populations. Students will collect macroinvertebrate samples, identify them, and calculate indices of river health. Anoka Conservation District staff provide instruction, oversight, and write a final report. This monitoring has been conducted for more than 10 years.	Rum River at Bunker Lake Blvd	$825
Reference Wetland Hydrology Monitoring	The ACD maintains a network of 18 reference wetlands throughout the county. These data aid in understanding of water conditions in wetlands, surficial water table changes, and trends. It is useful for regulatory determinations (for example, is a dry area actually a wetland, or are all wetlands dry right now?) and resolving water level disputes. Each reference wetland has been monitored for more than 10 years, providing a long term record.	Install and maintain a WL40 electronic water level monitoring device at the edge of reference wetlands. These devices measure water levels every four hours.	AEC Ref Wtld Rum Central Ref Wtld Lake Itasca Trails Ref Wtld	$1,725

Task	Purpose	Description	Locations or Action	Cost
LRRWMO Website	To increase awareness of the URRWMO and its programs. The website also provides tools and information that helps users better understand water resources issues in the area. The website serves as the URRWMO's alternative to a state-mandated newsletter.	Maintain and update the WMO website with current information about the organization, and meeting minutes and agendas. Web videos developed by the LRRWMO are also featured on the website.	http://www.lrrwmo.org	$625
Promotion of Water Quality Improve-ment Projects	To increase awareness of the LRRWMO and its programs, as well as educate the public on water quality issues.	In 2014 a web video about correcting riverbank erosion will be produced and posted to the LRRWMO website.	Watershed-wide	$1,500
Newsletter articles	To increase public awareness of water resources and the LRRWMO.	In 2016 two newsletter articles will be produced and printed in city newsletters. The topic of at least one of these articles will be the Rum River WRAP.	Watershed-wide	$1,120
Prepare Annual Report to State Auditor	To provide transparency and accountability of organization operations.	An annual financial report and online reporting of WMO finances though the State Auditor's SAFES website is completed by the WMO's Deputy Treasurer.	Watershed-wide	$0
Prepare Annual Report to BWSR	To provide transparency and accountability of organization operations.	Produce an annual report of WMO activities and finances that satisfies Minnesota Rules 8410.0150.	Watershed-wide	$850
Permitting Program	To ensure water quality and hydrology are properly taken into consideration during construction projects.	The LRRWMO permitting program targets land disturbance activities.	Watershed-wide	variable
Cost Share Grants for Water Quality Improve-ment	To improve water quality in lakes, rivers, and streams.	These grants offer up to 70% cost sharing of the materials needed for a water quality improvement project. Typical projects include erosion correction, lakeshore restoration, and rain gardens. The Anoka Conservation District provides administration.	Offer grants	$1,000

The LRRWMO deviated from its watershed management plan for 2016 in the following ways:

Change Removed Trott Brook stream water quality and hydrology monitoring.
Reason The MPCA monitored this site in 2013-14 as part of a WRAP study. The LRRWO has done extensive monitoring previously. The issues are understood. In 2015-16 the LRRWMO will actively participate in WRAP/TMDL planning for this waterway, with implementation to follow.

Change	Did not monitor groundwater levels or trends.
Reason	Groundwater monitoring is best done at a regional level. The MN DNR has taken the lead.
Change	Removed Rogers Lake water quality monitoring.
Reason	This lake has been declared impaired and a TMDL is being complete in 2016. The TMDL will be instructive for future management. This waterbody is a low priority for the LRRWMO because of its small size, limited recreation capacity and lack of public access.

III. Financial and Audit Report

a. 2015 Financial Summary

See Appendix A.

b. Fund Balances

See Appendix A.

c. Financial Audit Documentation

A 2015 financial audit has not yet been completed, but will be provided to the State once complete.

d. 2016 Budget

At its January 21, 2015 meeting the LRRWMO Board approved the 2016 budget shown below.

RESOLUTION # 2016-01

RESOLUTION OF THE LOWER RUM RIVER WATERSHED MANAGEMENT ORGANIZATION (LRRWMO) FOR ADOPTING THE BUDGET FOR YEAR 2016

BE IT RESOLVED by the Board of the Lower Rum River Watershed Management Organization of Minnesota as follows:

1. The budget for the LRRWMO the year 2016 hereby approved and adopted with appropriations for each of the various activities as follows:

REVENUE:	
Assessments	
Andover	$ 20,585
Anoka	$ 16,279
Ramsey	$ 37,136
	$ 74,000
Permits	$ 30,000
Grants	$ 500
Interest earnings	$ 100
TOTAL REVENUES	$ 104,600
EXPENDITURES:	
Engineering	$ 6,000
Permit Review	$ 26,700
Legal	$ 4,000
Financial Services	$ 2,400
Secretarial Services	$ 7,100
Postage, Copying, etc.	$ 1,500
Insurance	$ 2,200
Wetland Education	$ 11,580
Report to BWSR - Annual Report	$ 850
Grant funding	$ 1,000
Water Quality cost share grant	$ 1,200
Wetland education (2 city news articles)	$ 1,120
Lake Level Monitoring	$ 1,000
Stream Hydrology, water quality & biomonitoring	$ 5,650
Wetland monitoring	$ 1,725
Stormwater retrofit	$ 4,000
Anoka Dam Assessment	$ 2,500
Miscellaneous	$ 2,000
TOTAL	$ 83,110
NET INCOME	$ 21,490
LRRWMO Plan update/reserve	*$ 20,000*

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Appendix A:
2015 Financial Report

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LOWER RUM RIVER WATER MANAGEMENT ORGANIZATION

ANNUAL FINANCIAL REPORT

For the Year Ended January 31, 2016

Prepared by the Deputy Treasurer

Lori Yager
With assistance from Pam Richer, Finance Account Clerk

LOWER RUM RIVER WATER MANAGEMENT ORGANIZATION

Annual Financial Report

Year Ended January 31, 2016

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LOWER RUM RIVER WATER MANAGEMENT ORGANIZATION
STATEMENT OF NET POSITION
JANUARY 31, 2016

Assets		
Current assets:		
Cash and investments	$	184,124
Accounts receivable		3,423
Total assets	$	187,547
Liabilities		
Current liabilities:		
Accounts payable	$	3,718
Deposits		57,479
Total current liabilities		61,197
Net Position		
Unrestricted		126,350
Total liabilities and net position	$	187,547

See accompanying notes to financial statements.

LOWER RUM RIVER WATER MANAGEMENT ORGANIZATION

STATEMENT OF REVENUES, EXPENSES, AND CHANGE IN NET POSITION - BUDGET AND ACTUAL
YEAR ENDED JANUARY 31, 2016

	Original and Final Budget	Actual	Variance From Budget Positive (Negative)
Operating revenues:			
Assessments from participating cities	$ 80,000	$ 80,000	$ -
Permits:			
Service fees	2,000	2,165	165
Engineering fees	23,000	19,984	(3,016)
Intergovernmental	-	2,910	2,910
Miscellaneous	-	10	10
Total operating revenues	105,000	105,069	69
Operating expenses:			
Engineering fees:			
Permits	20,000	19,984	16
Administrative	5,000	6,929	(1,929)
Legal and professional fees	4,350	5,062	(712)
Insurance	2,300	1,192	1,108
Secretarial services and supplies	10,500	10,522	(22)
Projects	24,360	22,925	1,435
Other	25,000	-	25,000
Total operating expenses	91,510	66,614	24,896
Operating income	13,490	38,455	24,965
Nonoperating revenues:			
Interest income	100	83	(17)
Change in net position	$ 13,590	38,538	$ 24,948
Net position at beginning of year		87,812	
Net position at end of year		$ 126,350	

See accompanying notes to financial statements.

LOWER RUM RIVER WATER MANAGEMENT ORGANIZATION

STATEMENT OF CASH FLOWS
YEAR ENDED JANUARY 31, 2016

Increase (decrease) in cash and cash investments:		
Cash flows from operating activities:		
Received from member cities	$	80,000
Received from customers		40,973
Received from other governments		3,678
Payments to suppliers for goods and services		(66,462)
Net cash provided by operating activities		58,189
Cash flows from investing activities:		
Investment earnings		83
Net increase in cash and investments		58,272
Cash and investments at beginning of year		125,852
Cash and investments at end of year	$	184,124
Reconciliation of operating income to net cash provided by operating activities:		
Operating income	$	38,455
Changes in operating assets and liabilities:		
Accounts receivable		(382)
Due from other governments		768
Accounts payable		152
Deposits		19,196
Total adjustments		19,734
Net cash provided by operating activities	$	58,189

See accompanying notes to financial statements.

Lower Rum River Water Management Organization Board

Appointed Officials

January 31, 2016

Todd Haas, Chair

Mark Kuzma, Vice Chair

Carl Anderson, Secretary and Treasurer

Administrative

Carla Wirth, Time Savers — Administrative Secretary
Lori Yager, City of Anoka — Deputy Treasurer

1. NATURE OF THE ORGANIZATION

Lower Rum River Water Management Organization (the "Organization") is a watershed management organization that has been created to fulfill the requirements and purposes of Minnesota Statutes 103B.201 to 103B.251. The purpose of such an organization as defined by Minnesota Statute 103B.201 is to "Protect, preserve and use natural surface and ground water storage and retention systems in order to (a) reduce to the greatest practical extent the public capital expenditures necessary to control excessive volumes and rate of runoff, (b) protect and improve surface and ground water quality, (c) prevent flooding and erosion from surface flows, (d) promote ground water recharge, (e) protect and enhance fish and wildlife habitat and water recreational facilities, and (f) secure the other benefits associated with the proper management of surface and ground water."

The cities of Andover, Anoka, Coon Rapids, and Ramsey formed the Organization by executing a joint powers agreement in accordance with Minnesota Statute 103B.211, dated July 15, 1985. In July 2014 the joint powers agreement was amended removing Coon Rapids. Coon Rapids joined the Coon Creek Watershed District.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The accompanying summary of significant accounting policies is presented to assist the reader in understanding the Organization's financial statements. The financial statements are representations of the Organization's Board, which is responsible for the integrity and objectivity of the financial statements. The following is a summary of the more significant accounting policies:

A. Measurement Focus, Basis of Accounting, and Financial Statement Presentation

The financial statements are reported using the "economic resources" measurement focus and the accrual basis of accounting. Revenues are recorded when earned, and expenses are recorded when a liability is incurred, regardless of the timing of the related cash flows. Grants and similar items are recognized as revenue as soon as all eligibility requirements imposed by the provider have been met.

Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with the principal ongoing operations. The principal operating revenue of the Organization is charges to customers for permits. Operating expenses for the Organization include engineering services, administrative expenses, and related river, stream, and wetland monitoring, conservation, and compliance expenses. All revenues and expenses not meeting this definition are reported as nonoperating revenues and expenses.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

B. Cash and Cash Equivalents

Cash balances are invested to the maximum extent possible. For the purposes of the statement of cash flows, the Organization considers all highly liquid investments with a maturity of three months or less when purchased to be "cash equivalents."

C. Investments

Investments are reported at fair value.

D. Income Taxes

As a joint powers watershed management organization, the Organization is exempt from both federal and Minnesota income taxes. Accordingly, no provision for income taxes is included in these financial statements.

E. Receivables and Payables

Receivables represent outstanding reimbursements from permit holders for work already completed and paid for by the Organization. Payables are recorded for services completed for the Organization but unpaid as of the end of the current fiscal year. Deposits represent amounts owed to permit holders at year-end for services yet to be done.

F. Budgetary Information

Budgetary information is derived from the annual operating budget and is presented using the accrual basis of accounting, which is the same basis of accounting the Organization uses in preparation of its financial statements. The budgeted amounts presented include any amendments made.

G. Use of Estimates

The preparation of financial statements in accordance with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenditures during the reporting period. Actual results could differ from those estimates.

H. Subsequent Events

Subsequent events have been evaluated through May 19, 2016, which is the date the financial statements were available to be issued.

3. CASH AND INVESTMENTS

The Organization follows state statute guidelines for investment purposes. The state statute allows for investments in United States securities, state and local government general obligation securities rated "A" or better by a national bond rating agency, state and local government revenue securities rated "AA" or better by a national bond rating agency, commercial paper rated in the highest quality category by two national rating agencies and that mature in 270 days or less, certificates of deposit, bankers acceptance, and repurchase agreements.

The Organization is invested in the Minnesota Municipal Money Market Fund (4M Fund). The 4M Fund is an external investment pool not registered with the Securities and Exchange Commission (SEC) that follows the same regulatory rules of the SEC under rule 2a7. The City's investment in the 4M Fund is measured at the net asset value per share provided by the pool, which is based on amortized cost method that approximates fair value.

(a) Interest Rate Risk

Interest rate risk is the risk that the fair value of investments will be adversely affected by a change in interest rates. The Organization does not have a formal investment policy related to interest rate risk. As of January 31, 2016, the Organization had the following investments and maturities:

Investment type:	**Fair Value**	**Less Than One Year**
External investment pool	$ 184,124	$184,124

(b) Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. Credit risk is measured using credit quality ratings of investments in debt securities as described by nationally recognized rating agencies such as Standard & Poor's and Moody's.

The following table lists the credit quality ratings, per Moody's and/or Standard & Poor's, of the Organization's investments as of January 31, 2016:

Investment type:	**Fair Value**	**Unrated**
External investment pool	$ 184,124	$184,124

3. CASH AND INVESTMENTS (Continued)

(c) Custodial Credit Risk

Custodial credit risk is the risk that, in the event of the failure of a counterparty, the Organization will not be able to recover the value of the investments, collateral securities, or deposits that are in the possession of the counterparty. The Organization does not have a formal policy related to custodial credit risk of investments or deposits. At January 31, 2016, all of the Organization's investments are insured and registered and are held by the counterparty's agent in the Organization's name.

4. REVENUES

Assessments From Participating Cities:

Member cities are assessed on an annual basis for estimated Organization costs by motion of the Organization's governing board. Administrative and planning costs are apportioned by a formula, taking into account both valuation and gross area equally. Projects and improvement costs are charged to the benefiting properties by a formula adopted by the Organization's governing board. Member city assessments for administrative and planning costs were as follows:

	Year Ended January 31, 2016
Andover	$22,300
Anoka	17,473
Ramsey	40,227
	$80,000

Permits:

The Organization issues permits for construction to cover the costs associated with the review of grading, drainage, and erosion control plans of the projects to improve overall water quality. The Organization earns $100 for administrative costs for each permit it processes. A deposit is received upon application of the permit. The deposit is used to cover the administration costs and all professional services incurred to complete the permit process. Any remaining deposit excess is refunded upon issuance of the permit.

5. RISK MANAGEMENT

The Organization participates in a public entity risk pool to mitigate its exposure to these risks. Liability coverages are provided through a pooled self-insurance plan with other cities. The Organization has a $250 deductible per occurrence for its coverage.

Appendix B: Implementation of Watershed Management Plan Summary

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Lower Rum River Watershed Management Organization Task Checklist

Key to Symbols X = Task completed Empty box = task planned but not yet completed Black box = Task not planned for that entity or at that time.

EDUCATION	2013						2014						2015						2016						2017						2018						2019						2020						2021					
Task	ACD	Andover	Anoka	Coon Rapids	LRRWMO	Ramsey	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other
a. **Newsletter** - Distribution of education material biannually, fostering water quality management practices in Community newsletters, specifically addressing wetland regulation from time to time.	WMO hires ACD to write newsltr articles that cities print																																																		
"X" when completed -- April	X	X	X	X	X	X		X	X	X	X			X		X	X																																		
"X" when completed -- August	X	X	X	X	X	X		X	X	X	X			X		X	X																																		
b. **Website** - Maintain and expand the WMO website for water resource management. In 2013 add wetland regulatory info. The WMO website will be linked to the Cities' websites.	Website overhauled.						Addition of wtld regulatory info on website																																															
"X" when completed	X	X	X	X	X	X	X			X			X				X																																			
c. **Volunteer Monitoring** - Solicit volunteers for water quality monitoring – Citizen Assisted Monitoring Program (CAMP)	Done- comm. College monitoring Sunfish Lk																																																	
"X" when completed	X			X			X			X			na				na																																		
d. **City Local Water Plan Education Program** - Member communities shall develop a public education program as part of their local plan development. May include newsltrs, door hangers, catch basin stenciling, cable TV, etc																																																		
"X" when completed		X	X		X			X	X	X				X																																					
e. **Wetland Education** - Develop a general information packet and neighborhood specific information regarding water resource management, including wetlands.	Completed by ACD for WMO																																																		
"X" when completed	X			X			X			X																																									
e. **Continued Wetland Education** - Continue the distribution of the information packet to new property owners through the Cities' new resident packet information																																																		
"X" when completed													X																																						

Lower Rum River Watershed Management Organization Task Checklist

EDUCATION	2013						2014						2015						2016						2017						2018						2019						2020						2021					
Task	ACD	Andover	Anoka	Coon Rapids	LRRWMO	Ramsey	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other
f. **Wetland Ed Signage** - Design up to 30 wetland interpretive signs to educate the general public about the function and value of wetlands. WMO makes signs, cities post them in public areas adjacent to wetlands, preferably along trails.																																																	
"X" when completed													X	X	X	X	X	X																																
g. **Local Officials Workshop** - Conduct local official workshops for elected and appointed officials. Should specifically include info about wetland regulation.	Spring LRRWMO dinner mtg																																																
"X" when completed					X																																											
Hi. **Local Events Exhibit - design** - Design and develop informational materials or display for local events exhibit to educate the public about function and values of wetlands, wetland regulations.																																																	
"X" when completed													u n d e r w a y																																				
h.ii **Local Events Exhibit - display-** Display the information created in the task above at local events such as home shows, city environmental events, etc																																																
"X" when completed																																																	

Lower Rum River Watershed Management Organization Task Checklist

PLANNING, REPORTING AND ADMIN	2013						2014						2015						2016						2017						2018						2019						2020						2021					
Task	ACD	Andover	Anoka	Coon Rapids	LRRWMO	Ramsey	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other
a. **City Reports to WMO** - Member communities shall submit an annual status report by January 1 that describes the status of local plans and implementation of LRRWMO policies																																																			
"X" when completed		X	X	X		X		X	X	X				X	X	X																																			
b. **Annual Reporting to State**. Submit annual reports to BWSR and the State Auditor.	ACD was hired to prepare reports for WMO																																																	
"X" when completed	X				X		X				X		X				X																																	
c. **LRRWMO Plan Update** – 4th Generation Plan																																																		
"X" when completed																																																		
d. **City Local Water Plans** - Member communities shall update their local water resource management plans to be consistent with the WMO plan. WMO must review and approve local plans.	CR left WMO. Andover given extension, Ramsey underway																																																	
"X" when completed								X	X	X																																									
e. **WMO Plan Review** - LRRWMO will annually review its Watershed Management Plan to ensure it reflects current goals																																																		
"X" when completed					X					X																																									
f. **JPA** - Update LRRWMO Joint Powers Agreement, which expires 1/1/2015							Completed 9/2014						Done																																									
"X" when completed								X	X	X	X			X	X	X	X																																			
g. **Solicit Bids** - LRRWMO will solicit bids for professional services (solicit proposals for work to occur in the following year)							11 and 12 2014 selected engineer and attorney																																															
"X" when completed										X																																									

Lower Rum River Watershed Management Organization Task Checklist

WATER MONITORING AND IMPROVEMENT	2013						2014						2015						2016						2017						2018						2019						2020						2021					
Task	ACD	Andover	Anoka	Coon Rapids	LRRWMO	Ramsey	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other
a. **Volunteer Monitoring** - Solicit volunteers for water quality monitoring – Citizen Assisted Monitoring Program (CAMP)	Done- comm. College monitoring Sunfish Lk																																																		
"X" when completed	X				X		X				X		na				na																																		
b. **Professional Water Monitoring** - LRRWMO will work with the ACD with water quantity and quality programs. See separate sheet of planned LRRWMO monitoring and/or table 9 in watershed plan.	On track with monitoring plan.						On track with monitoring plan. Deleted some sites being monitored by MPCA.																																															
"X" when completed	X				X		X				X		X				X																																		
c. **Anoka Dam** - LRRWMO will work with member cities in the maintenance and control of the Rum River Dam							City of Anoka working on resolution accepting dam responsibilities.																																															
"X" when completed		X	X		X	X																																											
d. **Groundwater** - LRRWMO will develop and implement a plan to track groundwater levels	Task is better done by regional entities. No WMO action.						DNR is doing this task.						DNR is doing this task.																																									
"X" when completed					X						na	X																																					
e. **Grant Matching Fund** - LRRWMO will develop/build a fund to match future grants for projects																																																		
"X" when completed					X						X																																							

Lower Rum River Watershed Management Organization Task Checklist

REGULATION	2013						2014						2015						2016						2017						2018						2019						2020						2021					
Task	ACD	Andover	Anoka	Coon Rapids	LRRWMO	Ramsey	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other	ACD	Andover	Anoka	Ramsey	LRRWMO	Other
a. **City Wetland Protection BMPs** - Member communities shall develop and implement wetland protection BMPs included in local Water Resource Plan. Should be consistent with WMO wetland standards. Cities are expected to adopt an ordinance.							Underway in each community via local water planning. Ordinance adoption comes after plan approval.																																													
"X" when completed							X																																											
b. **City Erosion Ordinance** -Member communities shall adopt an erosion control ordinance				Coon Rapids is done (T. Haas 9/6/13)			Local water planning underway. Ordinance updates come after plan approval.																																												
"X" when completed				X			X																																											
c. **City Floodplain Ordinance** - Member communities shall adopt, at a minimum, floodplain ordinances conforming to MN Rules 6120.5000				Coon Rapids is done (T. Haas 9/6/13).			Cities are awaiting local water plan completion and FEMA map updates																																												
"X" when completed				X			X	X																																									

LAST UPDATED: 2-29-2016

Appendix C:
Newsletter Articles

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PLANNING A YARD PROJECT?

Want a shed, pool, retaining wall, fencing, playground area or deck for your property? Plan at least 3 months ahead. Why? Chances are you will need at least one permit.

Besides a City permit, you may need a permit from a watershed authority if your property is in floodplain or has a drainage easement or wetland on it. If so, your plans would then need review and approval by separate authorities. And, those authorities may meet only once or twice per month.

Not sure if your property is in a floodplain, drainage easement or wetland? Please check your Certificate of Survey, or call the City or watershed authority. What is a drainage easement? It allows access rights to a drainage authority along public ditches such as Coon Creek for periodic inspection or possible repair (land ownership is retained by the landowner). Why? Obstructed flow could result in upstream flooding for a mile or more since our elevation change is so slight here on the Anoka Sand Plain. The ditch obstruction may then need to be removed.

In Andover, there are two watershed organizations, based on topography: the Coon Creek Watershed District (CCWD) and the Lower Rum River Watershed Management Organization (LRRWMO). If you live within the CCWD boundary, please call the Coon Creek Watershed District at (763) 755-0975 or check the web-www.cooncreekwd.org. If you live in the LRRWMO boundary, or if you are not sure of your watershed "address," feel free to call Todd Haas at the City of Andover at (763) 767-5131.

Permits help ensure structural safety, public safety & welfare and conservation of wetland or floodplain areas that serve many functions, one being flood prevention. Help make Andover a better place to live. Plan ahead and get the proper permits for your project.

City Easements & Permits

City easements and permits can be different from watershed easements and permits.

Per Andover City Ordinance, an easement allows for the use of a portion of land for the express rights for:

- constructing and maintaining streets, trails, slopes, sidewalks, grade transitions
- utilities including but not limited to electric and telephone lines, sanitary and storm sewer lines, water lines, cable TV, communication lines and gas lines surface drainage ways (different from watershed drainage easements).

Information provided by Coon Creek Watershed District.

ACCAP CHORES & MORE

One stop shopping for minor home repairs, housekeeping and seasonal chores for people 60 +. We utilize independent contractors and when available, volunteer groups. Give a call for more details. New phone number and address, (763) 783-4767, 1201 89th Ave. N.E. Suite 345, Blaine, MN 55434.

EMERALD ASH BORER (EAB) FOUND IN HAM LAKE!

Have you heard of Emerald Ash Borer yet? Well if you haven't, you may want to read on. Emerald Ash Borer is an invasive pest that kills ash trees. It was found in St. Paul in 2009, Minneapolis in 2010 and Shoreview in 2011. It has now officially been found in Anoka County; on a private property in Ham Lake.

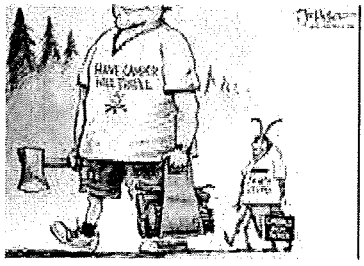
We need your help! The following are some things you can do to save more ash trees and help prevent the spread of Emerald Ash Borer into Andover:

1. Don't move any firewood, trees or brush into or out of the City. There is a quarantine prohibiting the movement of firewood outside Anoka County. In other words, it's ILLEGAL, unless it's been certified by the MN Dept. of Agriculture. This is in place to prevent new infestations from occurring.
2. Inspect ash trees on your property and report suspicious symptoms. First, become familiar with identifying ash trees. Look for dieback, bark cracking, excess woodpecker damage, "S-shaped" galleries under the bark and "D-shaped" exit holes outside the bark. If you notice any of these, report them to the City as soon as possible.
3. If you have ash trees on your property, come up with a game plan. Now is the time for you to decide what you want to do with your trees. Do you want to save some of them? Do you want to remove and replace them? Maybe you do both. There are different chemical treatment options that can be utilized to protect them. If you do nothing, it's likely the trees will eventually succumb to Emerald Ash Borer.

For the official press release and more important information on Emerald Ash Borer, go to Andover's website: www.andovermn.gov and click on the links "Your Government" "Natural Resources" "Emerald Ash Borer."

For additional questions, to report a tree suspected to have Emerald Ash Borer and/or to get helpful advice on planning for Emerald Ash Borer, contact Kameron at (763) 767-5137 or k.kytonen@andovermn.gov.

Used with permission from the Minnesota Society of Arboriculture.



RABIES VACCINATION CLINIC

The annual rabies vaccination clinic will be held on Saturday, May 2nd, from 9:00 a.m. - Noon at the Andover Public Works Building, 1785 Crosstown Boulevard NW, Andover, MN. A variety of vaccinations will be given to both dogs and cats. Make sure your animals are restrained when you arrive. You do not need to be a resident of Andover to have your dogs or cats vaccinated.

City dog licenses (required in Andover) will also be for sale. The cost is $12 for a 2-year license.

WETLAND LAW MADE CLEARER

Digging ponds, filling in low areas and removing cattails. All are regulated under complex wetland laws leaving landowners wondering, "can I do that on my property?" A new web tool is available to provide direct answers in one place.

With support from the Lower Rum River Watershed Management, the Anoka Conservation District has added a new "wetlands" section to their website. The website includes a summary of wetland rules, answers to frequently asked questions, a map with permitting contact information and a way to request advice without going through a permitting process.

Three sets of wetland law apply in Minnesota. First is the MN Wetland Conservation Act which applies to all wetlands. Second are DNR rules which apply only to larger, generally open water, "public waters." Third is the Army Corps of Engineers rules which apply to "navigable waters of the US" which can include smaller wetlands that seem "un-navigable" in common language. All apply regardless of whether the property is private or public.

Go to www.AnokaSWCD.org and click the "Wetlands" tab before beginning a project in or near low areas. And remember...even an area that is dry today, or even most of the time, may legally be a wetland.

A message from the Lower Rum River Watershed Management Organization www.LRRWMO.org

NEWS FROM THE BUILDING INSPECTIONS DEPARTMENT

To save you money, time and continuously improve access to City services, the Andover Building Inspections Department is now providing fixed-fee permits as online / internet transactions. Permits presently available online include:

- Electrical Permits - Multifamily / Commercial / Industrial & Institutional (License Required)
- Electrical Permits - Single Family Residential
- Existing Residential Heating / Air Conditioning Replacement Permit
- Existing Residential Water Heater or Water Softener Replacement Permit
- Landscape Irrigation Plumbing Permit
- New or Replacement Residential Garage Furnace / Unit Heater Permit
- New or Replacement Residential Gas Fireplace Permit
- New Single Family Residential Mechanical Combination HVAC Permit
- New Single Family Residential Plumbing Permit
- On-Site Sewage Treatment System Pumping Permit (License Required)
- One & Two Family Residential Roofing Permit
- One & Two Family Residential Siding Permit
- Single Family Residential Basement Finishing Permit

To apply for and pay for permits online, go to www.andovermn.gov, go to YOUR GOVERNMENT then to Departments, click on Building Inspection, click the menu for Permit/License Applications and PERMITS ONLINE. Then click the tab for ONLINE FIXED-FEE PERMITS.

Or

Enter the following link in your browser: www.andovermn.gov/138/Permit-License-Applications-and-PERMITS-

Online permits have been popular, more than 90 have been issued since the beginning of the year. We've tried to make online permitting easy and convenient. As you use the City website and purchase permits online, we welcome your suggestions for improvement. Please let us know how we are doing.

SCHOOL STARTS SOON WATCH FOR CHILDREN WALKING AND AT BUS STOPS!

ANDOVER YMCA GOLF TOURNAMENT

Majestic Oaks Golf Club - September 15th
Proceeds Benefit the Annual Support Campaign

Each day we work side-by-side with our neighbors to make sure that everyone, regardless of age, income or background has the opportunity to learn, grow and thrive at the Y. Each year the Andover Y raises funds through our Annual Support Campaign. The money raised stays right here in the communities we serve and provides scholarships so that no one is turned away from membership, swimming lessons, camps or programs due to financial need.

$340 per foursome or $85 per golfer until August 17th.
$400 per foursome or $100 per golfer after August 17th.
Includes 18 hole green fees, golf cart, use of driving range, and dinner.
$30 dinner only.

Event Schedule
11:30 A.M., registration
11:30 - 1:00 P.M., practice greens and driving range
12:00 - 12:30 P.M., putting contests

Lunch will be available for purchase.

1:00 P.M., shotgun start
5:00 P.M. - 6:00 P.M., cocktail reception
6:00 P.M. - 7:30 P.M., dinner and awards
6:30 P.M., silent auction closes

http://give.ymcatwincities.org/AndoverGolf

GOPHER STATE ONE CALL CALL BEFORE YOU DIG

(651) 454-0002-Metro
www.gopherstateonecall.org

HOMESTEAD FILING

New homeowners are reminded that December 15, 2015 is the deadline to file for Homestead Classification. You may file at City Hall or at the Anoka County Government Center. A copy of your deed is needed to file. If you have any questions, contact Michelle at (763) 755-5100.

Open to Business Program Now Available

Looking for a trusted advisor for your business? Maybe you've wanted to secure financing to start or expand your business? If so, a new program offered by Anoka County may be just what you're looking for.

Thanks to a partnership between Anoka County and the Metropolitan Consortium of Community Developers (MCCD), business owners or those looking to start a business can access a new program called Open to Business.

Free Technical Assistance
Open to Business will provide prospective and existing entrepreneurs in Anoka with free one-on-one counseling with a business advisor. The program provides assistance in the following areas:

- Financial Management
- Loan Packaging
- Business Plan Assistance
- Real Estate Analysis
- Marketing Assistance
- Strategic Planning
- Business Regulations
- Professional Referrals

Small Business Loan Program
Open to Business advisors can also assist entrepreneurs to identify borrowing needs and accessing financing options. Advisors work with clients to help them find the financing that best meets their own unique needs. MCCD also provides direct financing and loans in partnership with banks and non-profit lenders. Funds can be used for inventory, working capital, asset and equipment purchases, real estate acquisition and start-up costs.

How It Works
Business Advisor Kathleen DuChene is available for setting up a one-on-one meeting at either the Anoka County Government Center or other preferred location. For more information, contact Kathleen at 763-438-7315 or by email at **kduchene@mccdmn.org**. For general information, visit **www.opentobusiness.org**. The City of Anoka business contact is Erik Thorvig. He can be reached at 763-576-2723 or by email at **ethorvig@ci.anoka.mn.us**.

Lower Rum River Water Management Organization

The Lower Rum River Water Management Organization meets the third Thursday of each month at 8:30 a.m. in the committee room at Anoka City Hall to discuss storm and surface water issues. The public is welcome to attend.

Spring Cleaning Tips to Protect our Waters

Avoid putting any permanent structures in flood prone areas of your yard and try to keep those areas clear during the spring. Melting snow and spring storms can create standing water and voluntary streams that wash loose dirt and debris out of your yard and into the storm sewers where they are carried to nearby lakes, rivers and streams.

Stabilize your soil and increase infiltration by planting deep-rooted native plants or trees. The roots of turf grass extend only two to three inches into the soil, giving it little ability to hang on when the water flows. Native flowers and grasses, on the other hand, can have root systems four to twelve feet deep! These deep roots anchor the plants and keep soil from washing away. They also increase the amount of water the soil can absorb, meaning that more water sinks in to recharge groundwater supplies and less ends up in the storm drain.

If you live along a river, or wetland, it is important to maintain a healthy un-mowed buffer along your shoreline. A shoreline planted in trees and native plants will hold the soil steady when it rains. Buffers also catch and filter many of the pollutants found in melting snow and stormwater runoff.

Take a moment to clean the gutters on your roof and street. Make sure that sand, dirt, leaves and branches stay out of the storm sewers, where they can be carried to nearby water bodies. Blocked gutters can also cause flooding in your yard and street.

Water Conservation

Watering Restrictions

Please be advised that the City of Anoka has odd/even watering restrictions when using City supplied water from June 1 to September 1 each year.

Properties having odd-numbered mailing addresses may only water on odd-numbered days, and properties having even-numbered addresses may only water on even-numbered days.

In addition, no watering is allowed from 10 a.m. - 7 p.m., regardless of mailing address. Thank you for your cooperation.

City Watering Ordinance

The City needs to produce an adequate water supply for everyday use in homes, businesses, and for fire protection. During high demand periods water supply can diminish to low levels.

The City's watering policy recognizes environmental issues and an increased desire to conserve natural resources. In addition to the odd/even policy, the City restricts watering between 10 a.m. - 7 p.m. This is the period of time which creates the most evaporation and provides the least amount of benefit for the lawns and gardens. Evaporation rates during this period can be between 30 and 40 percent on summer days. Some studies have indicated that daytime watering may be damaging to the grass blades and plant leaves because the water droplets can act as small magnifying glasses causing them to burn.

All residents should be responsible to comply with these restrictions. Upon any violation, the City may issue written warnings and administrative fines.

Complete information can be found at www.ci.anoka.mn.us, City Code, Chapter 66, Article IV, Section 66-131, or call the Public Services Department at 763-576-2980.

2014 Drinking Water Report

The City of Anoka issues results of monitoring done on its drinking water. For the most recent report, visit www.ci.anoka.mn.us and click on the Drinking Water Report tab on the right-hand column of the site.

Sanitary Sewer System

If you have any sanitary sewer problems or concerns, call the City first at 763-576-2980! Visit www.ci.anoka.mn.us for additional information.

Be Good To Your Wetland

Twenty-three percent of southwestern Anoka County is water or wetland. Development within our city has wound its way around these wetlands, creating quaint, private neighborhoods. We've protected these ecologically important areas. Now, the condition of these wetlands is in the hands of residents, each of whom may own only a small portion.

Each homeowner can do a few simple things to be good to their wetland.

- **Leave an un-mowed buffer**. The edge of a wetland is particularly valuable habitat. Leave a 20 foot un-mowed strip.
- **Plant natives**. Native plants are those to which native wildlife is adapted. There are several native plant nurseries in our area.
- **Plant for pollinators**. Bees and other pollinators are on the decline. Treat yourself to some color, and treat the pollinators to some habitat by planting native flowers.

The collective actions of homeowners make a difference for wildlife and clean water.

A message from the Lower Rum River Watershed Management Organization www.LRRWMO.org

LendingCenter
Center for Energy and Environment

Home Improvement Financing Made Easy

It's never too early to get your home ready for winter. Whether it's upgrading your home's insulation or replacing that old heating system, the Lending Center at the Center for Energy and Environment (CEE) can make those home improvement projects come to life.

The City of Anoka has partnered with the Lending Center to offer a variety of low-interest financing options that allow homeowners to complete their projects with low monthly payments. Anoka homeowners may also be eligible for a special rebate for mechanical and energy improvements – perfect for getting your home ready for the cold weather.

The Lending Center makes it easy to finance a variety of home improvements projects:

- Insulation and air sealing
- Air conditioning and furnace
- New roof
- Siding
- Water heaters
- Kitchen and bathroom remodels
- Windows and more!

Get started today by calling 612-335-5884 or visiting mnlendingcenter.org. Also ask about an informational Residential Advisor Visit to your home. A "RAV" appointment is a visit from a Center for Energy and Environment team member to help you evaluate improvements, compare bids, figure out where to start, and more. RAV visits are made possible by the City of Anoka and are complimentary for Anoka home owners (limited to one visit per household). The Center for Energy and Environment is a Minnesota nonprofit that has been helping homeowners save energy and money for over 35 years.

Temporary Accessory Buildings

The City Council has amended the City Code (Section 74-491) to allow temporary accessory buildings in residential zoning districts. A temporary accessory building is "*a building used for a temporary purpose which has a roof but is without a foundation or footings, is designed to be removable, and is not designed to be permanently attached to the ground, to another structure, or to any utility system. Such buildings are typically constructed of a canvas or other fabric over a PVC, metal or wood frame.*" Among the restrictions include; one temporary accessory building per parcel with a maximum size of 12' X 26'. The building may be up for no more than six months within a calendar year. A 30-day extension may be granted administratively. A permit is required (no fee). The temporary accessory building must be maintained in good condition. For more details, please see Section 74-491 of the City Code, or contact the Planning Department at 763-576-2716.

Wetland Law Made Clearer

Digging ponds, filling in low areas, and removing cattails - all are regulated under complex wetland laws leaving landowners wondering, "Can I do that on my property?" A new web tool is available to provide direct answers in one place.

With support from the Lower Rum River Watershed Management, the Anoka Conservation District has added a new "wetlands" section to its website. The website includes a summary of wetland rules, answers to frequently asked questions, a map with permitting contact information and a way to request advice without going through a permitting process.

Three sets of wetland law apply in Minnesota. First is the MN Wetland Conservation Act which applies to all wetlands. Second are DNR rules which apply only to larger, generally open water, "public waters." Third is the Army Corps of Engineers rules which apply to "navigable waters of the US" which can include smaller wetlands that seem "un-navigable" in common language. All apply regardless of whether the property is private or public.

Go to **www.AnokaSWCD.org** and click the "Wetlands" tab before beginning a project in or near low areas. And remember…even an area that is dry today, or even most of the time, may legally be a wetland.

A message from the Lower Rum River Watershed Management Organization ***www.LRRWMO.org***

Waste Reduction & Recycling

2015 Recycling Schedule

In December residents should have received the 2015 recycling service schedule postcard from Republic Services. If you did not, please visit www.ci.anoka.mn.us to view and print the schedule, call 763-576-2725 to have one mailed to you, or get text message reminders on your recycling week. Text "blue" to 292929. Standard text message rates may apply.

Christmas Tree Recycling

Most garbage haulers offer Christmas tree collection as part of their service. Contact your garbage hauler directly for details.

The Bunker Hills compost site, located one mile north of Main Street on Hanson Boulevard in Coon Rapids, will re-open for two weekends in January to receive Christmas trees as well as other types of yard and tree waste.

Bunker Hills Compost Site Special January 2015 Winter Hours

Saturday, January 3 and 10: 9 a.m. – 4:30 p.m.

Sunday, January 4 and 11: Noon – 4:30 p.m.

Please remove all wire, garland tinsel, ornaments, and stands. There is a $1.50 charge per Christmas tree. There is a fee of $5 per vehicle for debagged leaves, grass clippings and garden waste up to four cubic yards. An additional 50 cents per yard will be charged in excess of four cubic yards. There is a variable fee for tree waste disposal, depending on the size and amount of the material. Please keep yard waste separate from tree waste. Call Anoka County Integrated Waste Management with any questions at 763-323-5730.

Recycle Holiday Lights

Drop off your old holiday lights for recycling in the lobby of Anoka City Hall, M-F, 8 a.m. - 4:30 p.m. through January.

Public Services Department

Downtown Sidewalk Snow Removal

Downtown businesses are reminded to please remove all business-owned items (benches, planters, doormats, etc.) from the sidewalks to ease snow removal. The city will assist businesses with snow removal from sidewalks when two or more inches of snow has fallen; however, the city is not responsible for any damage that may occur to items on the sidewalk. Let's work together to keep our sidewalks safe for your customers and pedestrians.

Quality On Tap!
Our Commitment Our Profession

Hot Water Heater Problems

Many complaints about water are due to problems that originate in the home. If you detect an odor in your hot water, it could be due to your water heater. A harmless type of bacteria can contaminate a water heater and convert natural sulfate to hydrogen sulfide gas, which has a pungent odor. This problem is made worse if you are away from home for long periods of time and the water heater stands idle. Flushing the water heater can help; consult your owner's manual for instructions. Other remedies include replacing the magnesium anode with an aluminum one or increasing the temperature setting to 160 degrees (high setting) for a few hours. ***CAUTION: Make sure the water tank has an operable pressure relief valve before attempting this remedy and remember to lower the setting after about three hours.***

If you notice small white particles in your faucet aerators, check to see if they float. If they do, your water heater dip tube may have disintegrated into small pieces. The dip tube is an extension of the cold water, extending nearly to the bottom of the tank. This prevents the incoming cold water from diluting the temperature of the hot water. Few homeowners have the tools to know how to replace a dip tube; it is best to have a plumber perform this repair.

Winterizing Your Home's Water System

- Fill in foundation cracks
- Wrap exposed pipes with insulation
- Keep basement or crawl space warm enough to prevent freeze-ups
- Detach hoses from outside faucets
- Store lawn furniture more than three feet from utility meters
- Clear snow away from nearby fire hydrants

Please call the Anoka Water Department at 763-576-2923 with any questions.

Lower Rum River

The Lower Rum River Water Management Organization meets the third Thursday of each month at 8:30 a.m. at Anoka City Hall in the Committee Room to discuss storm and surface water issues. The public is welcome to attend. Please call the Public Services Department at 763-576-2980 with any questions.

Appendix D:
2015 Work Results

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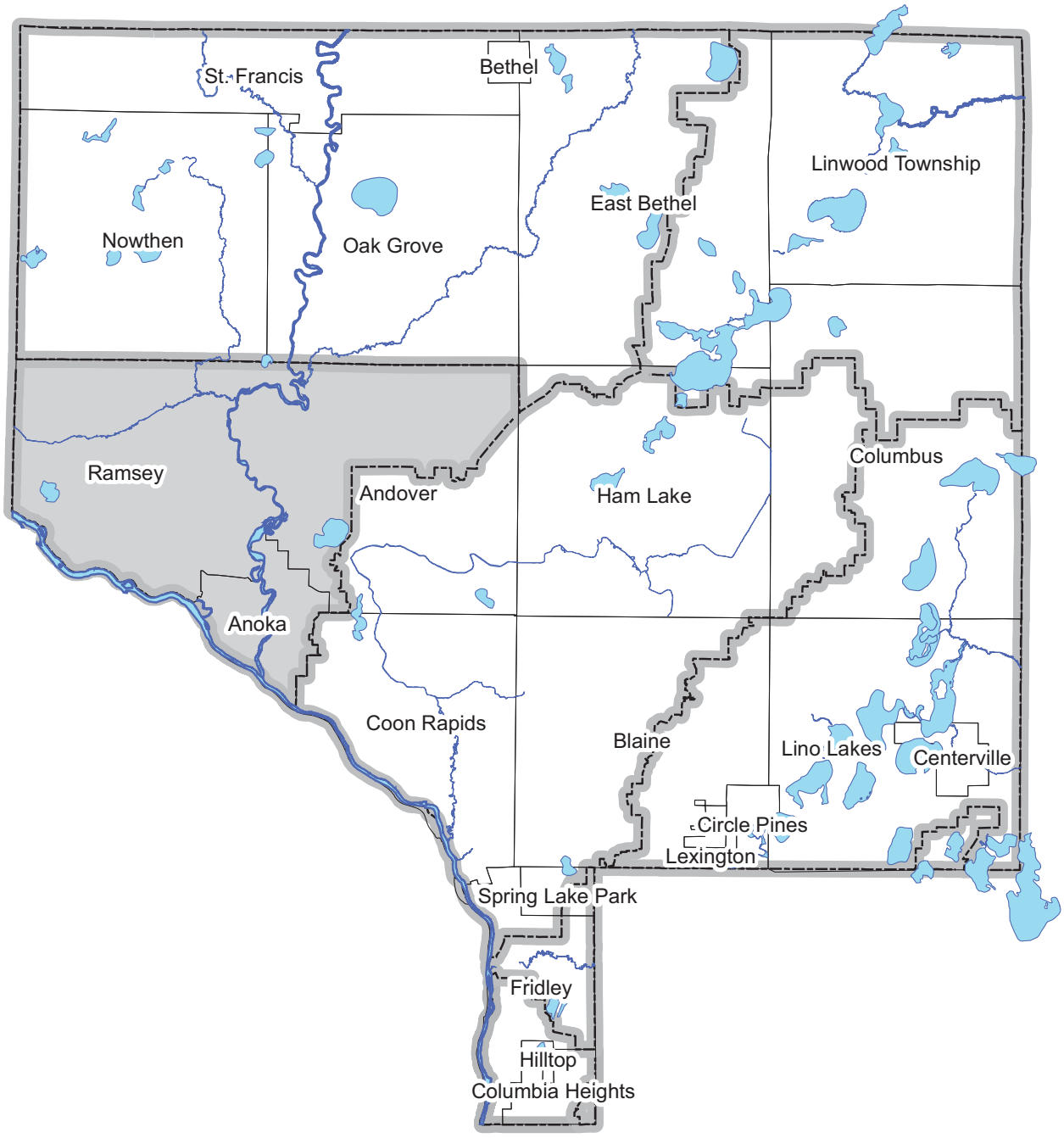
Excerpt from the 2015 Anoka Water Almanac

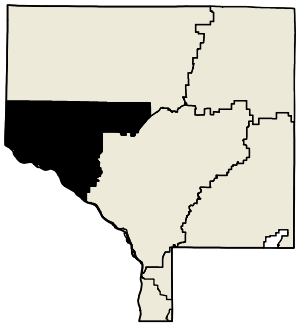
Chapter 4: Lower Rum River Watershed

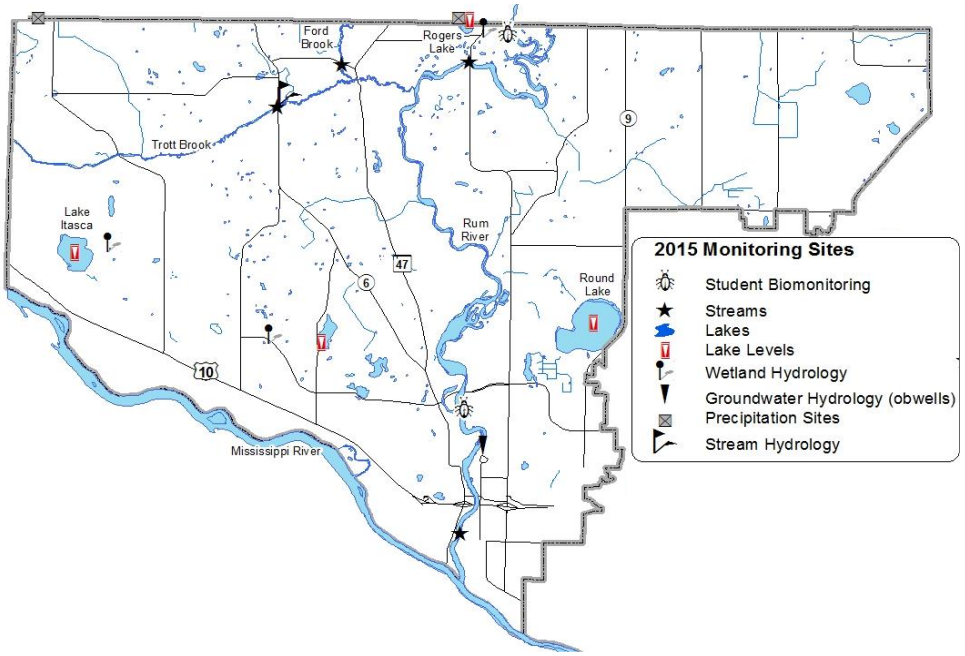


Prepared by the Anoka Conservation District

CHAPTER 4:
LOWER RUM RIVER WATERSHED

ACAP = Anoka County Ag Preserves, ACD = Anoka Conservation District, LRRWMO = Lower Rum River Watershed Mgmt Org, MC = Metropolitan Council, MNDNR = MN Dept. of Natural Resources, LSOHC = Lessard-Sams Outdoor Heritage Council





Lake Level Monitoring

Description: Weekly water level monitoring in lakes. The past five years are shown below, and all historic data are available on the Minnesota DNR website using the "LakeFinder" feature (www.dnr.mn.us.state\lakefind\index.html).

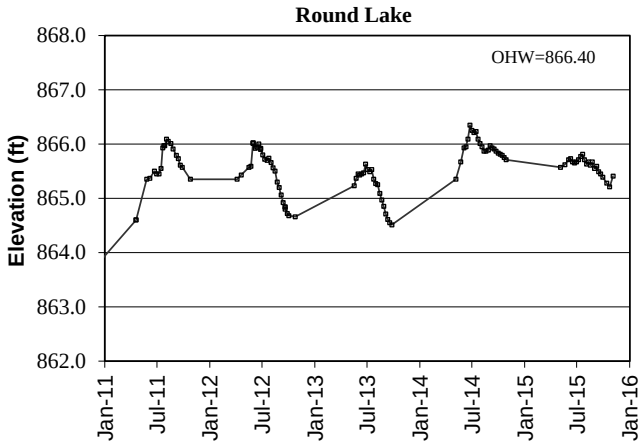
Purpose: To understand lake hydrology, including the impact of climate or other water budget changes. These data are useful for regulatory, building/development, and lake management decisions.

Locations: Itasca, Round, Rogers, and Sunfish/Grass Lakes

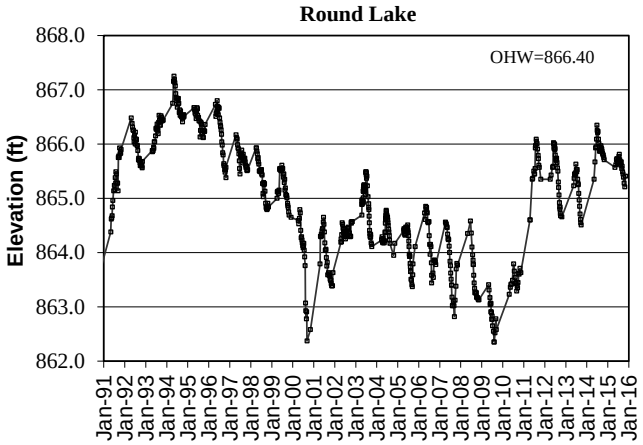
Results: Lake levels were measured by volunteers throughout the 2015 open water season. Lake gauges were installed and surveyed by the Anoka Conservation District and MN DNR. Lakes had increasing water levels in spring and early summer and then fell later in the year due to less rainfall. Increased rainfall late into fall caused a spike in lake levels at the end of the year. Overall lake levels were lower than in 2014 when heavy rainfall totals occurred.

All lake level data can be downloaded from the MN DNR website's Lakefinder feature. Ordinary High Water Level (OHW), the elevation below which a DNR permit is needed to perform work, is listed for each lake on the corresponding graphs below.

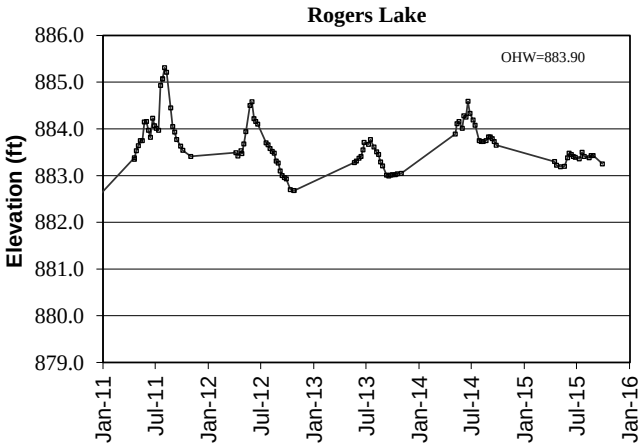
Round Lake Levels – last 5 years



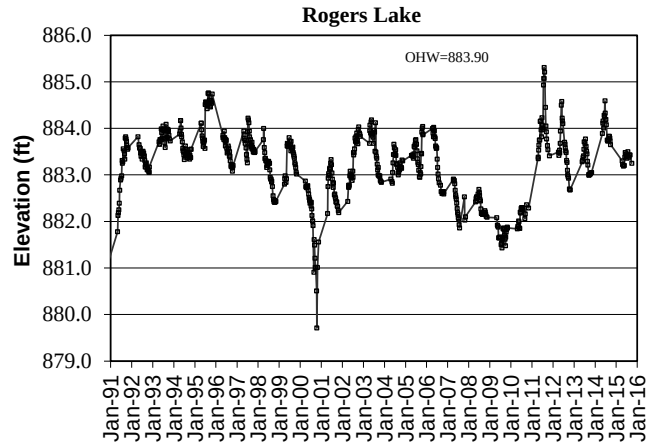
Round Lake Levels – last 25 years



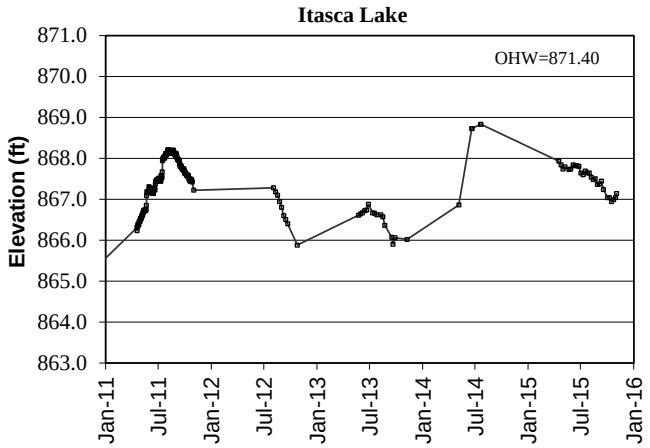
Rogers Lake Levels – last 5 years



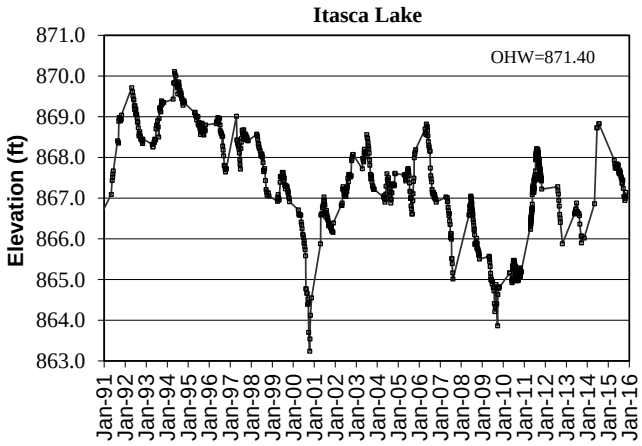
Rogers Lake Levels – last 25 years



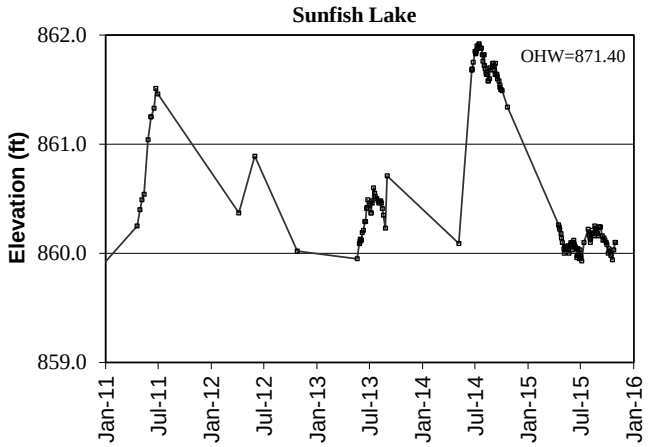
Itasca Lake Levels – last 5 years



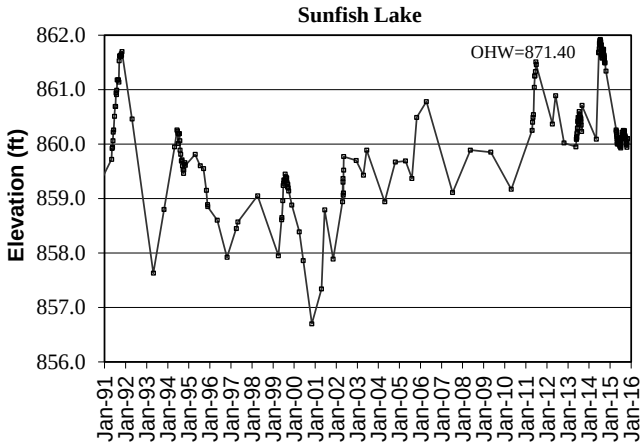
Itasca Lake Levels – last 25 years



Sunfish/Grass Lake Levels – last 5 years



Sunfish/Grass Lake Levels – last 25 years



Stream Water Quality - Chemical Monitoring

Description: In 2015 monitoring events were scheduled May through September for of the following parameters: total suspended solids, e. coli, total phosphorus, Secchi tube transparency, dissolved oxygen, turbidity, temperature, conductivity, pH, and salinity.

Purpose: To provide an initial assessment of water quality to be used in the completion of the Rum River Watershed Restoration and Protection Plan (WRAPP).

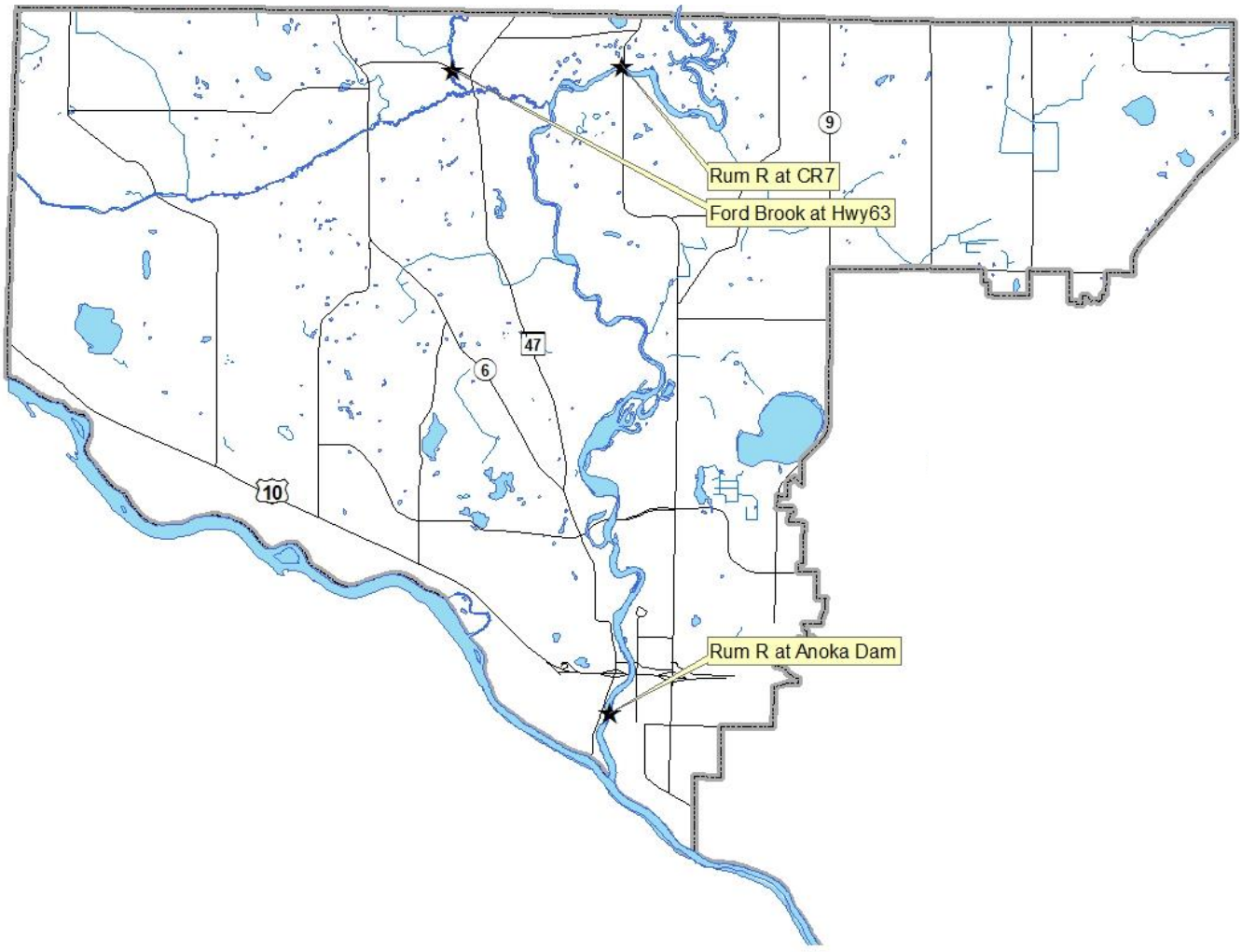
Locations: Ford Brook at Highway 63

Rum River at County Road 7

Rum River at Anoka Dam

Results: Results are presented on the following pages.

2015 Lower Rum River Monitoring Sites



Stream Water Quality Monitoring

FORD BROOK

At Co Rd 63, City of Ramsey, MN

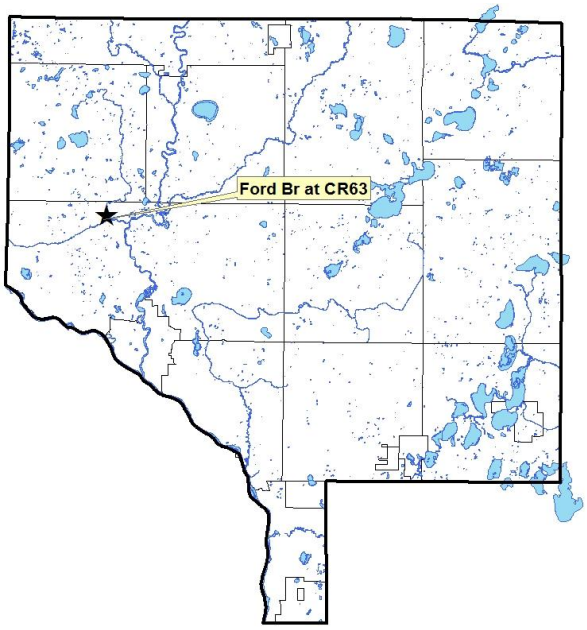
Years Monitored

2001, 2003, 2011, 2014, 2015

Background

Ford Brook originates at Goose Lake in north-western Anoka County and flows south. Ford Brook is a tributary to the Rum River. In north-western Anoka County it flows through the relatively undisturbed community of Nowthen before joining Trott Brook just prior to the Rum River.

Ford Brook is one of the smaller streams in Anoka County. The watershed is moderately developed with scattered single family homes, but continues to grow.



Results and Discussion

This report includes data from 2015. Additional monitoring has been done, particularly in 2003 and 2011. The following is a summary of 2015 results.

- Dissolved constituents, as measured by conductivity, in Ford Brook were slightly above average when compared to similar Anoka County streams. Conductivity averaged 0.419 mS/cm (maximum of 0.505 mS/cm and a minimum of 0.328 mS/cm). The median in Anoka County streams is 0.362 mS/cm.
- Phosphorous averaged much higher than proposed MPCA water quality standard of 100 ug/l, during both baseflow and storms. Phosphorous in Ford Brook averaged 181 ug/l (maximum of 215 ug/l and a minimum of 110 ug/l). Median phosphorus concentration in Anoka County streams is 135 ug/L.
- Suspended solids and turbidity were both below state standards each sampling event and averaged well below the standards. Total suspended solids averaged 22.5 mg/l (maximum of 35 mg/l and a minimum of 8 mg/l). Turbidity averaged 29.70 NTU (maximum of 49 NTU and a minimum of 6.6 NTU). Water flow during the 49 NTU reading was extremely fast and turbulent due to abnormal rainfall. Median turbidity in Anoka County streams is 8.5 NTU and total suspended solids averages 12 NTU.
- pH and dissolved oxygen were in the 6.5-8.5 range considered normal and healthy for streams in this area. pH averaged 7.85 (maximum of 8.68 and a minimum of 7.51).
- Dissolved Oxygen levels observed were above the 5 mg/L state standard threshold needed by most aquatic life. DO averaged 8.62 mg/l (maximum of 11.60 mg/l and a minimum of 6.65 mg/l).

FordBrook at CR63			3/12/2015	4/13/2015	7/6/2015	7/10/2015				
	Units	R.L.*	Results	Results	Results	Results		Average	Min	Max
pH		0.1	8.68	7.51	7.55	7.64		7.85	7.51	8.68
Conductivity	mS/cm	0.01	0.328	0.395	0.448	0.505		0.419	0.328	0.505
Turbidity	NTU	1	19.4	43.8	49.0	6.6		29.70	6.60	49.00
D.O.	mg/L	0.01	11.6	8.83	6.65	7.38		8.62	6.65	11.60
D.O.	%	1	80.4	79	77.3	87.7		81.1	77.3	87.7
Temp.	°C	0.1	0.2	9.2	21.0	22.5		13.2	0.2	22.5
Salinity	%	0.01	0.15	0.19	0.12	0.24		0.18	0.12	0.24
T.P.	ug/L	10	215	198	201	110		181	110	215
TSS	mg/L	2	13	35	34.0	8		22.5	8.0	35.0
Secchi-tube	cm		77	38	21	87		>100	21	87
E coli	MPN									
Appearance										
Recreational										

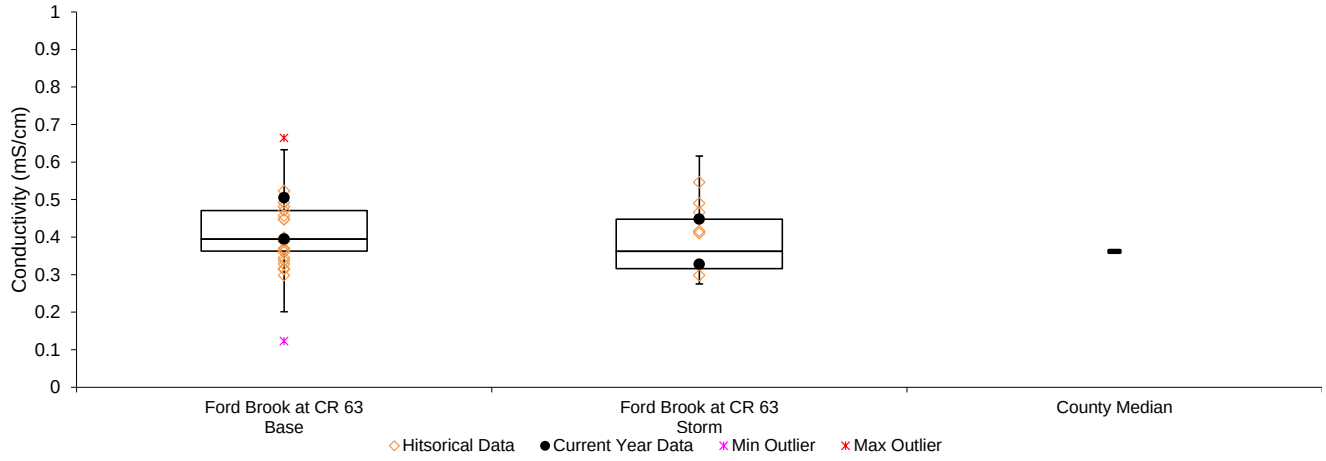
*reporting limit

Conductivity

Conductivity, chlorides, and salinity are all measures of a broad range of dissolved pollutants. Dissolved pollutant sources include urban road runoff, industrial sources, and others. Metals, hydrocarbons, road salts, and others are often of concern in a suburban environment. Conductivity is the broadest measure of dissolved pollutants we use. It measures electrical conductivity of the water; pure water with no dissolved constituents has zero conductivity. Chlorides tests for chloride salts, the most common of which are road de-icing chemicals. Chlorides can also be present in other pollutant types, such as wastewater. These pollutants are of greatest concern because of the effect they can have on the stream's biological community; Ford Brook's rural location indicates that sources of high dissolved pollutants are likely naturally occurring.

Median conductivity results in Ford Brook were low overall and just slightly higher than the median for other Anoka County streams (see table and figures below). Median conductivity in Ford Brook (all years, all conditions) was 0.391 mS/cm compared to the countywide median of 0.362 mS/cm.

Conductivity at Ford Brook. Orange diamonds are historical data from previous years and black circles are 2015 readings. Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).



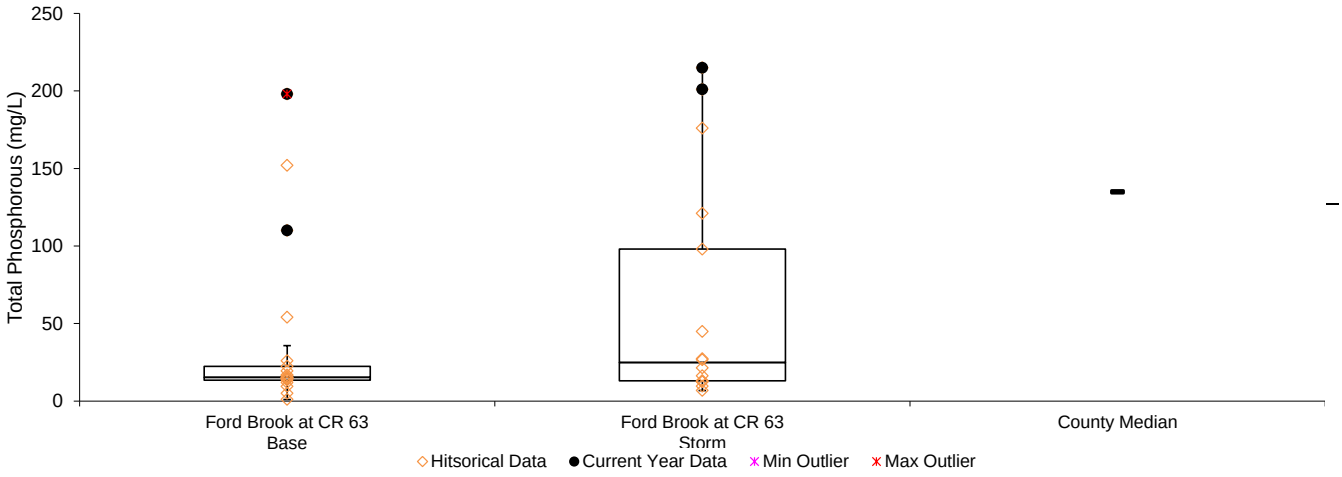
Total Phosphorus

Total phosphorus (TP) is a common nutrient pollutant. It is limiting for most algae growth. Total phosphorus in Ford Brook is typically low during baseflow and storm conditions, we have however observed increases during baseflow and storms (see figures below).

In 2015 TP levels in Ford Brook were much higher than the county median and were an increase from 2014 results. TP was higher during storm events than baseflow. The median TP for Ford Brook (all years, all conditions) was only 17.4. This is substantially lower than the countywide median for streams of 135ug/L, as well as the state water quality standard of 100 ug/L, although more recent results have indicated that this may no longer be the case.

The dominant phosphorus sources are likely increases in water volume and changes in land use around Ford Brook. Mobilization of in-stream sediments and agricultural runoff may be an important phosphorus sources. Drained, organic wetland soils may be another source; much of the wetlands Ford Brook runs through no longer hold back water flow.

Total Phosphorus at Ford Brook. Orange diamonds are historical data from previous years and black circles are 2015 readings. Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).



Total Suspended Solids and Turbidity

Total suspended solids (TSS) and turbidity both measure solid particles in the water. TSS measures these particles by weighing materials filtered out of the water. Turbidity measures by diffraction of a beam of light sent though the water sample, and is therefore most sensitive to large particles.

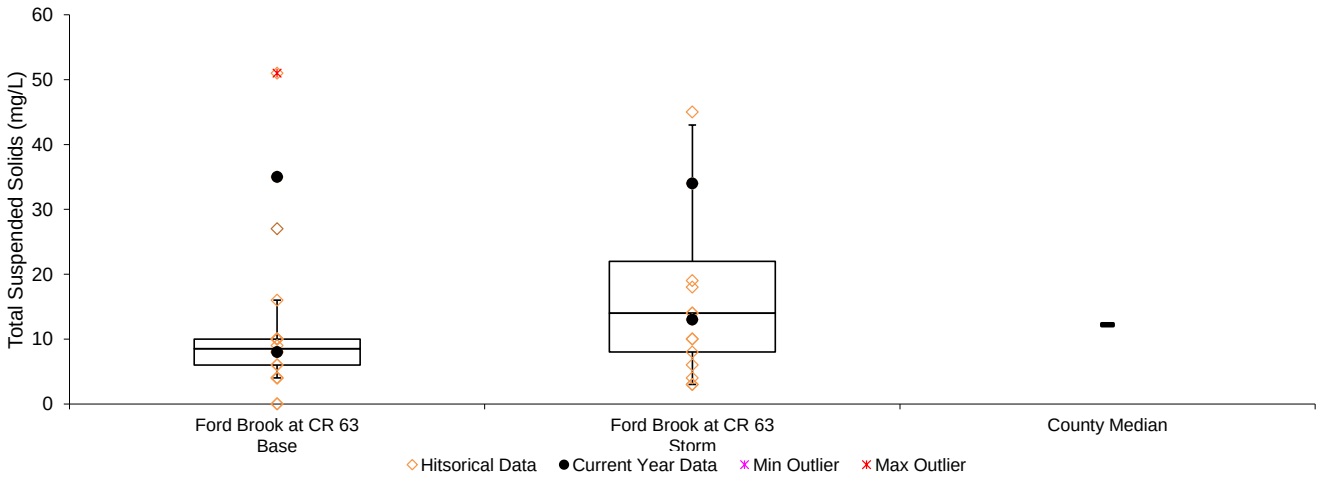
In Ford Brook both TSS and turbidity were generally low and just slightly higher during storm events. Presently the state water quality standard allows turbidity of >25 NTU during no more than 10% of measurements. That standard is being changed to TSS of 30 mg/L. In either case, the stream sometimes exceeds state water quality standards.

Median turbidity for Ford Brook (all years, all conditions) was 9 NTU, respectively. This is similar to the countywide median of 8.5 NTU. Only 4 of 33 (12%) measurements at Ford Brook are greater than MPCA's present water quality standard of 25 NTU. Median TSS was 10 mg/L. This is lower than the median for streams county-wide of 12 mg/L. Only 4 of 34 (12%) of TSS measurements exceeded the new, proposed water quality standard of 30 mg/L.

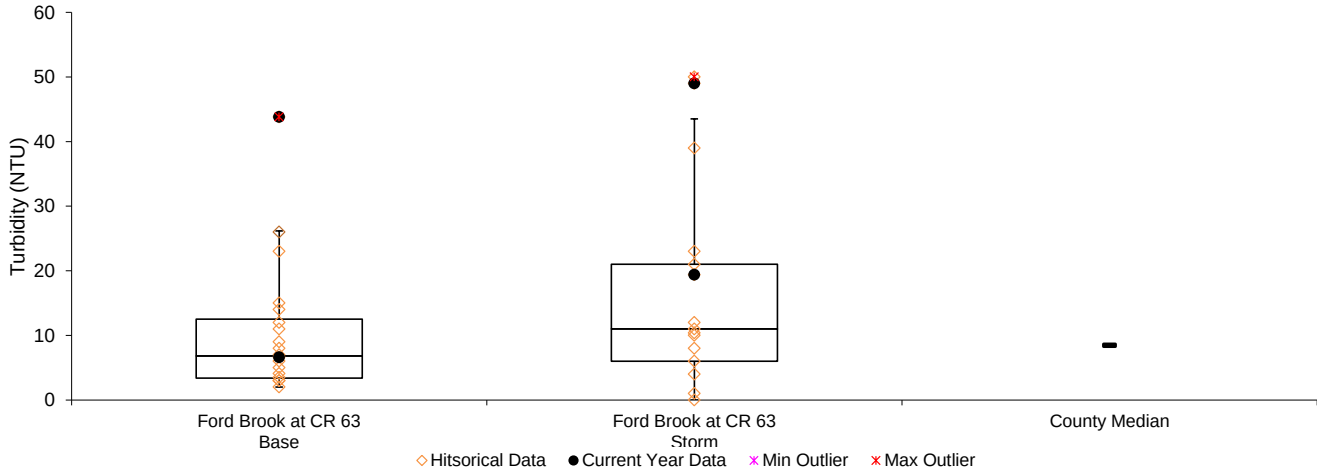
During storms, TSS was often similarly higher at all sites (see figures below). Bank erosion, bedload transport, and stormwater runoff are likely all important sources of suspended solids. Their relative contributions likely differ across the watershed. However given that suspended solids are high throughout the watershed, it is safe to say the problem is not geographically isolated.

Research should be done to determine the extent to which bed load transport of sediment is contributing to high turbidity and TSS. Presently, it appears that it has the potential to be important. High suspended solids in the upper watershed, where land uses are rural residential and sod fields is surprising, given that these are not often sources of high suspended solids. This lends suspicion that near-channel and in-channel sources may be important in the upper watershed. It may be important farther downstream too. On the other hand, Hydrolab continuous turbidity monitoring during storms has found that turbidity does not increase as flow increases, as would be expected if bed load were dominant.

Total Suspended Solids at Ford Brook. Orange diamonds are historical data from previous years and black circles are 2015 readings. Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).



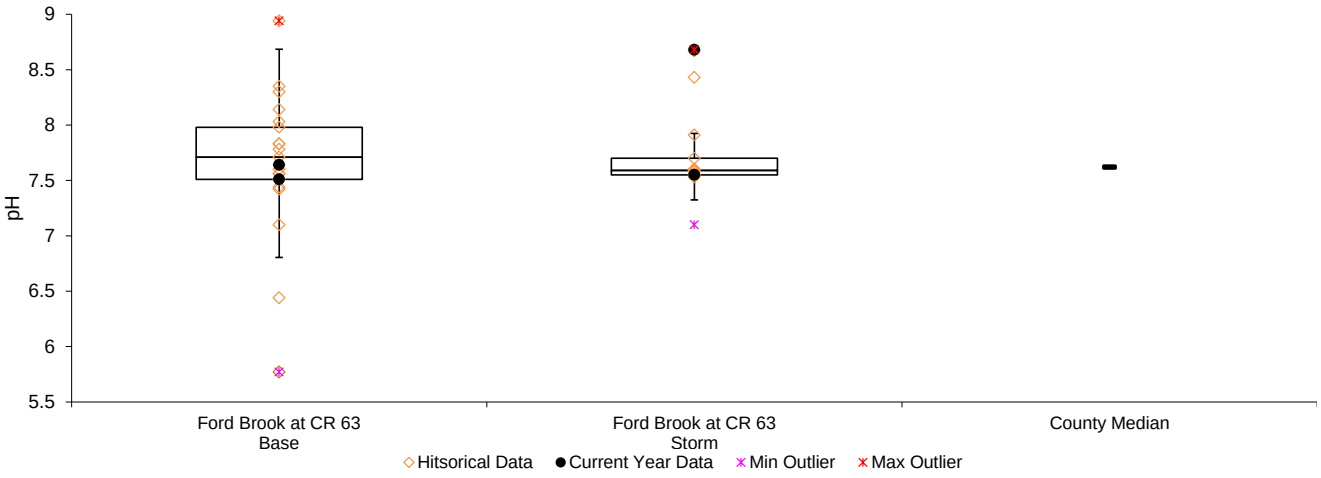
Turbidity at Ford Brook. Orange diamonds are historical data from previous years and black circles are 2015 readings. Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).



pH

pH was generally within the expected range at all sites for 2015. pH is expected to be between 6.5 and 8.5 according to MPCA water quality standards. While occasional readings outside of this range have occurred in previous years, they were not large departures that generate concerns. On one monitoring event pH exceeded 8.5. pH was similar during baseflow and storm events. lower during all storm events, but this is not surprising because rainfall has a lower pH and the creek serves as a stormwater conveyance for four cities.

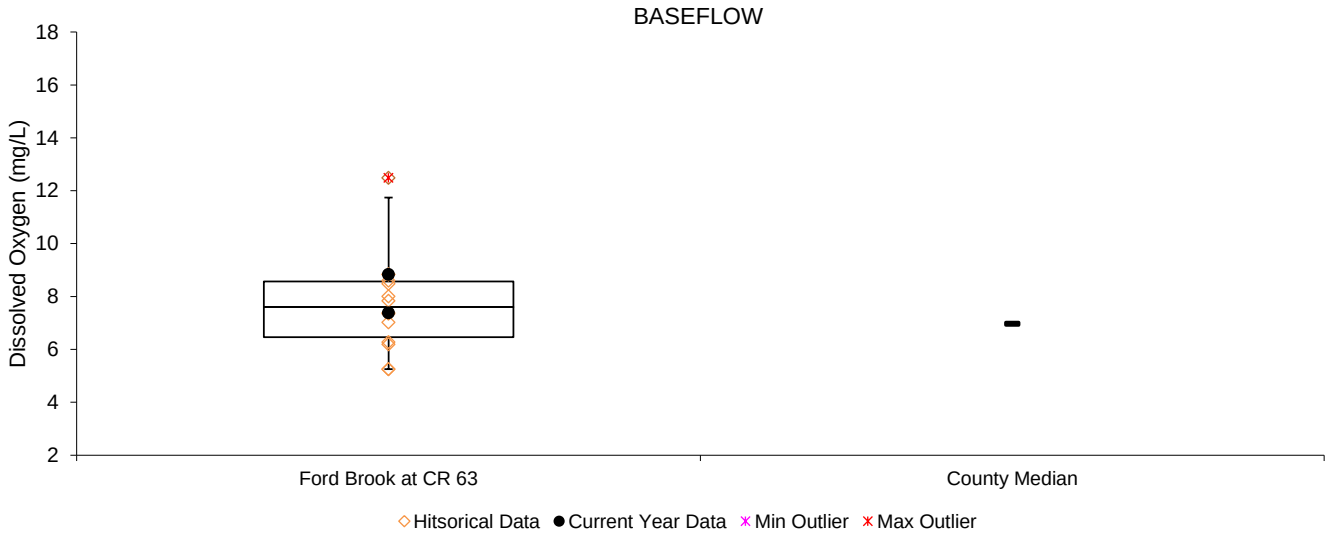
pH at Ford Brook. Orange diamonds are historical data from previous years and black circles are 2015 readings. Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).



Dissolved Oxygen

Dissolved oxygen in Ford Brook was within acceptable levels in Ford Brok. Of the 29 samples took historically, 0 samples dropped below 5 mg/L. The other sites had no instances of dissolved oxygen below 5 mg/L. In sum, any dissolved oxygen problems observed appear.

Dissolved Oxygen at Ford Brook. Orange diamonds are historical data from previous years and black circles are 2015 readings. Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).



Stream Water Quality - Chemical Monitoring

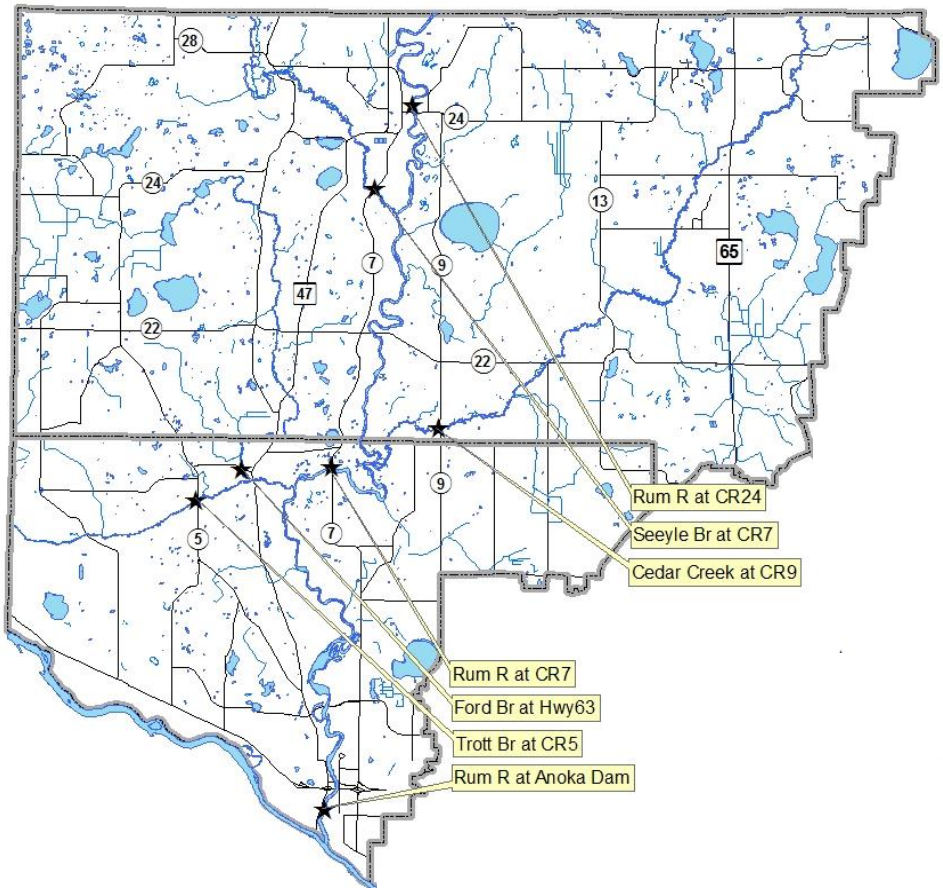
Description: The Rum River and several tributary streams were monitored in 2015. The locations of river monitoring include the approximate top and bottom of the Upper and Lower Rum River Watershed Management Organizations. Tributaries were monitored simultaneous with the Rum River monitoring for greatest comparability near their outfalls into the river. Collectively, these data allow for an upstream to downstream water quality comparison within Anoka County, as well as within each watershed organization. It also allows us to examine whether the tributaries degrade Rum River water quality. Monitoring occurred in May through September for of the following parameters: total suspended solids, e. coli, total phosphorus, Secchi tube transparency, dissolved oxygen, turbidity, temperature, conductivity, pH, and salinity.

Purpose: To detect water quality trends and problems, and diagnose the source as well as provide an initial assessment of water quality to be used in the completion of the Rum River Watershed Restoration and Protection Plan (WRAPP).

Locations:
Rum River at Co Rd 24
Rum River at Co Rd 7
Rum River at the Anoka Dam
Seelye Brook at Co Rd 7
Cedar Creek at Co Rd 9
Ford Brook at Co Rd 63

Results: Results are presented on the following pages.

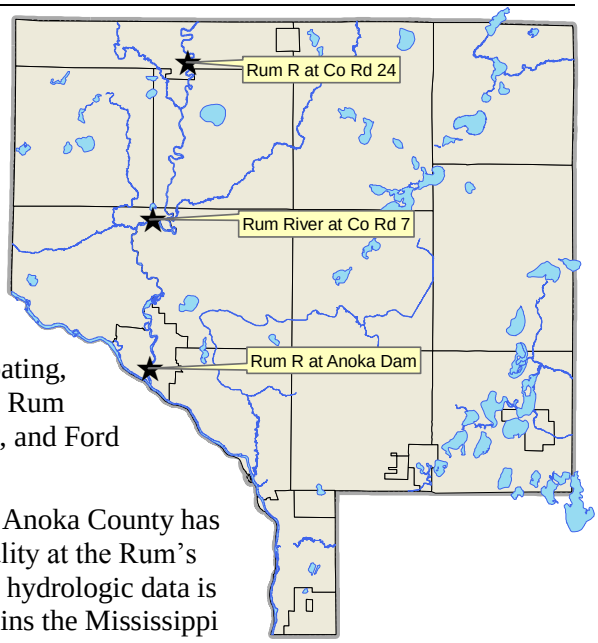
Upper Rum River Watershed Stream Water Quality Monitoring Sites



Stream Water Quality Monitoring

RUM RIVER

Rum River at Co. Rd. 24 (Bridge St), St. Francis	STORET SiteID =	S000-066
Rum River at Co. Rd. 7 (Roanoke St), Ramsey	STORET SiteID =	S004-026
Rum River at Anoka Dam, Anoka	STORET SiteID =	S003-183



Years Monitored

At Co. Rd. 24 – 2004, 2009, 2010, 2011, 2014, 2015

At Co. Rd. 7 – 2004, 2009, 2010, 2011, 2014, 2015

At Anoka Dam – 1996-2011(MC WOMP), 2015

Background

The Rum River is regarded as one of Anoka County's highest quality and most valuable water resources. It is designated as a state scenic and recreational river throughout Anoka County, except south of the county fairgrounds in Anoka. It is used for boating, tubing, and fishing. Much of western Anoka County drains to the Rum River. Subwatersheds that drain to the Rum include Seelye, Trott, and Ford Brooks, and Cedar Creek.

The extent to which water quality improves or is degraded within Anoka County has been unclear. The Metropolitan Council has monitored water quality at the Rum's outlet to the Mississippi River since 1996. This water quality and hydrologic data is well suited for evaluating the river's water quality just before it joins the Mississippi River. Monitoring elsewhere has been sporadic and sparse. Water quality changes might be expected from upstream to downstream because land use changes dramatically from rural residential in the upstream areas of Anoka County to suburban in the downstream areas.

Methods

In 2004, 2009, 2010, 2011, 2014, and 2015 monitoring was conducted to determine if Rum River water quality changes in Anoka County, and if so, generally where changes occur. The data is reported together for a more comprehensive analysis of the river from upstream to downstream.

In 2015 the river was monitored during both storm and baseflow conditions by grab samples. Eight water quality samples were taken; half during baseflow and half following storms. Storms were generally defined as one-inch or more of rainfall in 24 hours or a significant snowmelt event combined with rainfall. In some years, particularly the drought year of 2009, smaller storms were sampled because of a lack of larger storms. All storms sampled were significant runoff events. Parameters tested with portable meters included pH, conductivity, turbidity, temperature, salinity, and dissolved oxygen. Parameters tested by water samples sent to a state-certified lab included total phosphorus, total suspended solids. During every sampling the water level (stage) was recorded. The monitoring station at the Anoka Dam includes automated equipment that continuously tracks water levels and calculates flows. Water level and flow data for other sites was obtained from the US Geological Survey, who maintains a hydrological monitoring site at Viking Boulevard.

The purpose of this report is to make an upstream to downstream comparison of Rum River water quality. It includes only parameters tested in 2015. It does not include additional parameters tested at the Anoka Dam or additional monitoring events at that site. For that information, see Metropolitan Council reports at http://www.metrocouncil.org/Environment/RiversLakes. All other raw data can be obtained from the Anoka Conservation District and is also available through the Minnesota Pollution Control Agency's EQuIS database, which is available through their website.

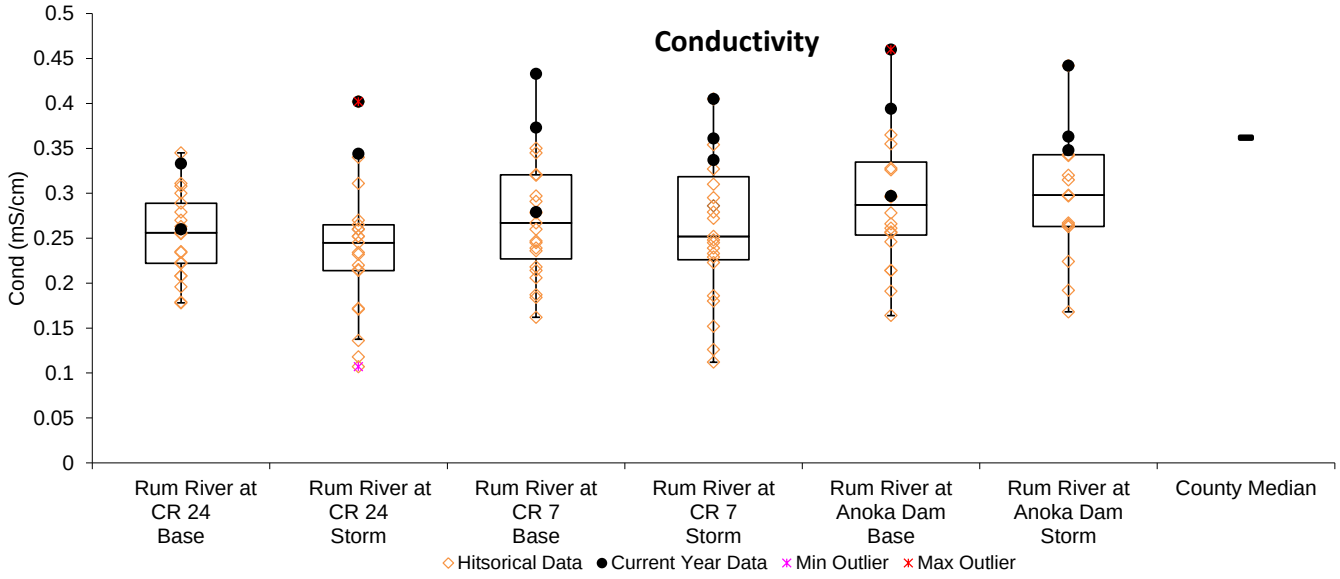
Results and Discussion

On the following pages data are presented and discussed for each parameter. Management recommendations will be included in the 2015 report at the conclusion of this monitoring project. The Rum River is an exceptional waterbody, and its protection and improvement should be a high priority.

Conductivity

Conductivity and chlorides are measures of dissolved pollutants. Dissolved pollutant sources include urban road runoff, industrial chemicals, and others. Metals, hydrocarbons, road salts, and others are often of concern in a suburban environment. Conductivity was the broadest measure of dissolved pollutants used. It measures electrical conductivity of the water; pure water with no dissolved constituents has zero conductivity. Chlorides were not sampled in 2015 and thus not displayed below. Historical chloride data can be obtained from the Anoka Conservation District and is also available through the Minnesota Pollution Control Agency's EQuIS database, which is available through their website. These pollutants are of greatest concern because of the effect they can have on the stream's biological community. They can also be of concern because the Rum River is upstream from the Twin Cities drinking water intakes on the Mississippi River.

Conductivity during baseflow and storm conditions Orange diamonds are historical data from previous years and black circles are 2015 readings. Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).



Conductivity is acceptably low in the Rum River, but increases downstream (see figures above) and is usually higher during baseflow. Median conductivity from upstream to downstream of the sites monitored in 2015 (all conditions) was 0.338 mS/cm, 0.369 and 0.391 mS/cm, respectively. Two of the sites are higher than the median for 34 Anoka County streams of 0.362 mS/cm. The 2015 maximum observed conductivity in the Rum River was 0.46 mS/cm which is the highest on record.

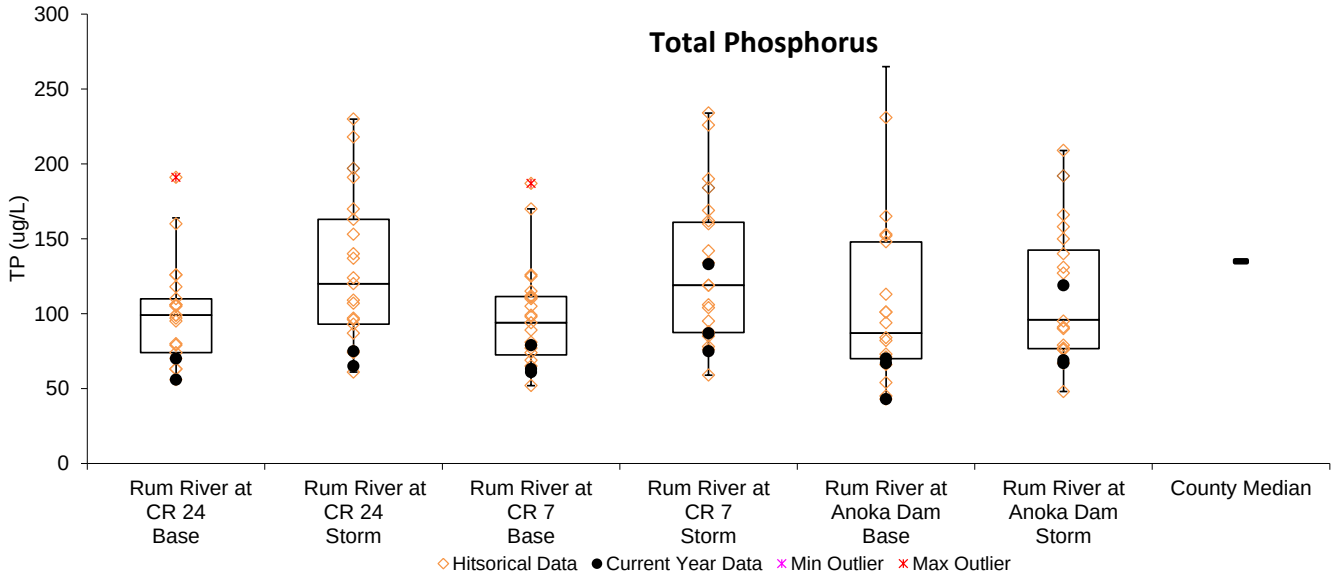
Conductivity was lowest at most sites during storms, suggesting that stormwater runoff contains fewer dissolved pollutants than the surficial water table that feeds the river during baseflow. High baseflow conductivity has been observed in most other nearby streams too, studied extensively, and the largest cause has been found to be road salts that have infiltrated into the shallow aquifer. Geologic materials also contribute, but to a lesser degree.

Conductivity increased from upstream to downstream. During baseflow this increase from upstream to downstream reflects greater road densities and deicing salt application. During storms, the higher conductivity downstream is reflective of greater stormwater runoff and pollutants associated with the more densely developed lower watershed.

Total Phosphorus

Total phosphorus in the Rum River is acceptably low and is similar to the median for all other monitored 34 Anoka County streams (see figure below). 2015 readings averaged much lower than 2014 results. This nutrient is one of the most common pollutants in our region, and can be associated with urban runoff, agricultural runoff, wastewater, and many other sources. The median phosphorus concentration in 2015 at the three monitored sites (all conditions) was 67.5, 77 and 69.5 ug/L. These upstream-to-downstream differences are negligible and there is no trend of increasing phosphorus downstream. All sites in 2015 had phosphorus concentrations lower than the median for Anoka County streams of 135 ug/L. In 2015 the highest observed total phosphorus reading was during one particular storm event, with a maximum of 133. In all, phosphorus in the Rum River is at acceptable levels but should continue to be an area of pollution control effort as the area urbanizes.

Total phosphorus during baseflow and storm conditions Orange diamonds are historical data from previous years and black circles are 2015 readings. Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).



Turbidity and Total Suspended Solids (TSS)

Turbidity and total suspended solids (TSS) are two different measurements of solid material suspended in the water. Turbidity is measured by refraction of a light beam passed through a water sample. It is most sensitive to large particles. Total suspended solids are measured by filtering solids from a water sample and weighing the filtered material. The amount of suspended material is important because it affects transparency and aquatic life, and because many other pollutants are attached to particles. Many stormwater treatment practices such as street sweeping, sumps, and stormwater settling ponds target sediment and attached pollutants. In 2015 Suspended solids in the Rum River were low.

It is important to note the suspended solids can come from sources within and outside of the river channel. Sources on land include soil erosion, road sanding, and others. Riverbank erosion and movement of the river bottom also contributes to suspended solids. A moderate amount of this "bed load" is natural and expected.

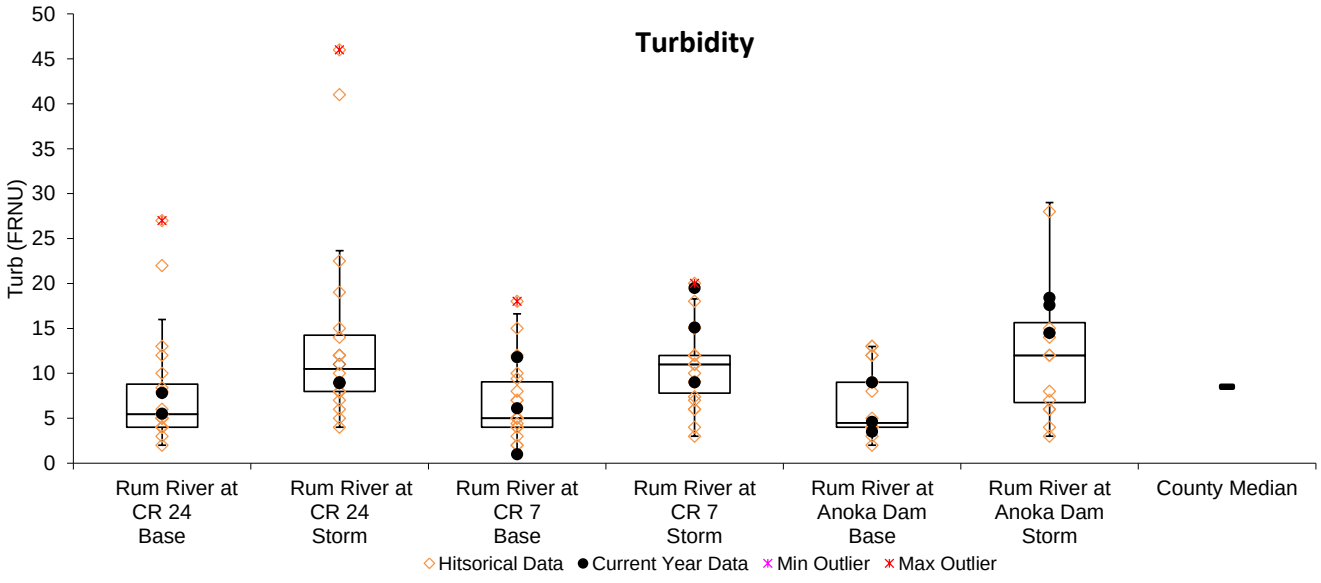
In the Rum River, turbidity was low with increases during storms and a very slight decrease at downstream monitoring sites (see figure below). The median turbidity, in 2015 (all conditions) was 8.35, 10.4 and 9.5 NTU (upstream to downstream), which is similar or higher than the median for Anoka County streams of 8.5 NTU. Turbidity was elevated on a few occasions, especially during storms. In 2015 the maximum observed was 19.5 NTU during a mid-season monitoring event.

TSS in 2015 was similar to 2014 results. The median TSS, in 2015 (all conditions) was 6, 5.5 and 5.5 (upstream to downstream). These are all much lower than the Anoka County stream median for TSS of 12.

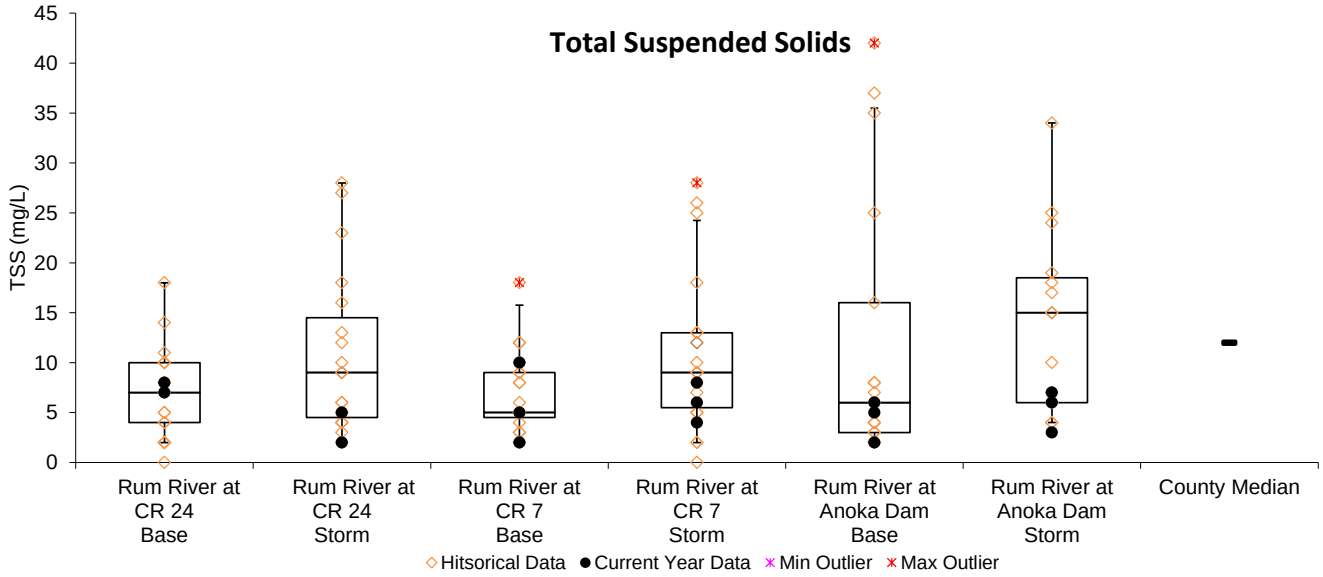
Rigorous stormwater treatment should occur as the Rum River watershed develops, or the collective pollution caused by many small developments will seriously impact the river. Bringing stormwater treatment up to date in older developments is also important.

Differences between TSS and turbidity lend insight into the nature of any problems. TSS showed increases at the downstream monitoring site, while turbidity did not. Turbidity is most sensitive to large particles. Therefore, the downstream increases are likely due to smaller particles. Other pollutants, such as phosphorus and metals, are most highly correlated with smaller particles. These other pollutants can "hitch a ride" on smaller particles because of their greater surface area and, in the case of certain soils, ionic charge. Furthermore, small particles stay suspended in the water column and therefore are more likely to be transported by stream flows and are more difficult to remove with stormwater practices like settling ponds.

Turbidity during baseflow and storm conditions Orange diamonds are historical data from previous years and black circles are 2015 readings Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).



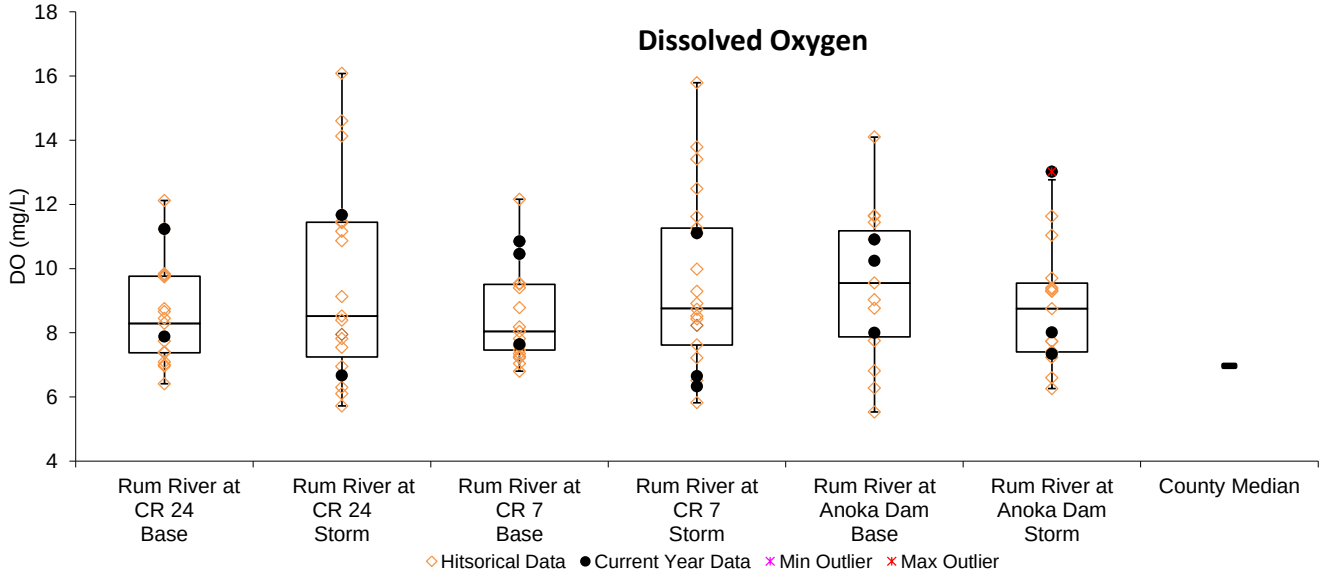
Total suspended solids during baseflow and storm conditions Orange diamonds are historical data from previous years and black circles are 2015 readings Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).



Dissolved Oxygen

Dissolved oxygen is necessary for aquatic life, including fish. Organic pollution consumes oxygen when it decomposes. If oxygen levels fall below 5 mg/L aquatic life begins to suffer. In the Rum River dissolved oxygen was always above 5.5 mg/L at all monitoring sites.

Dissolved oxygen during baseflow and storm conditions Orange diamonds are historical data from previous years and black circles are 2015 readings Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).

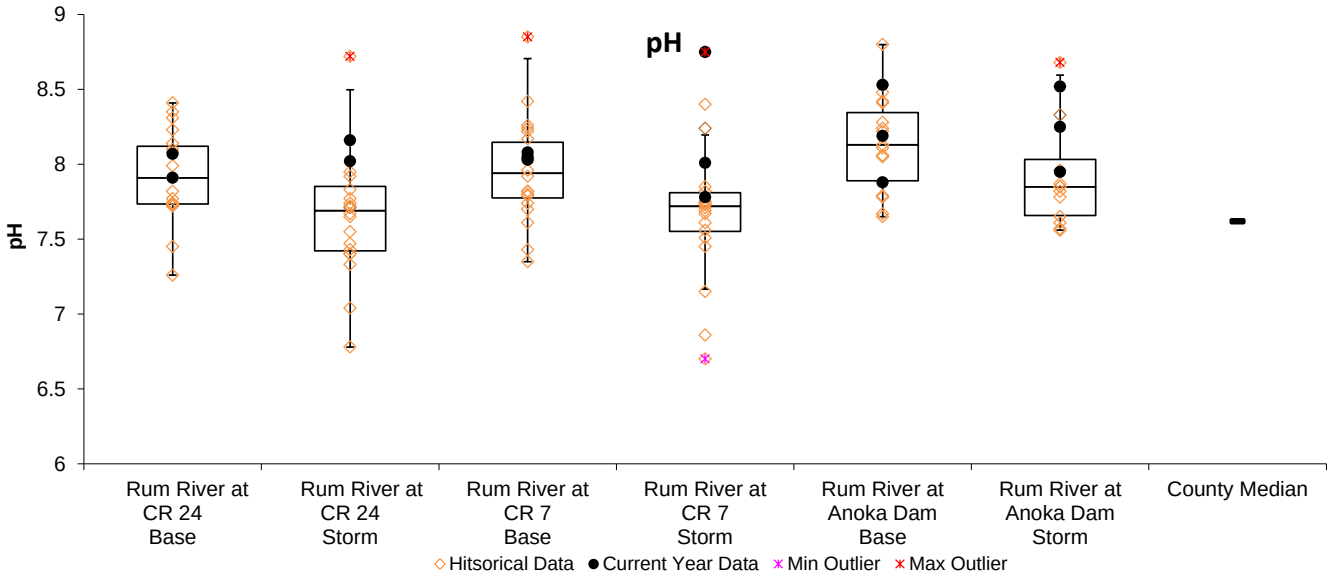


pH

pH refers to the acidity of the water. The Minnesota Pollution Control Agency's water quality standard is for pH to be between 6.5 and 8.5. The Rum River is generally within this range (see figure below).

It is interesting to note that pH is lower during storms than during baseflow. This is because the pH of rain is typically lower (more acidic). While acid rain is a longstanding problem, its effect on this aquatic system is small.

pH during baseflow and storm conditions Orange diamonds are historical data from previous years and black circles are 2015 readings Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).



Summary and Recommendations

The Rum River's water quality is very good. It does show a slight increase in suspended solids and conductivity downstream. Protection of the Rum River should be a high priority for local officials. Large population increases are expected for the Rum River's watershed within Anoka County and have the potential to degrade water quality unless carefully sited and managed. Development pressure is likely to be especially high near the river because of its scenic and natural qualities.

Stream Water Quality – Biological Monitoring

Description: This program combines environmental education and stream monitoring. Under the supervision of ACD staff, high school science classes collect aquatic macroinvertebrates from a stream, identify their catch to the family level, and use the resulting numbers to gauge water and habitat quality. These methods are based upon the knowledge that different families of macroinvertebrates have different water and habitat quality requirements. The families collectively known as EPT (Ephemeroptera, or mayflies; Plecoptera, or stoneflies; and Trichoptera, or caddisflies) are pollution intolerant. Other families can thrive in low quality water. Therefore, a census of stream macroinvertebrates yields information about stream health.

Purpose: To assess stream quality, both independently as well as by supplementing chemical data.
To provide an environmental education service to the community.

Location: Rum River behind Anoka High School, south side of Bunker Lake Blvd, Anoka

Results: Results for each site are detailed on the following pages.

Tips for Data Interpretation

Consider all biological indices of water quality together rather than looking at each alone, because each gives only a partial picture of stream condition. Compare the numbers to county-wide averages. This gives some sense of what might be expected for streams in a similar landscape, but does not necessarily reflect what might be expected of a minimally impacted stream. Some key numbers to look for include:

Families — Number of invertebrate families. Higher values indicate better quality.

EPT — Number of families of the generally pollution-intolerant orders Ephemeroptera (mayflies), Plecoptera (stoneflies), Trichoptera (caddisflies). Higher numbers indicate better stream quality.

Family Biotic Index (FBI) — An index that utilizes known pollution tolerances for each family. Lower numbers indicate better stream quality.

FBI	Stream Quality Evaluation
0.00-3.75	Excellent
3.76-4.25	Very Good
4.26-5.00	Good
5.01-5.75	Fair
5.76-6.50	Fairly Poor
6.51-7.25	Poor
7.26-10.00	Very Poor

% Dominant Family — High numbers indicates an uneven community, and likely poorer stream health.

RUM RIVER

behind Anoka High School, Anoka
STORET SiteID = S003-189

Last Monitored

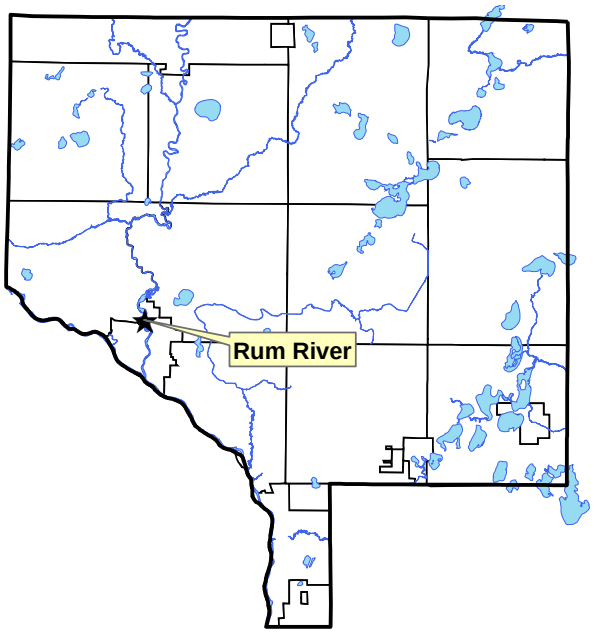
By Anoka High School in 2015

Monitored Since

2001

Student Involvement

162 students in 2015, approximately 900 since 2001



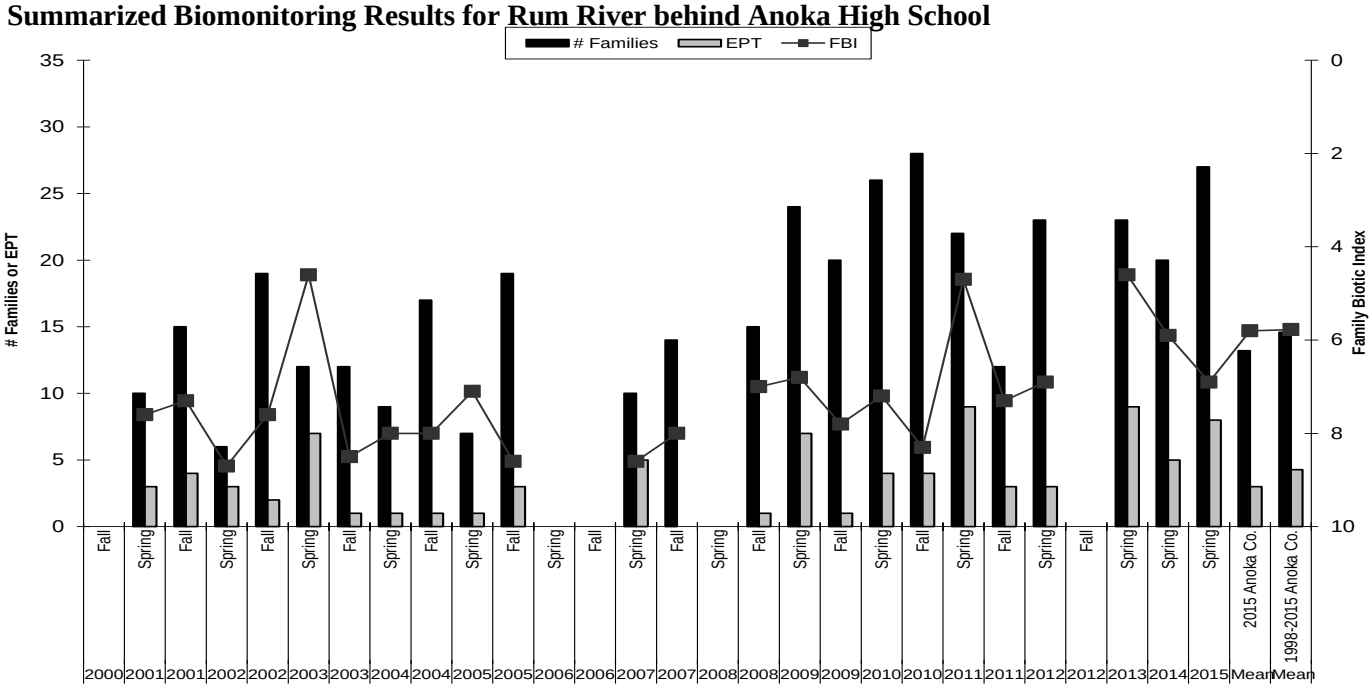
Background

The Rum River originates from Lake Mille Lacs, and flows south through western Anoka County where it joins the Mississippi River in the City of Anoka. In Anoka County the river has both rocky riffles (northern part of county) as well as pools and runs with sandy bottoms. The river's condition is generally regarded as excellent. Most of the Rum River in Anoka County has a state "scenic and recreational" designation. The sampling site is near the Bunker Lake Boulevard bridge behind Anoka High School. Most sampling has been conducted in a backwater rather than the main channel.

Results

Anoka High school classes monitored the Rum River in spring of 2015 with Anoka Conservation District (ACD) oversight. The results for spring 2015 were similar to previous years. More families, 27 in total, were found here than in any other Anoka County stream. This should be expected as most other sites are small streams and this is a larger river. The number of sensitive EPT families (8) and the FBI score (6.9) were the best in Anoka County and above the county averages.

Summarized Biomonitoring Results for Rum River behind Anoka High School



Biomonitoring Data for the Rum River behind Anoka High School

Data presented from the most recent five years. Contact the ACD to request archived data.

Year	2009	2009	2010	2010	2011	2011	2012	2013	2014	Mean	Mean
Season	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Spring	Spring	2014 Anoka Co.	1998-2014 Anoka Co.
FBI	6.80	7.80	7.20	8.30	4.70	7.30	6.90	4.60	5.90	5.8	5.8
# Families	24	20	26	28	22	12	23	23	20	13.2	14.6
EPT	7	1	4	4	9	3	3	9	5	3.0	4.3
Date	8-May	28-Sep	18-May	7-Oct	10-Jun	5-Oct	8-May	14-May	20-May		
sampling by	AHS	AHS	AHS	AHS	ACD	ACD	AHS	AHS	AHS		
sampling method	MH	MH	MH	MH	MH	MH	MH	MH	MH		
Mean # individuals	880	585	443	816	604	188	502	357	350		
# replicates	1	2	1	1	1	1	2	4	4		
Dominant Family	Siphlonuridae	Hyalellidae	Gastropoda	Hyalellidae	baetidae	hyalellidae	silphonuridae	Perlodidae	Siphlonuridae		
% Dominant Family	40.7	39.1	31.8	34.1	57.5	63.3	37.8	42.1	33.4		
% Ephemeroptera	48.2	0.9	8.1	0.9	59.3	11.2	44.9	19.4	57.8		
% Trichoptera	0.1	0	0	0.2	1	0	1.2	0.2	0.1		
% Plecoptera	2.6	0	0.5	0	3.8	0.5	0	42.6	0.5		

Supplemental Stream Chemistry Readings

Data presented from the most recent five years. Contact the ACD to request archived data.

Parameter	5/18/2010	10/7/2010	6/10/2011	10/5/2011	5/8/2012	5/13/2013	5/20/2014
pH	7.24	7.22	7.84	7.98	8.10	7.69	8
Conductivity (mS/cm)	0.207	0.399	0.296	0.296	0.205	0.181	0.237
Turbidity (NTU)	7	7	18	10	7	5	14.2
Dissolved Oxygen (mg/L)	6.93	na	6.85	7.91	7.87	10.00	13.05
Salinity (%)	0	0.01	0.01	0.01	0.00	0.00	0.11
Temperature (°C)	14.8	12.2	20.7	15.3	15.7	13.0	13.5

Discussion

Both chemical and biological monitoring indicate the good quality of this river. Habitat is ideal for a variety of stream life, and includes a variety of substrates, plenty of woody snags, riffles, and pools. Water chemistry monitoring done at various locations on the Rum River throughout Anoka County found that water quality is also good. Both habitat and water quality decline, but are still good, in the downstream reaches of the Rum River where development is more intense and the Anoka Dam creates a slow moving pool.

Historically, biomonitoring near Anoka was conducted mostly in a backwater area that has a mucky bottom and does not receive good flow. This area is unlikely to be occupied by families which are pollution intolerant. In recent years more sampling occurred in the main channel which has more diverse habitat. This change in sampling likely explains the apparent improvement in the invertebrate community in recent years. In 2014 and 2015 sampling returned to the backwater area, however high water levels likely altered its normal functions.

Wetland Hydrology

Description: Continuous groundwater level monitoring at a wetland boundary to a depth of 40 inches. County-wide, the ACD maintains a network of 23 wetland hydrology monitoring stations.

Purpose: To provide understanding of wetland hydrology, including the impact of climate and land use. These data aid in delineation of nearby wetlands by documenting hydrologic trends including the timing, frequency, and duration of saturation.

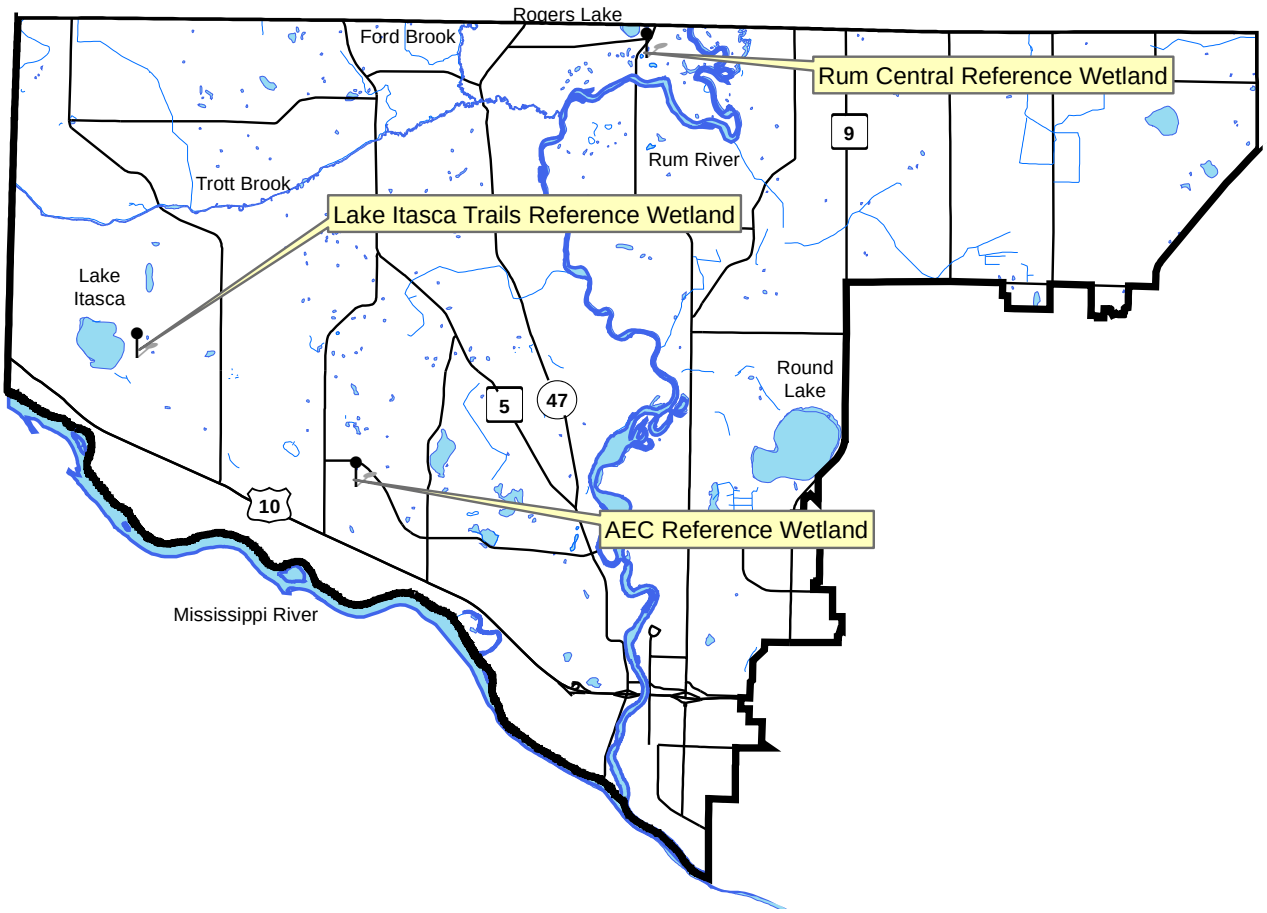
Locations: AEC Reference Wetland, Connexus Energy Property on Bunker Lake Blvd, Ramsey

Rum River Central Reference Wetland, Rum River Central Park, Ramsey

Lake Itasca Trail Reference Wetland, Lake Itasca Park, Ramsey

Results: See the following pages. Raw data and updated graphs can be downloaded from www.AnokaNaturalResources.com using the Data Access Tool.

Lower Rum River Watershed Wetland Hydrology Monitoring Sites

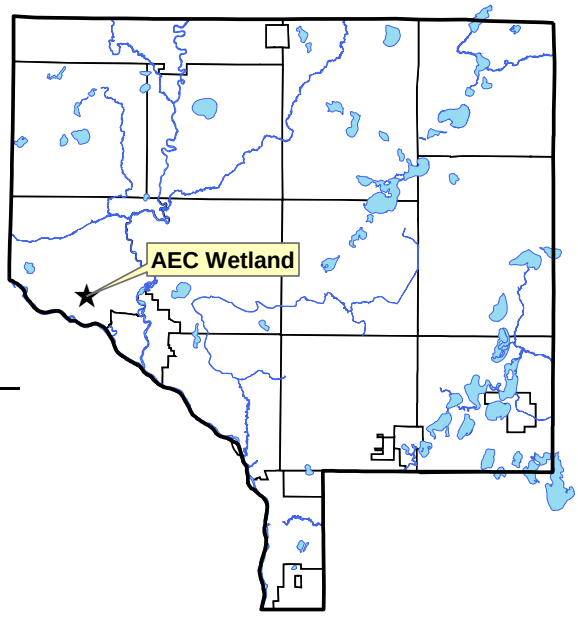


Wetland Hydrology Monitoring

AEC REFERENCE WETLAND

Cottonwood Park, adjacent to Connexus Energy Offices (formerly Anoka Electric Coop), Ramsey

Site Information



Monitored Since: 1999

Wetland Type: 3

Wetland Size: ~18 acres

Isolated Basin? No, probably receives storm water

Connected to a Ditch? No

Soils at Well Location:

Horizon	Depth	Color	Texture	Redox
A	0-15	10yr2/1	Sandy Loam	-
Bw	15-40	10yr3/2	Gravelly Sandy loam	-

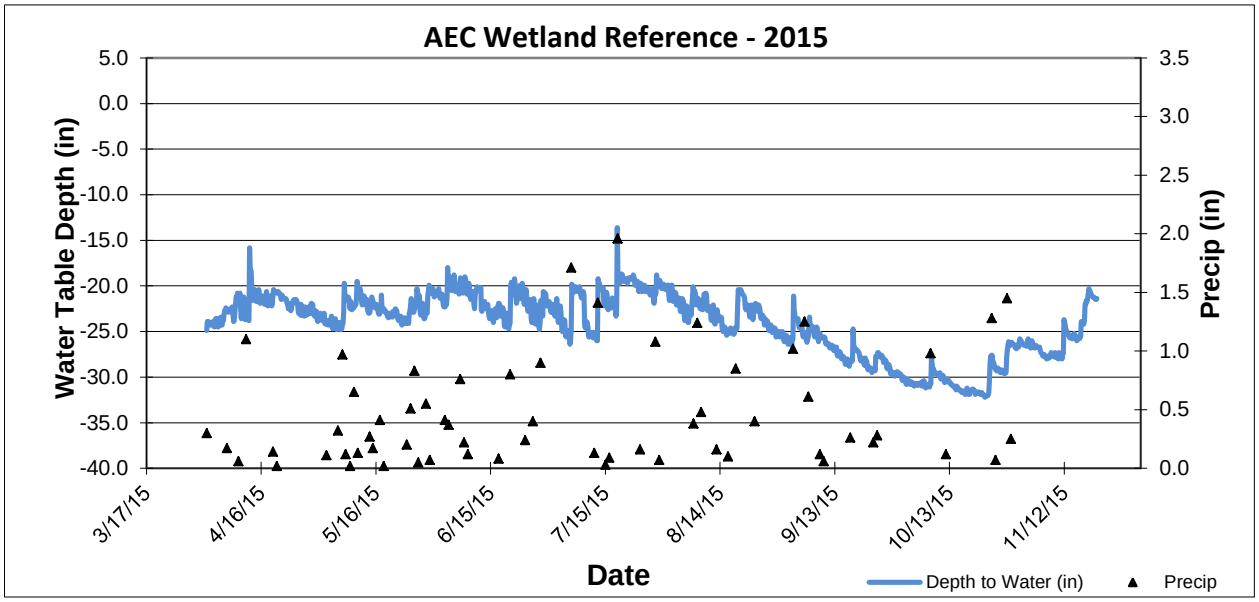
Surrounding Soils: Hubbard coarse sand

Vegetation at Well Location:

Scientific	Common	% Coverage
Populus tremuloides	Quaking Aspen	30
Salix bebbiana	Bebb Willow	30
Carex Spp	Sedge undiff.	30
Solidago canadensis	Canada Goldenrod	20

Other Notes: Well is located at the wetland boundary.

2015 Hydrograph



Well depth was 39 inches, so a reading of –39 indicates water levels were at an unknown depth greater than or equal to 39 inches.

Wetland Hydrology Monitoring

RUM RIVER CENTRAL REFERENCE WETLAND

Rum River Central Regional Park, Ramsey

Site Information

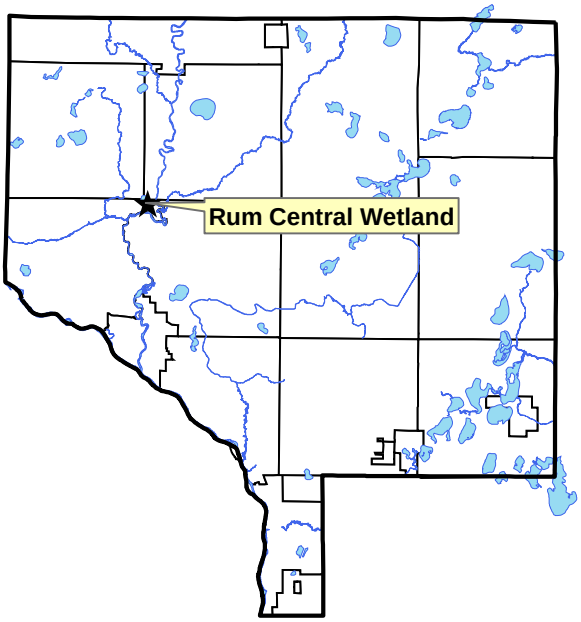
Monitored Since: 1997

Wetland Type: 6

Wetland Size: ~0.8 acres

Isolated Basin? Yes

Connected to a Ditch? No



Soils at Well Location:

Horizon	Depth	Color	Texture	Redox
A	0-12	10yr2/1	Sandy Loam	-
Bg1	12-26	10ry5/6	Sandy Loam	-
Bg2	26-40	10yr5/2	Loamy Sand	-

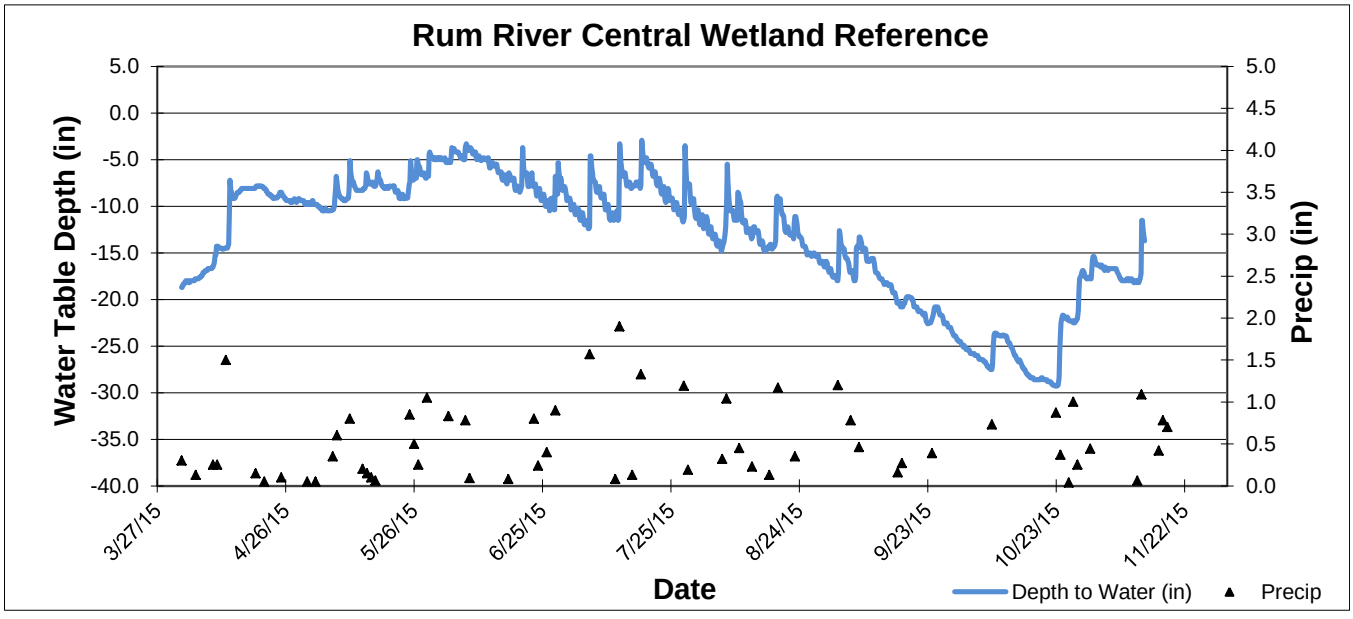
Surrounding Soils: Zimmerman fine sand

Vegetation at Well Location:

Scientific	Common	% Coverage
Phalaris arundinacea	Reed Canary Grass	40
Corylus americanum	American Hazelnut	40
Onoclea sensibilis	Sensitive Fern	30
Rubus strigosus	Raspberry	30
Quercus rubra	Red Oak	20

Other Notes: Well is located at the wetland boundary.

2015 Hydrograph



Well depth was 37.7 inches, so a reading of –37.7 indicates water levels were at an unknown depth greater than or equal to 37.7 inches.

Wetland Hydrology Monitoring

LAKE ITASCA TRAILS REFERENCE WETLAND

Lake Itasca Trails Park, Ramsey

Site Information

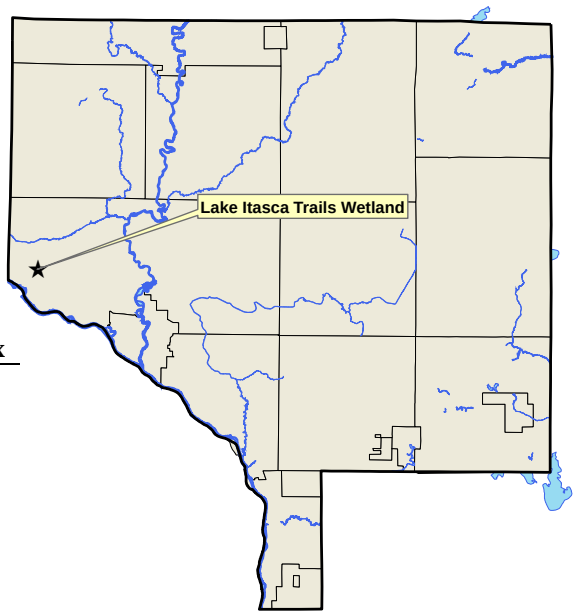
Monitored Since: 2013

Wetland Type: 2/6

Wetland Size: ~10 acres

Isolated Basin? Yes

Connected to a Ditch? No



Soils at Well Location:

Horizon	Depth	Color	Texture	Redox
A1	0-12	10yr2/0	Mucky sand	-
A2	12-20	10ry2/1	Sand	-
B1	20-36	10yr4/1	Sand and fine gravel	-
B2	36-48	10yr6/1	Sand and fine gravel	-

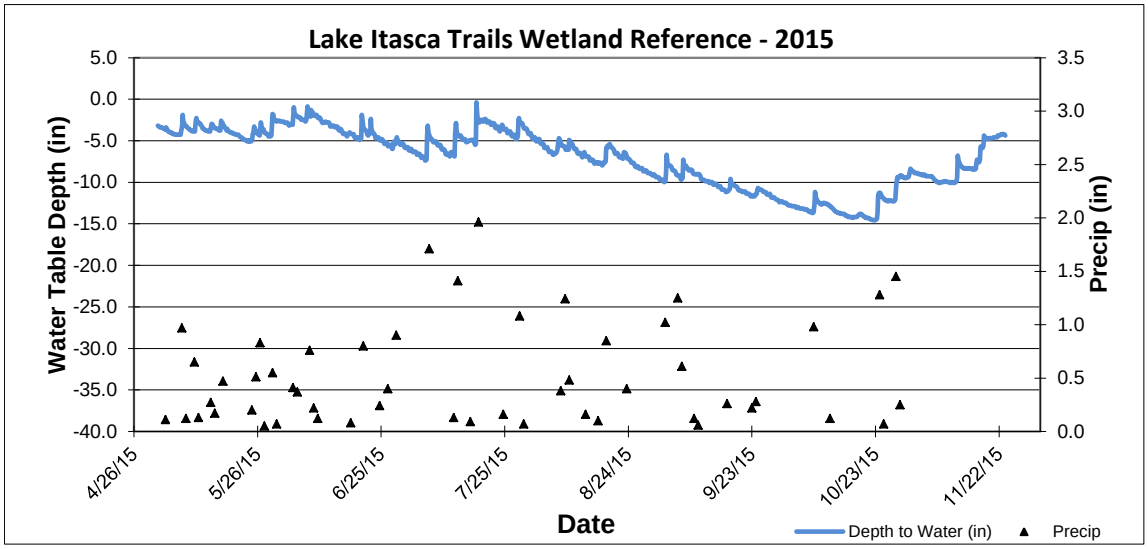
Surrounding Soils: Hubbard coarse sand

Vegetation at Well Location:

Scientific	Common	% Coverage
Carex stricta	Hummock Sedge	80
Phalaris arundinacea	Reed Canary Grass	20
Salix sp.	Willow	20
Rubus sp.	Bristle-berry	5

Other Notes: Well is located about 10 feet east and about 6 inches downslope of the wetland boundary. DNR Public Water Wetland 2-339.

2015 Hydrograph



Well depth was 41.4 inches, so a reading of –41.4 indicates water levels were at an unknown depth greater than or equal to 41.4 inches.

Water Quality Grant Fund

Description: The LRRWMO provided cost share for projects on either public or private property that will improve water quality, such as repairing streambank erosion, restoring native shoreline vegetation, or rain gardens. This funding was administered by the Anoka Conservation District, which works with landowners on conservation projects. Projects affecting the Rum River were given the highest priority because it is viewed as an especially valuable resource.

Purpose: To improve water quality in lakes streams and rivers by correcting erosion problems and providing buffers or other structures that filter runoff before it reaches the water bodies.

Results: Projects reported in the year they are installed. No projects were installed in 2015.

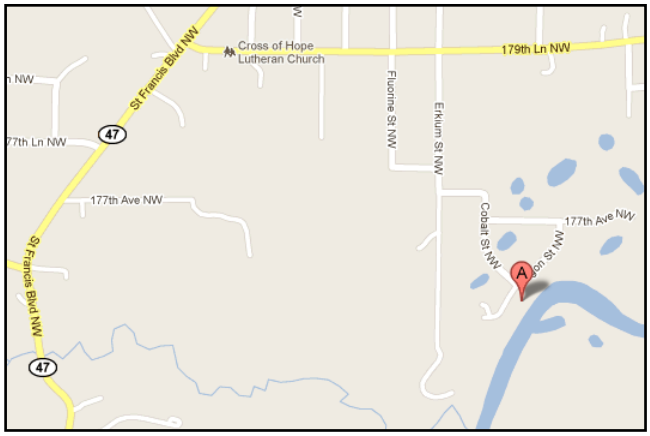
LRRWMO Cost Share Fund Summary

2006 LRRWMO Contribution	+	$1,000.00
2008 Expense – Herrala Rum Riverbank stabilization	-	$ 150.91
2008 Expense – Rusin Rum Riverbank stabilization	-	$ 225.46
2009 LRRWMO Contribution	+	$1,000.00
2009 Expense – Rusin Rum Riverbank bluff stabilization	-	$ 52.05
2010 LRRWMO Contribution	+	$ 0
2010 LRRWMO Expenses	-	$ 0
2011 LRRWMO Contribution	+	$ 0
2011 Expense - Blackburn Rum riverbank	-	$ 543.46
2012 LRRWMO Contribution	+	$1,000.00
2012 Expense – Smith Rum Riverbank	-	$1,596.92
2013 LRRWMO Contribution	+	$1,000.00
2013 Expense – Geldacker Mississippi Riverbank	-	$1,431.20
2014 LRRWMO Contribution	+	$2,050.00
2015 LRRWMO Contribution	+	$1,000.00
2015 Expense – Smith Rum Riverbank	-	$ 533.65
Fund Balance		**$2,516.35**

2015 funded project – Smith Rum Riverbank, City of Ramsey

100 feet of undercut, eroding riverbank was stabilized using a cedar tree revetment. This was phase two of efforts on this property. In 2012, approximately 70 feet of riverbank were stabilized using a cedar tree revetment. A design was completed for the entire 170 feet of riverbank on the property, but a full installation in 2012 was cost prohibitive. The remaining 100 feet of riverbank was stabilized in 2015.

The landowner paid half of the expense of this project; LRRWMO were used to cover the other half. Installation was primarily done by the Minnesota Conservation Corps with oversight from the Anoka Conservation District.



MISSISSIPPI RIVERBANK INVENTORY

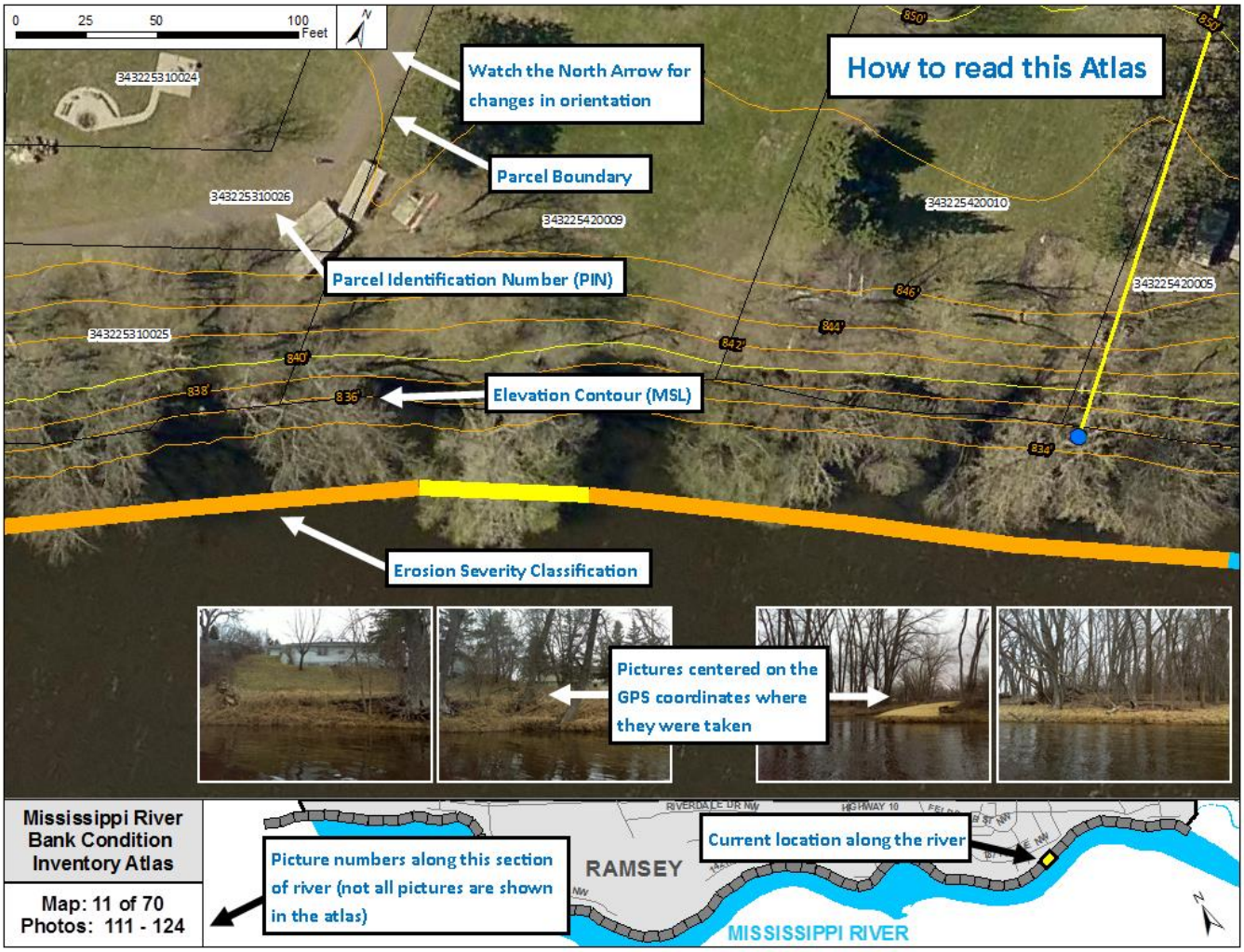
Description: This City of Ramsey contracted the Anoka Conservation District to complete an inventory of riverbank condition along the 5.8 miles of City that border the Mississippi River. The inventory will provide the city with a comprehensive record of riverbank condition. This inventory is structured as a report and atlas. The report will provide details on the methodology used to estimate bank erosion severity and provide insight and recommendations on stabilizing severely eroding sections of the riverbank. The atlas will provide a complete record of aerial photographs with corresponding erosions categories as well as key pictures collected during field work.

Location: City of Ramsey

Purpose: To gather information about current riverbank conditions in order to better address future concerns.

Results: Along the 5.8 miles of Mississippi Riverbank in Ramsey, ten stretches of severely eroding riverbank were identified, consisting of 39 properties. If stabilized sediment loading into the river would be reduced by by 5,148 tons per year. Other less severely eroding areas were also documented. A separate report is available.

Example from Mississippi Riverbank Inventory report



Wetland Education Signs & Displays

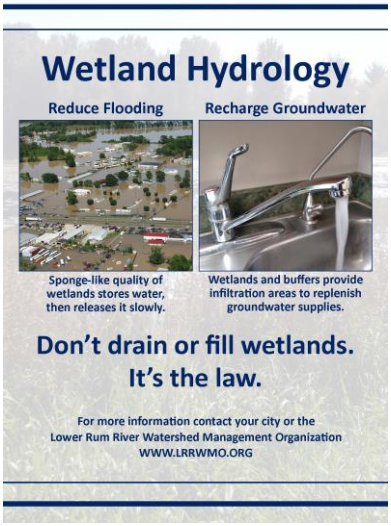
Description: Two separate projects were completed to increase residents' awareness of the values of wetlands, wetland protection laws, and voluntary actions that can be taken to protect wetlands. The projects included trailside signage and a trade-show style display.

Purpose: To increase public awareness of wetland values, boundaries, best management practices and regulations.

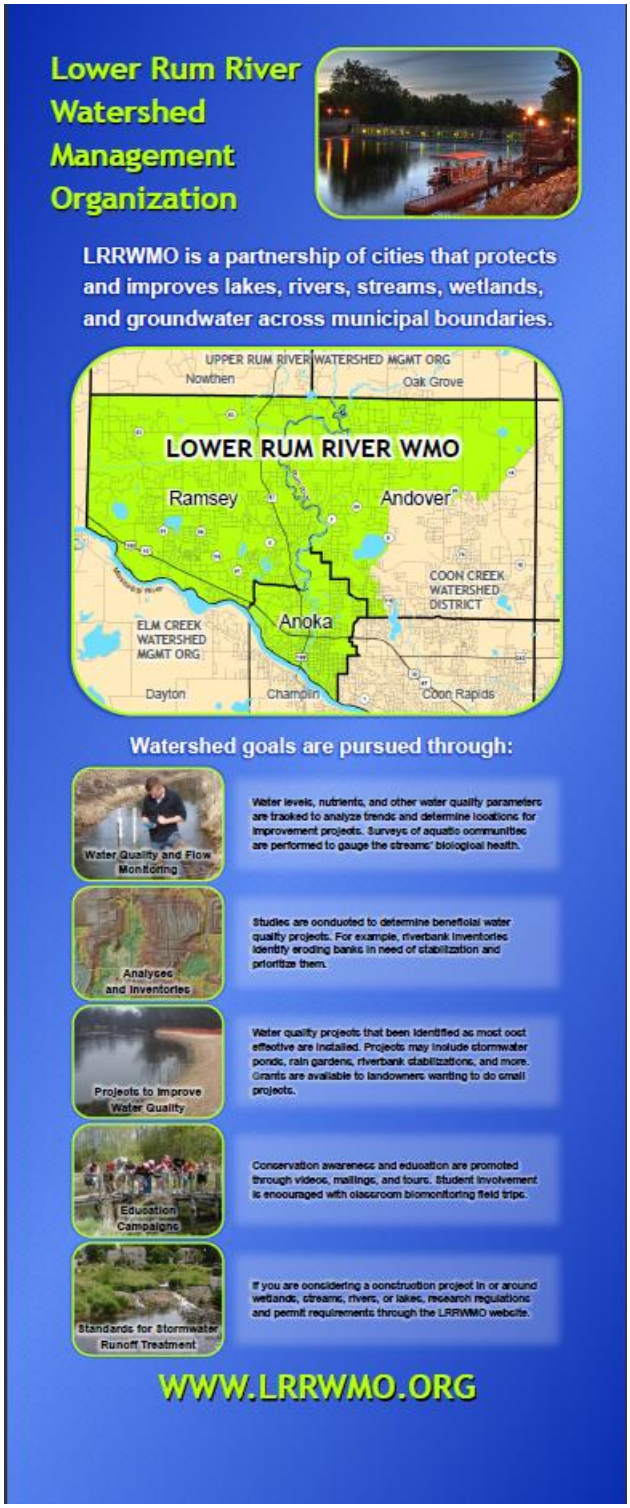
Results: Five signs were designed, printed and will be installed alongside walking trails in the Cities of Ramsey, Anoka and Andover. The signs are shown below and will be installed by city staff in spring 2016.

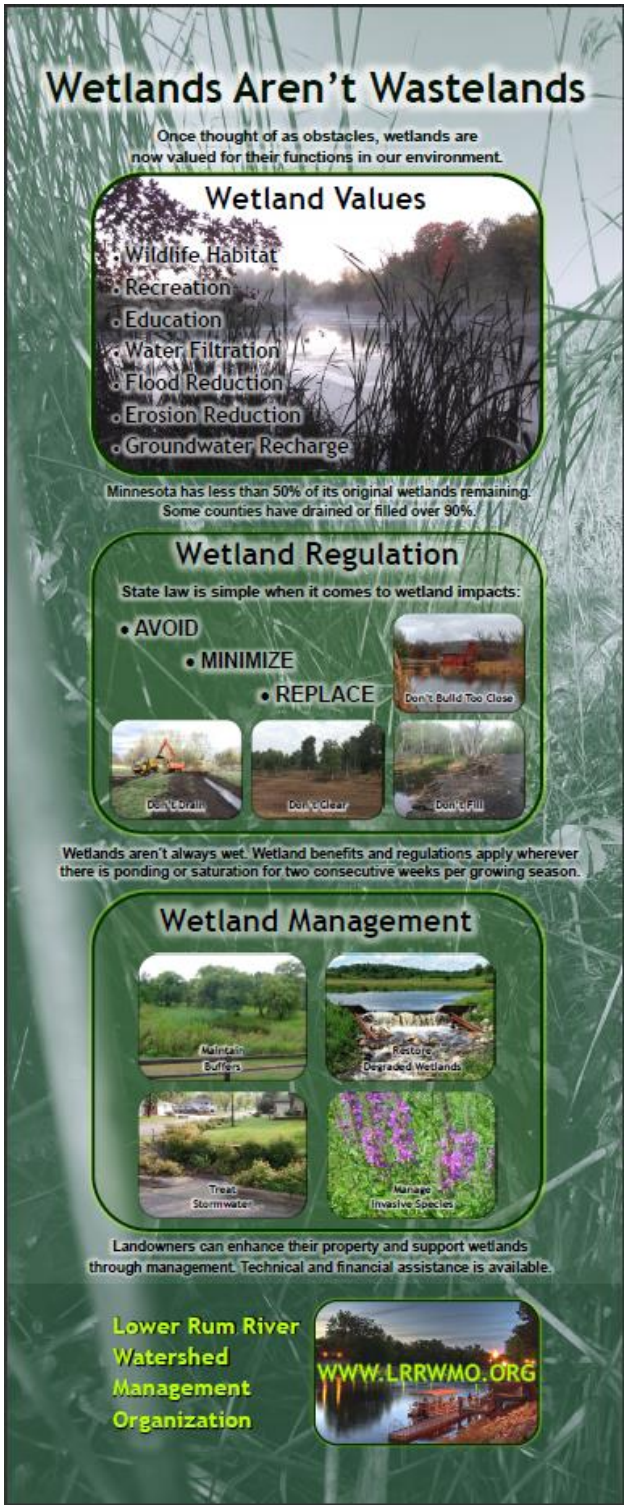
Two trade-show-style displays were designed and printed. One highlighted wetland values and protection. The second display was about the Lower Rum River WMO. Both displays are 33"x80" and will be used by the LRRWMO at local events and other environmental presentations.

Wetland education signs



Displays about Wetlands and the LRRWMO





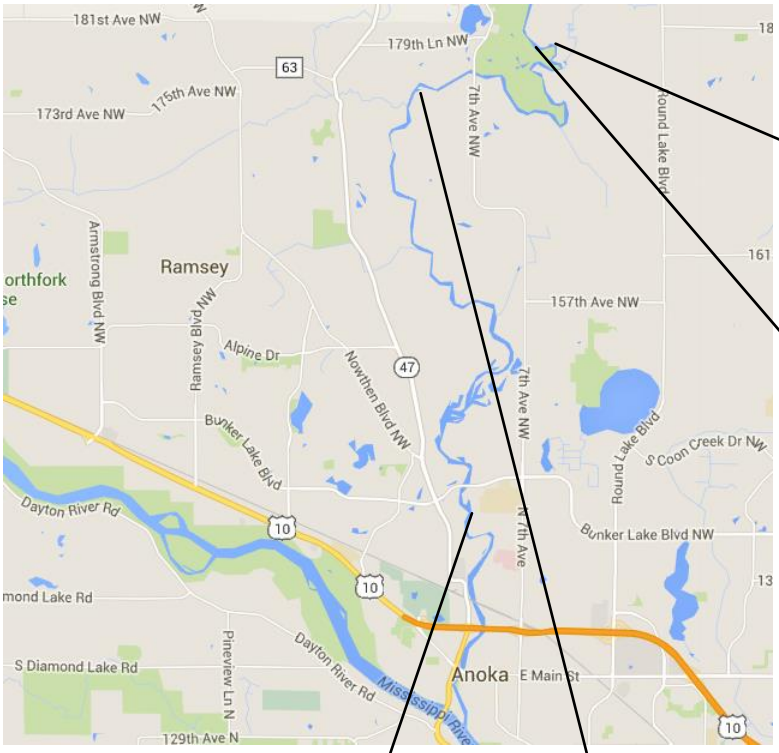
Rum River Stabilizations

Description: Four riverbank stabilization projects were installed on the Rum River in 2015 in partnership with the Lessard-Sams Outdoor Heritage Council, the Anoka County Parks Department, and Conservation Corps Minnesota. A combination of hard armoring (riprap and Flexamat), regrading, native vegetation, cedar tree revetment, and live willow staking were used to stabilize the severely eroding banks.

Location: Cedar Creek Conservation Area, Rum River Central Regional Park, near Anoka High School, and a residential property in Ramsey.

Purpose: To stabilize areas of riverbank with severe erosion and reduce the sediment loading in the Rum River.

Results: Stabilized a total of 1,150 linear feet of riverbank on the Rum River.



Anoka and Ramsey Stormwater Retrofit Studies

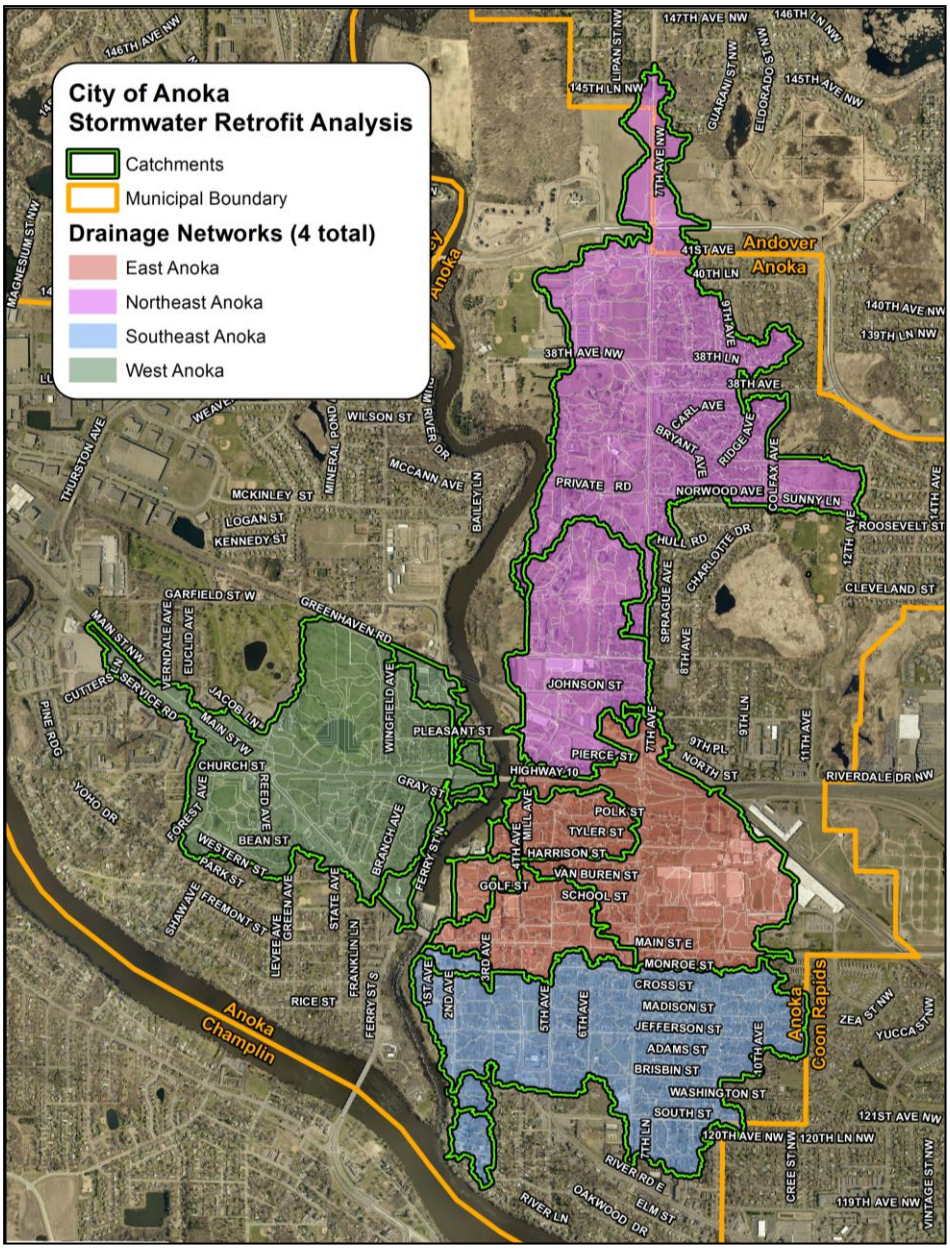
Description: Studies identify new stormwater treatment opportunities in neighborhoods identified by cities and rank those potential projects by cost effectiveness (amount of pollutant kept out of area rivers per dollar spent). The studies provide sufficient detail for pursuit of funds to install the most cost effective projects. The studies are conducted in areas with little or no stormwater treatment, which are often older neighborhoods.

Location: Selected areas in the Cities of Ramsey and Anoka.

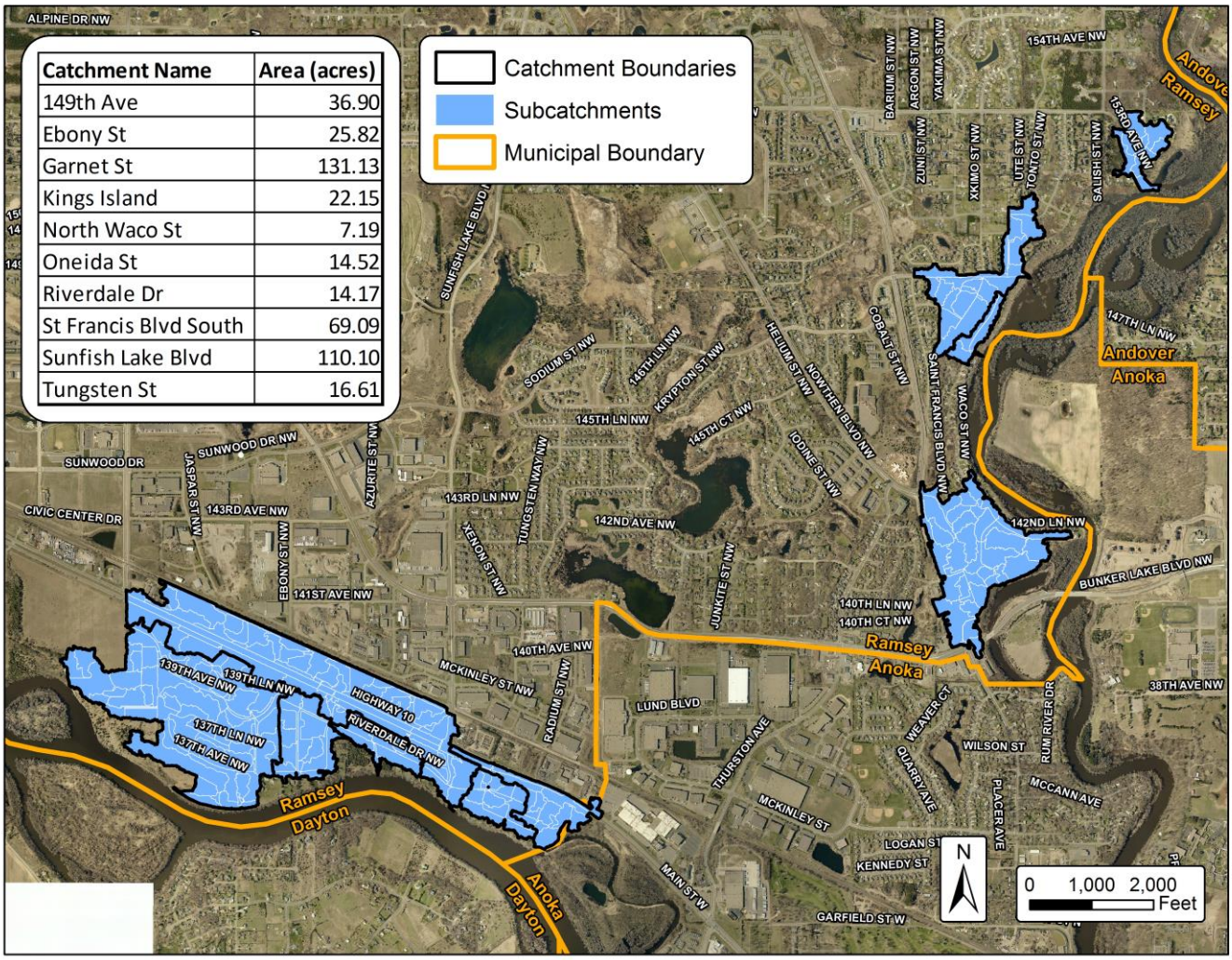
Purpose: To improve water quality in the Rum and Mississippi Rivers.

Results: Work began in 2015 and will be completed in 2016. Maps of the study areas are provided below.

City of Anoka Stormwater Retrofit Study Area



City of Ramsey Stormwater Retrofit Study Area



Newsletters

Description: The Lower Rum River Watershed Management Organization (LRRWMO) contracted the Anoka Conservation District (ACD) to create a series of public education newsletter articles. The LRRWMO is required to publish an annual newsletter under State Rules.

Purpose: To improve public understanding of the LRRWMO, its functions, and accomplishments.

Location: Watershed-wide

Results: The Anoka Conservation District (ACD) drafted two newsletters and sent them to cities for inclusion in their newsletters.

Both 2015 newsletters focused on public education regarding wetlands. One articles included information what homeowners can do to help wetlands on their property. The other focused on wetland regulation and the new "wetland" section on the ACD website.

2015 Newsletter Articles

Be Good To Your Wetland

23% of southwestern Anoka County is water or wetland. Development within our city has wound its way around these wetlands, creating quaint, private neighborhoods. We've protected these ecologically important areas. Now, the condition of these wetlands is in the hands residents, each of whom may own only a small portion.

Each homeowner can do a few simple things to be good to their wetland.

- **Leave an unmowed buffer**. The edge of a wetland is particularly valuable habitat. Leave a 20 foot unmowed strip.
- **Plant natives**. Native plants are those to which native wildlife is adapted. There are several native plant nurseries in our area.
- **Plant for pollinators**. Bees and other pollinators are on the decline. Treat yourself to some color, and treat the pollinators to some habitat by planting native flowers.

The collective actions of homeowners make a difference for wildlife and clean water.

A message from the Lower Rum River Watershed Management Organization www.LRRWMO.org

Wetland Law Made Clearer

Digging ponds, filling in low areas, and removing cattails. All are regulated under complex wetland laws leaving landowners wondering, "can I do that on my property?" A new web tool is available to provide direct answers in one place.

With support from the Lower Rum River Watershed Management, the Anoka Conservation District has added a new "wetlands" section to their website. The website includes a summary of wetland rules, answers to frequently asked questions, a map with permitting contact information and a way to request advice without going through a permitting process.

Three sets of wetland law apply in Minnesota. First is the MN Wetland Conservation Act which applies to all wetlands. Second are DNR rules which apply only to larger, generally open water, "public waters." Third is the Army Corps of Engineers rules which apply to "navigable waters of the US" which can include smaller wetlands that seem "un-navigable" in common language. All apply regardless of whether the property is private or public.

Go to **www.AnokaSWCD.org** and click the "Wetlands" tab before beginning a project in or near low areas. And remember…even an area that is dry today, or even most of the time, may legally be a wetland.

A message from the Lower Rum River Watershed Management Organization www.LRRWMO.org

LRRWMO Website

Description: The Lower Rum River Watershed Management Organization (LRRWMO) contracted the Anoka Conservation District (ACD) to design and maintain a website about the LRRWMO and the Lower Rum River watershed. The website has been in operation since 2003.

Purpose: To increase awareness of the LRRWMO and its programs. The website also provides tools and information that helps users better understand water resources issues in the area.

Location: LRRWMO.org

Results: Regular website updates occurred throughout the year. The LRRWMO website contains information about both the LRRWMO and about natural resources in the area. Information about the LRRWMO includes:

- a directory of board members,
- meeting minutes and agendas,
- watershed management plan and annual reports,
- descriptions of work that the organization is directing,
- highlighted projects.

LRRWMO Website Homepage

Financial Summary

ACD accounting is organized by program and not by customer. This allows us to track all of the labor, materials and overhead expenses for a program. We do not, however, know specifically which expenses are attributed to monitoring which sites. To enable reporting of expenses for monitoring conducted in a specific watershed, we divide the total program cost by the number of sites monitored to determine an annual cost per site. We then multiply the cost per site by the number of sites monitored for a customer.

Lower Rum River Watershed Financial Summary

Lower Rum River Watershed	WMO Asst (no charge)	Volunteer Precip	Reference Wetlands	Ob Well	Lake Level	Stream Water Quality	Student Biomonitoring	LRRWMO Admin	City Water Plan Reviews for WMOs	WMO Annual Rpts to State	LRRWMO Outreach/Promo	URRWMO Outreach/Promo	WMO Website Maintenance	Anoka Nat. Pres. Restoration	Rum River Stabilization	BMP Maintenance	Mississippi Riverbank Inventory - Ramsey	Shoreland NRBG	Rum River WRAPP	Anoka SRA (Rum River WRAPP)	Ramsey SRA (Rum River WRAPP)	Project Hours	Total
Revenues																							
LRRWMO	0	0	1725	0	1000	2240	825	0	2000	850	12700	0	585	0	0	0	0	0	0	0	0	534	22459
State	0	0	0	320	0	0	0	0	0	0	0	0	0	0	110000	0	0	0	38373	4289	3486	0	156468
Anoka Conservation District	0	0	88	0	0	0	0	70	331	0	0	0	0	0	0	0	0	0	0	0	0	0	489
Anoka Co. General Services	379	0	1176	0	0	0	0	0	0	0	0	0	0	1567	0	2481	0	0	853	45	61	0	6561
County Ag Preserves/Projects	0	0	0	0	0	0	384	0	0	0	0	0	0	0	69549	0	0	0	0	0	0	9325	79258
Regional/Local	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Service Fees	0	0	46	0	0	0	0	0	0	0	0	0	0	0	0	0	2873	0	0	0	0	3540	6459
BWSR Cons Delivery	0	0	0	0	271	0	46	1153	0	0	0	0	0	0	1363	0	0	0	0	0	0	0	2834
BWSR Cost Share TA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2555	0	0	0	0	0	0	0	2555
Local Water Planning	0	166	852	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1018
TOTAL	379	166	3887	320	1271	2240	1255	1223	2331	850	12700	0	585	1567	183467	2481	2873	0	39226	4334	3547	13398	278100
Expenses-																							
Capital Outlay/Equip	3	1	1110	3	11	10	11	11	20	1	72	0	3	14	163	21	25	0	52	37	31	101	1700
Personnel Salaries/Benefits	333	146	2378	282	1113	1035	1105	1077	2052	134	7365	0	275	1379	16652	2181	2529	0	5309	3815	3122	10354	62635
Overhead	21	9	152	18	71	66	71	69	131	9	472	0	18	88	1067	140	162	0	340	244	200	663	4012
Employee Training	2	1	15	2	7	7	7	7	13	1	47	0	2	9	106	14	16	0	34	24	20	66	399
Vehicle/Mileage	5	2	34	4	16	15	16	15	30	2	106	0	4	20	239	31	36	0	76	55	45	149	901
Rent	14	6	99	12	46	43	46	45	85	6	305	0	11	57	690	90	105	0	220	158	129	429	2596
Program Participants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122023	0	0	0	0	0	0	1635	123658
Program Supplies	0	0	99	0	7	492	0	0	0	0	649	0	0	0	42526	4	0	0	33195	0	0	0	76970
McKay Expenses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	379	166	3887	320	1271	1668	1255	1223	2331	152	9015	0	312	1567	183467	2481	2873	0	39226	4334	3547	13398	272871

Recommendations

- **Actively participate in the MPCA Rum River WRAPP (Watershed Restoration and Protection Plan) which will conclude in early 2017.** This WRAPP is an assessment of the entire Rum River watershed. This is an opportunity for the LRRWMO to prioritize and coordinate efforts with upstream entities and state agencies. TMDL studies for impaired waters, including Trott Brook, will be completed as part of this project.
- **Engage in the Upper Rum River WMO's watershed plan update** process in 2016.
- **Diagnose low dissolved oxygen in Trott Brook.** Diagnostic monitoring is complete and will be incorporated into the TMDL study for that stream. Local review is advised.
- **Install projects identified in the stormwater retrofitting studies for the Cities of Anoka and Ramsey.** These, which will be completed in 2016, will identify and rank projects that improve stormwater runoff before it is discharged to the Rum or Mississippi Rivers. The projects may be good candidates for State grants.
- **Implement water conservation measures** throughout the watershed and promote it metro-wide. Depletion of surficial water is a concern.
- **Continue lake level monitoring, especially on Round Lake** where residents have expressed concerns with levels. Other nearby lakes should be monitored for comparison and problems.