LOWER RUM RIVER WATERSHED MANAGEMENT ORGANIZATION

ANDOVER - ANOKA - COON RAPIDS - RAMSEY

2015 First Avenue • Anoka, MN 55303

TO: The Minnesota Board of Water and Soil Resources
FROM: Lower Rum River Watershed Management Organization
Steve Jankowski, Chairperson
DATE: May, 2010
SUBJECT: Annual Activity Report for Fiscal Year 2009
Begin Date: 2-1-09 End Date: 1-31-10

In response to Minnesota Board of Water and Soil Resources (BWSR) annual requirements, the Lower Rum River Watershed Management Organization (LRRWMO), created by a joint powers agreement, submits the following:

I. LIST BOARD MEMBERS, ADVISORS, EMPLOYEES AND CONSULTANTS

- *See Appendix A*

II. REPORTING YEAR'S WORK PLAN

A. LIST GOALS/OBJECTIVES IDENTIFIED IN THE REPORTING YEAR'S WORK PLAN:
B. LIST ACHIEVEMENTS FROM REPORTING YEAR'S WORK PLAN:
C. LIST THOSE ITEMS IDENTIFIED IN REPORTING YEAR'S WORK PLAN NOT ACCOMPLISHED, AND GIVE AN EXPLANATION OF WHY THEY COULDN'T BE ACCOMPLISHED:

GOAL: Adoption of Third Generation Water Management Plan.

ACHIEVEMENT: *In 2008, the LRRWMO retained the services of Barr Engineering for the update of the Third Generation Water Management Plan. The Plan is in draft form and the formal review process has not yet started. It is anticipated the Third Generation Water Management Plan will be adopted during fiscal 2010.* ***Objective pending.***

GOAL: Raise public awareness of LRRWMO by: Posting meeting agenda and inviting public to participate.

ACHIEVEMENT: ***Objective reached.***

- *The LRRWMO maintains a website where meeting announcements, agendas, and minutes are posted. Meeting agendas are also posted in a public place and indicate "PUBLIC WELCOME TO ATTEND."*
- *The City of Ramsey held an Environmental Expo and Tree Sale on April 25, 2009, that included a number of exhibitors, each representing a 'green' industry. Several presentations*

were made and information provided on the topics of recycling, conservation, energy conservation, renewable/alternative energy, 'green' cleaning products, and runoff models. The Expo was educational in format, including presentations on energy conservation tips and energy efficient landscaping.

GOAL: Conduct a Rum River canoe trip in June of 2009 with Board Members and DNR.

ACHIEVEMENT: *On June 25, 2009, the LRRWMO conducted a canoe trip of the Rum River to inspect for areas of erosion and Code violations. The violations observed were reported to the pertinent member city for compliance action.* ***Objective reached.***

GOAL: Maintain web site created by the Anoka Conservation District that details the WMO's contact information, boundaries, wetlands regulatory information, meeting agendas and minutes, permit process, and testing and biomonitoring data.

ACHIEVEMENT: ***Objective reached.***
Website is: www.AnokaNaturalResources.com/LRRWMO

GOAL: Contract with the Anoka Conservation District (ACD) in 2010 to conduct lake level monitoring (Itasca, Round, and Rogers Lakes), lake water quality monitoring (Round Lake), stream biomonitoring with students from Anoka High School (Rum River), river water quality monitoring in conjunction with the ACD and Upper Rum River WMO (Rum River), and hydrology monitoring in one reference wetland (next to the Connexus Energy office building in Ramsey).

ACHIEVEMENT: *This data has been entered into the ACD data base and is included in the ACD annual report, which is attached as Appendix B.* ***Objective reached.***

GOAL: Encourage water quality improvement projects by continuing to offer water quality improvement cost share grants to residents.

ACHIEVEMENT: *The LRRWMO contributed $1,000 in 2006 and $1,000 in 2009 to a cost share grant fund administered by the Anoka Conservation District (ACD). Funds were not expended until 2008 when $376.37 was expended for two projects, both involving cedar tree riverbank stabilizations on the Rum River. In 2009, $52.05 was expended for Rusin Rum riverbank bluff stabilization. See page 4-25 of Appendix B for additional detail.* ***Objective reached.***

GOAL: Increase public involvement with LRRWMO by: Continue to identify residents to assist with lake monitoring in conjunction with the Anoka Conservation District.

ACHIEVEMENT: *The LRRWMO has worked in conjunction with the ACD to identify residents who monitor water levels on Round, Rogers, and Itasca Lakes.* ***Objective reached.***

GOAL: Continue effort in the enforcement of the 1991 Wetland Conservation Act as the Local Governmental Unit (LGU) for the cities of Andover, Anoka, and Ramsey

within the LRRWMO jurisdiction; Coon Rapids has assumed its own LGU authority.

ACHIEVEMENT: ***Objective reached.***

- *On June 19, 2008, LRRWMO Chair Steve Jankowski was appointed as the LRRWMO representative to the Upper Mississippi River Bacteria Total Maximum Daily Load (TMDL) Project Stakeholder Advisory Team. Board Member Carl Anderson was appointed as the alternate.*
- *The LRRWMO continues to monitor enforcement of the 1991 Wetland Conservation Act as the LGU for the cities of Andover, Anoka, and Ramsey.*

III. PROJECTED WORK PLAN FOR UP-COMING FISCAL YEAR

A. LIST MAIN GOALS AND OBJECTIVES OF YOUR WORK PLAN FOR THE NEXT FISCAL YEAR:

1. *Adoption of Third Generation Water Management Plan.*
2. *Raise public awareness of LRRWMO by: Posting meeting agenda and inviting public to participate.*
3. *Conduct a Rum River canoe trip in June of 2010 with Board Members and DNR.*
4. *Maintain web site created by the Anoka Conservation District that details the WMO's contact information, boundaries, wetlands regulatory information, meeting agendas and minutes, permit process, and testing and biomonitoring data.*
5. *Contract with the Anoka Conservation District in 2010 for lake level monitoring (Itasca, Round, and Rogers Lakes), lake water quality monitoring (Rogers Lake), biomonitoring with Anoka High School students (Rum River), and hydrology monitoring in one reference wetland.*
6. *Encourage water quality improvement projects by continuing to offer water quality improvement cost share grants to residents.*
7. *Increase public involvement with LRRWMO by: Continuing to identify residents to assist with lake monitoring in conjunction with the Anoka Conservation District.*
8. *Continue effort in the enforcement of the 1991 Wetland Conservation Act as the Local Governmental Unit (LGU) for the cities of Andover, Anoka, and Ramsey within the LRRWMO jurisdiction; Coon Rapids has assumed its own LGU authority.*

IV. SUMMARY OF PERMITS, PROJECT REVIEWS, VARIANCES, AND ENFORCEMENT ACTIONS

A. TOTAL NUMBER AND SUMMARY OF THE TYPES OF PERMITS ISSUED AND DENIED BY THE WMO:

- *See Appendix C.*

B. TOTAL NUMBER AND SUMMARY OF THE TYPES OF PROJECTS REVIEWED BY THE WMO:

- *See Appendix C.*

C. SUMMARY OF VARIANCES TO PLAN OR LOCAL PLAN (LIST TYPES AND GRANTOR):

- *No variances were issued. Plans/proposals were required to meet the requirements of the LRRWMO and/or other state agencies.*

D. SUMMARY OF ENFORCEMENT ACTIONS TAKEN RELATIVE TO PLAN OR LOCAL PLAN (LIST TYPES AND LGU):

- *No enforcement actions were taken by the LRRWMO. The Minnesota Department of Natural Resources (DNR) issued no Cease and Desist Orders within the LRRWMO jurisdiction.*

V. SUMMARY OF WATER QUALITY MONITORING DATA

ATTACH YOUR MET COUNCIL SUMMARY REPORT OR BRIEFLY SUMMARIZE, WHICH BODIES OF WATER WERE MONITORED, WHAT PARAMETERS WERE MEASURED, THE FREQUENCY OF MONITORING AND WHO COLLECTED THE DATA. INDICATE ANY TRENDS NOTED IF AN ANALYSIS OF THE DATA WAS CONDUCTED:

Water quality monitoring data is administered by the Anoka Conservation District (ACD). Appendix B is a report of water monitoring work completed in 2009.

VI. STATUS OF LOCAL PLANS ADOPTION

A. LIST OF LOCAL PLANS APPROVED BY WMO AND DATE OF APPROVAL:

Andover:	*Approved as of 2005*
Anoka:	*Approved as of 2001*
Coon Rapids:	*Approved as of 2004*
Ramsey:	*Approved as of 2008*

B. DATE DUE OF LOCAL PLANS:

Andover:	*As determined by BWSR*
Anoka:	*As determined by BWSR*
Coon Rapids:	*As determined by BWSR*
Ramsey:	*As determined by BWSR*

VII. SUMMARY OF WRITTEN CORRESPONDENCE

ATTACH A COPY OF THE WRITTEN COMMUNICATION FOR GENERAL CIRCULATION THE WMO USED TO ACHIEVE COMPLIANCE WITH MS 103B.227, SUBD. 4

- *Yes. See Appendix D.*

VIII. BIENNIAL SOLICITATION FOR PROFESSIONAL SERVICES

WAS THE ORGANIZATION REQUIRED TO SOLICIT PROPOSALS FOR PROFESSIONAL, ENGINEERING AND LEGAL SERVICES THIS YEAR?

- *Requests for Proposals will be published following adoption of the Third Generation Plan.* ***Objective pending.***

IX. STATUS OF LOCALLY ADOPTED WETLAND BANKING PROGRAM

SUMMARIZE ANY WETLAND REPLACEMENT IN WMO DONE THROUGH THE USE OF WETLAND BANKING CREDITS, BANKING CREDITS ESTABLISHED, CREDIT BALANCES, AND WHAT LGUs APPROVED SUCH REPLACEMENTS:

- *The LRRWMO, in July of 1992, approved a mitigation policy whereby Anoka County will be allowed to accrue up to one acre of wetland losses; at which time that entity would be required to replace the total accrued lost wetland acreage. However, a ranking system for providing wetland area greater than required is pending.*
- *Only one developer, Russell Johanson, has qualified and banked approximately 0.6864 acres of excess wetland. A certain amount of those banked credits have been purchased by an adjacent property owner.*
- *The LRRWMO, on July 17, 2008, accepted the recommendation of TEP on certification of the Alpine Park wetland bank for the maximum amount allowable by BWSR (0.38 acres of new wetland credit and 0.38 acres of upland buffer) and ACOE (0.38 acres of wetland credit and 0.50 acres of upland buffer).*

X. ANNUAL BUDGET SUMMARY FOR CURRENT REPORTING YEAR

- *See Appendix E.*

LOWER RUM RIVER WATERSHED MANAGEMENT ORGANIZATION

ANDOVER - ANOKA - COON RAPIDS - RAMSEY

2015 First Avenue • Anoka, MN 55303

CITY OF ANDOVER	**TELEPHONE**
Todd Haas (Secretary)	(763) 767-5131
Assistant Public Works Director	FAX: (763) 755-8923
Andover City Hall	
1685 Crosstown Blvd. NW	
Andover, MN 55304	thaas@ci.andover.mn.us
Bruce Perry (alternate)	(763) 427-4485
17337 Roanoke Street NW	
Andover, MN 55304	bpmpandover@aol.com

CITY OF ANOKA	
Carl Anderson (Treasurer)	Cel: (612) 518-5317
City Councilmember	(763) 427-2262
1625 S. Second Avenue	
Anoka, MN 55303	carl.anderson.eng@comcast.net
Russ Zastrow (alternate)	(763) 576-2782
Engineering Technician	
City of Anoka	
2015 First Avenue	
Anoka, MN 55303	rzastrow@ci.anoka.mn.us

CITY OF COON RAPIDS	
Doug Vierzba (Vice Chair)	(763) 767-6465
City Engineer	FAX: (763) 767-6573
Coon Rapids City Hall	
11155 Robinson Drive	
Coon Rapids, MN 55433	vierzba@ci.coon-rapids.mn.us
Steve Gatlin (alternate)	
Director of Public Works	(763) 767-6458
Coon Rapids City Hall	FAX: (763) 767-6573
11155 Robinson Drive	
Coon Rapids, MN 55433-3761	

CITY OF RAMSEY	
Steve Jankowski (Chair)	(763) 433-9826
City Engineer	FAX: (763) 427-5543
Ramsey City Hall	
7550 Sunwood Drive	sjankowski@ci.ramsey.mn.us
Ramsey, MN 55303	
Mat Look (alternate)	Home: (763) 323-6626
City Councilmember	
5635 142nd Avenue NW	
Ramsey, MN 55303	Matlook@looksigns.com

ATTORNEY	**TELEPHONE**
Charlie LeFevere	(612) 337-9215
Kennedy & Graven	FAX: (612) 337-9310
470 US Bank Plaza	
200 South Sixth Street	
Minneapolis, MN 55402	clefevere@kennedy-graven.com
Legal Assistant, Pat	(612) 337-9278

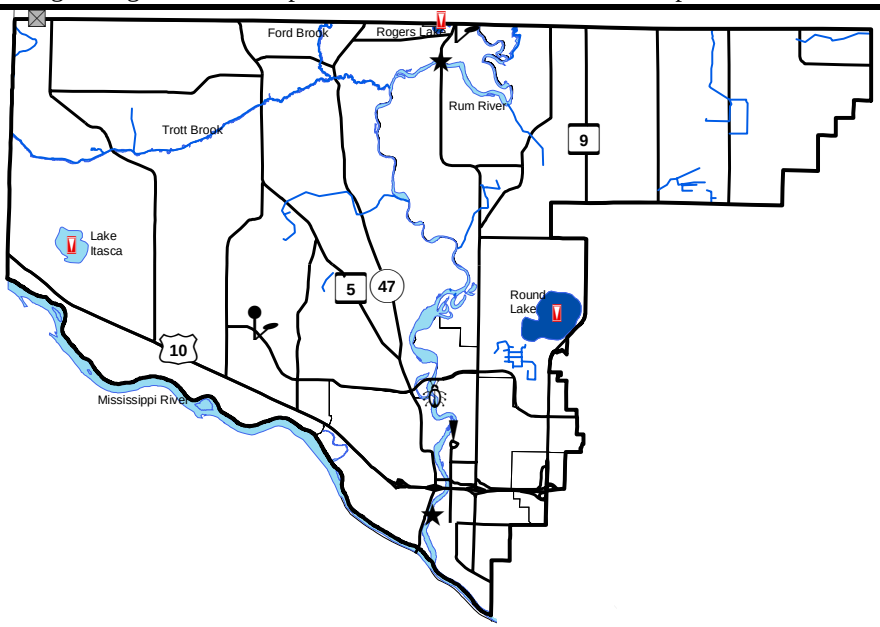
CONSULTING ENGINEERS	
Bob Obermeyer	(952) 832-2857
Barr Engineering	FAX: (952) 832-2601
4700 West 77th Street	
Minneapolis, MN 55435	http://www.barr.com
Mark Jacobson	(952) 832-2610

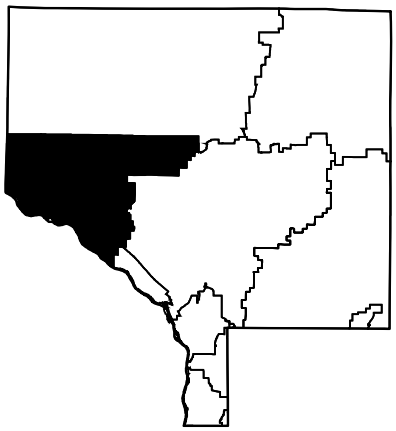
DEPUTY TREASURER	
Lori Yager	(763) 576-2771
Finance Director	FAX: (763) 576-2777
Anoka City Hall	
2015 First Avenue N	lyager@ci.anoka.mn.us
Anoka, MN 55303	

ADMINISTRATIVE SECRETARY	
Carla Wirth	(612) 251-8999
TimeSaver Off Site Secretarial, Inc.	FAX: (507) 931-1668
28601 Hub Drive	
Madison Lake, MN 56063	timesaver02@aol.com

DRAFT 2009 RESULTS
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, MGS = MN Geological Survey





2009 Monitoring Sites

- Groundwater Hydrology (Obwells)
- Wetland Hydrology
- Lake Levels
- Lake Water Quality
- Stream Water Quality
- Stream Biomonitoring
- Precipitation

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.

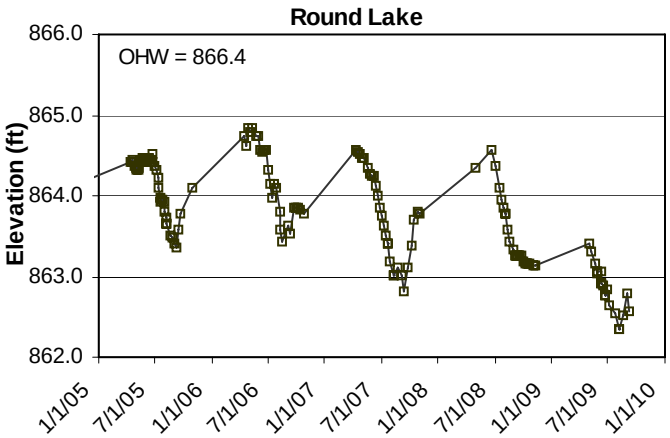
Locations: Lake Itasca, Round Lake, Rogers Lake

Results: Water levels were measured 19 to 27 times, despite difficulties caused by record or near-record low water due to drought. Water levels on all three lakes dropped until late July when more substantial rainfall began. Round Lake reached a record low. Itasca Lake was 0.62 ft higher than its record low from 2000. Rogers Lake was still about two feet higher than its record low, but over three feet lower than the record high. Water levels became so low that volunteers were unable to read the lake gauge with binoculars, and Anoka Conservation District staff began taking readings by trudging through the near-shore muck in chest waters.

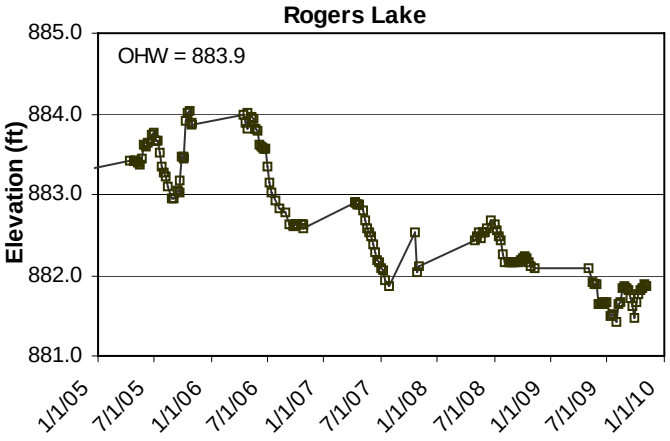
Ordinary High Water Levels (OHW), the elevation below which a DNR permit is needed to perform work, are listed for each lake on the graph.

Round Lake levels and others receded dramatically from April 20009 when the gauge was placed to June when this photo was taken.

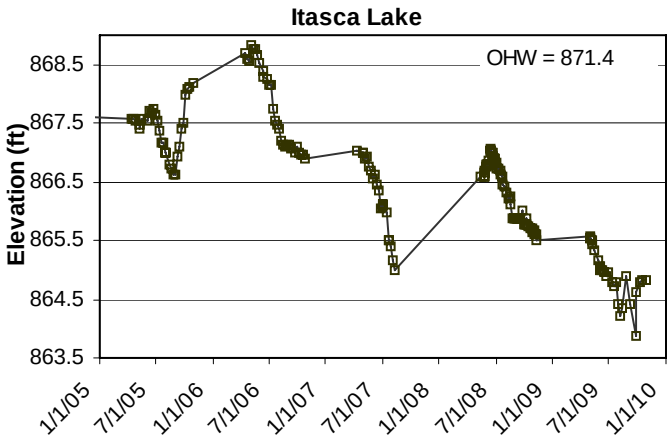
Round Lake Levels 2005-2009



Rogers Lake Levels 2005-2009



Lake Itasca Levels 2005-2009



Lower Rum River Watershed
Lake Levels Summary

Lake	Year	Average	Min	Max
Itasca	2005	867.39	866.61	868.19
	2006	867.81	866.90	869.77
	2007	866.25	865.01	867.03
	2008	866.36	865.50	867.05
	2009	864.90	863.86	865.57
Rogers	2005	883.48	882.95	884.04
	2006	883.28	882.59	884.02
	2007	882.19	881.79	882.91
	2008	882.33	882.09	882.69
	2009	881.73	881.43	882.08
Round	2005	864.14	863.37	864.51
	2006	864.21	863.44	864.85
	2007	864.21	863.44	864.85
	2008	863.52	863.09	864.54
	2009	862.84	862.35	863.41

Lake Water Quality

Description: May through September twice-monthly monitoring of the following parameters: total phosphorus, chlorophyll-a, Secchi transparency, dissolved oxygen, turbidity, temperature, conductivity, pH, and salinity.

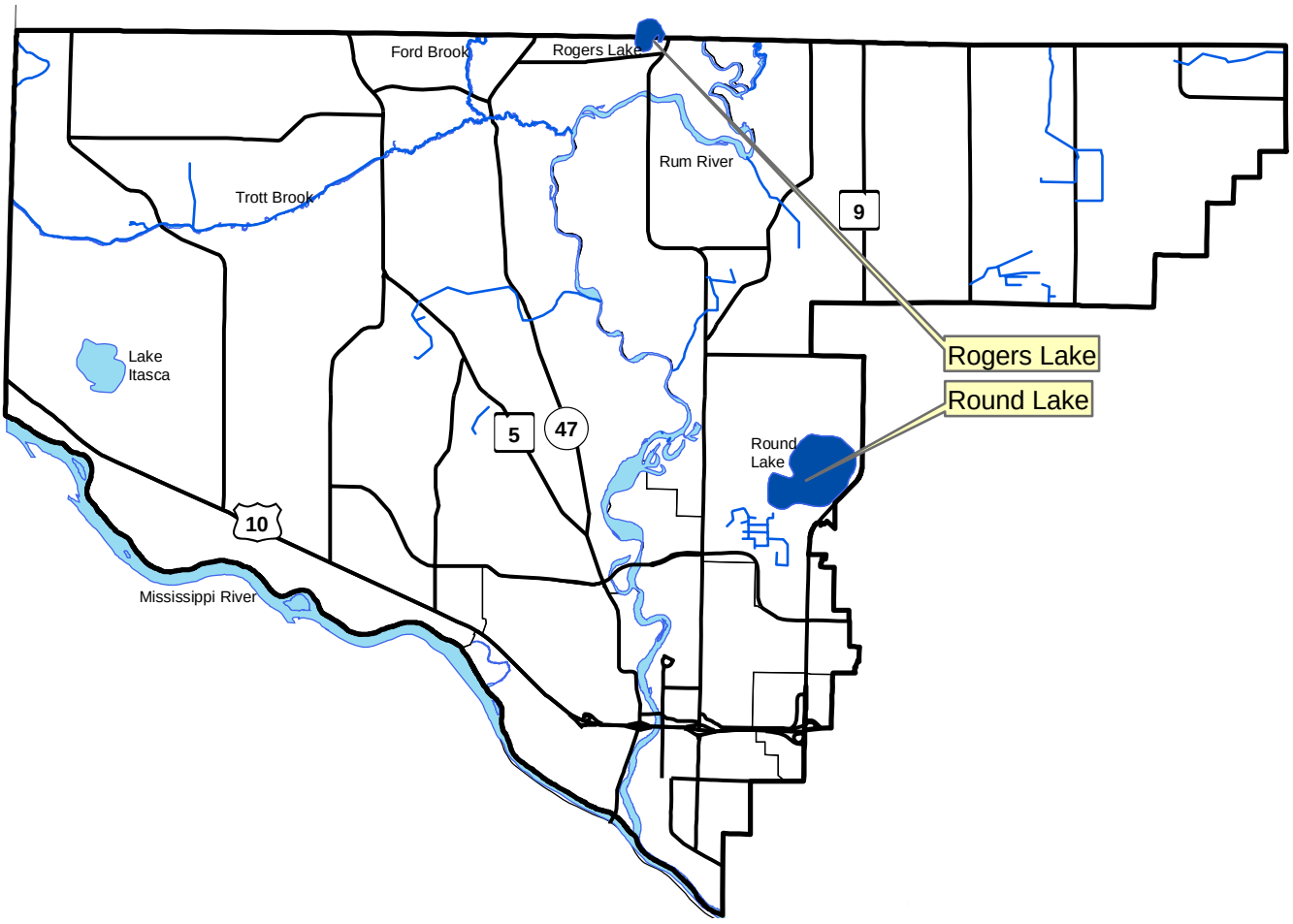
Purpose: To detect water quality trends and diagnose the cause of changes.

Locations: Rogers Lake

Round Lake

Results: Detailed data for each lake are provided on the following pages, including summaries of historical conditions and trend analysis. Previous years' data are available from the ACD. Refer to Chapter 1 for additional information on interpreting the data and on lake dynamics.

Lower Rum River Watershed Lake Water Quality Monitoring Sites



Rogers Lake

Cities of Oak Grove, Ramsey, and Nowthen, LAKE ID # 03-0104

Background

Rogers Lake is in west-central Anoka County, and lies partially within the jurisdictional areas of both the Lower and Upper Rum River Watershed Management Organizations. It has a surface area of 40 acres and a maximum depth of 6 feet. The shoreline is about 1/3 developed, primarily on the western shore. There are no streams of any consequence entering or leaving this lake; it is an isolated basin with a small watershed. There is no public access. Rogers Lake is designated as "impaired" for excess nutrients by the MPCA.

Water Quality Results

In 2009 Rogers Lake received an overall B letter grade for water quality, but there are ecological concerns about the lake. The lake's condition has changed significantly within the last 2-4 years. The water became clearer and plant growth exploded between 2006 and 2008. This condition continued in 2009.

In 2006 total phosphorus was high (averaged 110 ug/L), the water was brown and turbid (average 12 FNRU), and algae levels were relatively high (average chlorophyll-a 38.5 mg/L). Plants were limited by the turbid water, and ACD staff estimated 40% of the lake had plants growing to the surface. Floating-leaved plant species were most abundant, probably because light levels were low below the surface. Other monitored years before 2006 had better water quality, but similar aquatic plant growth.

In 2008 and 2009 water quality was notably better and plant growth dramatically increased. In 2008 average phosphorus was 32 ug/L, better than the state water quality standard of 40 ug/L. In 2009 average phosphorus was 50 ug/L, but this was driven by a single high reading of 170 ug/L. Excluding that high reading the average phosphorus in 2009 was 37 ug/L. Chlorophyll-a was low in 2008 (12.3 ug/L) and even lower in 2009 (7.1 ug/L). The water was clear in both years (average turbidity 3 FNRU both years). Plants grew densely and to the surface across 95% of the lake. The entire water column was filled with plants. Species included curly-leaf pondweed, large-leaf pondweed, floating-leaf pondweed, water shield, and lilies. Large-leaf pondweed was most abundant. Curly-leaf pondweed was least abundant.

The abundance of plants is benefiting some aspects of water quality but negatively affecting recreation and the fishery. Increased plant growth is consuming phosphorus, out-competing algae, and minimizing sediment disturbance so the water is clearer. However the abundance of plants eliminates almost all boating, swimming and fishing. Decomposition of the abundant plants consumes oxygen, depleting it below levels needed by most fish. By early June dissolved oxygen levels dropped below 4 mg/L. Dissolved oxygen levels decreased further later in summer, remaining below 2 mg/L for over three months. No dead fish were seen, but a resident said similar conditions occurred in 2007, likely killing most fish at that time. Schools of 1" bullheads and tadpoles were the only aquatic animals seen in 2009.

The water quality in 2008-09 was not unusual for this lake but the abundance of plants was unusual. Water quality records from 1998, 2000, and 2003 are similar to 2008 and 2009. But a review of aerial photos shows that before 2007 there was much less plant growth on the lake (see photos below). In 2000, 2003, and 2006 aerial photos plants grew to the surface on <40% of the lake. Similar or less plant growth is seen in 1938, 1953, 1964, and 1970 aerial photos. In 2008-09 plants covered 95% of the lake almost the entire open water season.

Trend Analysis

Six years of water quality monitoring have been conducted by the Anoka Conservation District and Secchi depths were taken by citizens one other year. This is not enough data to perform a trend analysis.

Discussion

In recent years Rogers Lake has traded one problem for another. In 2006 and earlier the lake had high phosphorus, algae, and turbity. In more recent years water has been clear, but aquatic plants have increased many-fold. This has created recreational and low dissolved oxygen problems. Generally, a rich aquatic plant community is desirable and healthy in a shallow lake, but here it has become excessive and problematic.

The reason for the explosion in aquatic plant growth is not clear. While plant growth is expected to increase with clearer water, there were no changes in the watershed or lake management that would have created clearer water.

The abundant plant species in Rogers Lake are not generally aggressive or problematic in other lakes. Low water levels, cooler than usual spring weather in consecutive years, and past illegal herbicide treatments are possible reasons for vegetation changes in the lake.

Spring plant management should be considered for Rogers Lake. The purpose should be to reduce spring plant growth as a way of reducing the amount of decaying plant material later in summer. This should result in higher summer dissolved oxygen. It will also increase open water areas for recreation, such as canoeing. It should not be designed to eliminate plants; plants are essential to the health of shallow lakes.

No more than 15% of the lake should be treated per year and treatments should be restricted to early spring before plants have grown to nuisance levels. Treatments larger than 15% of the lake are not allowed by the MN DNR because this risks creating an environment where algae outcompete large plants, converting the lake back into a turbid condition. Treating larger areas or later in the year would kill a large mass of plants, resulting in decomposition that will keep dissolved oxygen low. The best plant treatment strategy will include small, dispersed, coordinated treatment areas early in spring.

Any treatments will likely need to be led by and paid by residents around the lake because the lake has no public access. MN DNR aquatic plant management permits will be required. Anoka Conservation District staff consulted with MN DNR aquatic plant management staff about permitted plant treatments for Rogers Lake. Residents can apply for aquatic plant management permits individually or as a group. A coordinated group approach seems most efficient and may allow creation of connected open water areas that would better serve uses like canoing. The maximum treatment area is generally 100 feet per property, or 50% of the property's frontage, whichever is smaller. More restrictive policies are in place for floating-leaf plants, such as lilies, and this may limit treatable area on Rogers Lake. The DNR can assist in determining what treatments would be allowed before an application is submitted, and will visit the lake as part of the permitting process.

Aerial photos showing increase in aquatic plants, particularly between 2006 and 2008. Light green areas are aquatic plants. Black areas are open water.

2000 2003 2006 2008

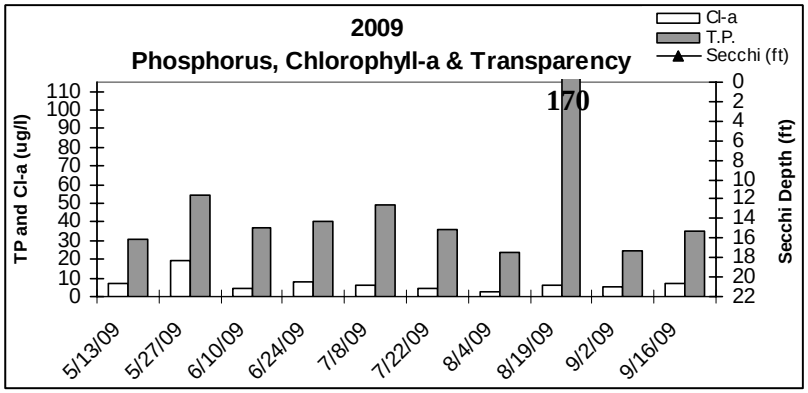
Photos of aquatic plant growth in Rogers Lake.

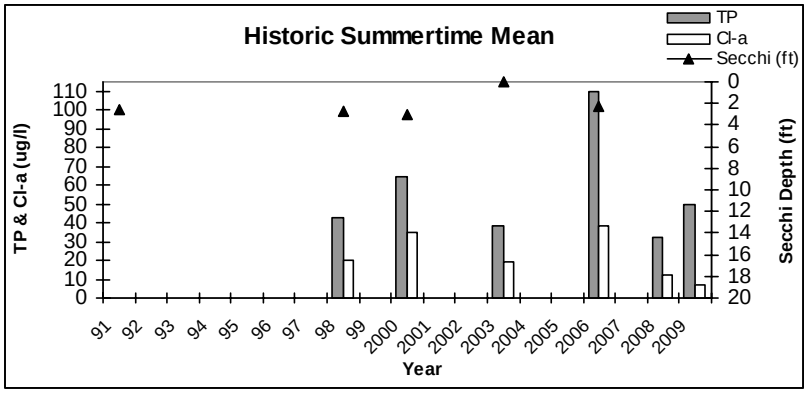
May 27, 2009 June 10, 2008 August 4, 2009 Decomposing large-leaf pondweed.

Rogers Lake Water Quality Results

Rogers Lake 2009			5/13/2009 10:50	5/27/2009 10:30	6/10/2009 10:10	6/24/2009 10:15	7/8/2009 10:15	7/22/2009 10:40	8/4/2009 10:25	8/19/2009 9:45	9/2/2009 10:15	9/16/2009 9:20			
	Units	R.L.*	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Average	Min	Max
pH		0.1	7.17	6.47	6.93	5.81	5.73	5.76	5.60	5.64	5.30	5.52	5.99	5.30	7.17
Conductivity	mS/cm	0.010	0.780	0.083	0.075	0.074	0.069	0.061	0.059	0.062	0.061	0.063	0.139	0.059	0.780
Turbidity	FNRU	1	4	3	0	3	7	2	3	2	4	3	3	0	7
D.O.	mg/L	0.01	7.78	4.03	2.81	1.39	1.16	1.13	0.21	1.63	1.25	2.22	2.36	0.21	7.78
D.O.	%	1	78%	42%	26%	16%	13%	10%	2%	18%	12%	20%	24%	2%	78%
Temp.	°C	0.1	16.0	17.6	14.9	24.5	21.6	19.9	21.0	20.2	18.0	19.4	19.3	14.9	24.5
Temp.	°F	0.1	60.8	63.7	58.8	76.1	70.9	67.8	69.8	68.4	64.4	66.9	66.8	58.8	76.1
Salinity	%	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cl-a	ug/L	1	7.4	19.4	4.7	7.5	5.8	4.8	2.3	6.2	5.0	7.4	7.1	2.3	19.4
T.P.	mg/L	0.005	0.031	0.054	0.037	0.040	0.049	0.036	0.024	0.170	0.025	0.035	0.050	0.024	0.170
T.P.	ug/L	5	31	54	37	40	49	36	24	170	25	35	50	24	170
Secchi	ft	0.1	>max depth	>4.8	>4.7	>4	>4	>4	>4	>4	>4	>4			
Secchi	m	0.1	>max depth	>1.5	>1.4	>1.2	>1.2	>1.2	>1.2	>1.2	>1.2	>1.2			
Field Observations															
Physical			1.0	1.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.0	2.0
Recreational			1.0	1.5	2.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0	1.0	5.0

*reporting limit





Rogers Lake Historical Means

Agency	CAMP	ACD	ACD	ACD	ACD	ACD	ACD
Year	91	98	2000	2003	2006	2008	2009
TP (ug/L)		42.70	64.70	38.4	110.0	32	50
Cl-a (ug/L)		20.30	35.10	19.4	38.5	12.3	7.1
Secchi (m)	0.81	0.85	0.91	n/a	0.7	n/a	n/a
Secchi (ft)	2.7	2.8	3.00	n/a	2.3	n/a	n/a

Carlson's Trophic State Index

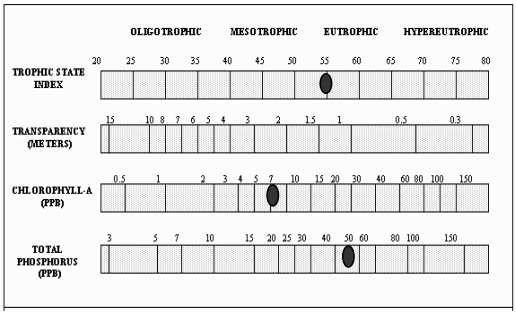
TSIP		58	62	57	72	54	61
TSIC		60	62	60	67	55	50
TSIS	63	62	63	n/a	65	n/a	n/a
TSI		59*	62*	58*	68	55*	55*

Rogers Lake Water Quality Report Card

Year	91	98	2000	2003	2006	2008	2009
TP		C	C	C	D	B-	C
Cl-a		C	C	B	C	B	A
Secchi	D	n/a*	n/a*	n/a*	D-	n/a*	n/a*
Overall		**C**	**C**	**B**	**D**	**B**	**B**

*Secchi transparency not included because as secchi depth exceeded lake depth

Carlson's Trophic State Index



Round Lake

City of Andover, Lake ID # 03-0089

Background

Round Lake is located in southwest Anoka County. It has a surface area of 220 acres and maximum depth of 19 feet, though the majority of the lake is less than 4 feet deep. The lake is surrounded by a cattails and has submerged vegetation throughout, including carpets of the macrophyte-like algae Chara. This lake has a small watershed, with a watershed to surface area ratio of less than 10:1. Public access is from a dirt ramp on the lake's southeast side. Almost no boating and only wintertime fishing occurs. Wildlife usage of the lake is high.

2009 Results

In 2009 Round Lake had average water quality compared to other lakes in this region (NCHF Ecoregion), receiving an overall C letter grade. The lake was slightly eutrophic. Average total phosphorus and chlorophyll-a were the highest of the seven monitored years, at 45 ug/L and 16.2 ug/L, respectively. Average Secchi transparency was 5.5 feet, the second poorest of monitored years (1998 was poorer).

In 2009 the lake experienced a spring algae bloom. In mid-May chlorophyll-a was the highest of the year at 47 ug/L. Yet Anoka Conservation District staff noted the water was "fairly clear" and there was only "some algae." This suggests the sample may have not been representative. From late May through August algae levels were lower, then increasing through August and September. Secchi transparency followed, starting as clear at 10 feet in June and reduced to 3-4 feet in August and September. Total phosphorus remained fairly steady throughout 2009 at about 40 ug/L, but increased slightly to around 55 ug/L in late August and September.

Trend Analysis

Six years of water quality monitoring have been conducted by the Anoka Conservation District (1998-2000, '03, '05, '07, and '09). This is not enough data for a powerful statistical test of trend analysis. If the test is attempted it does find a significant declining water quality trend (repeated measures MANOVA with response variables TP, Cl-a, and Secchi depth, $F_{2,4}$=8.00, p=0.04). Examined individually, all three parameters are trending poorer but the relationship is weak for transparency (R^2=0.04) and chlorophyll-a (R^2=0.15), and strongest for TP (R^2=0.57).

Discussion

There are few obvious impacts to the lake. Shoreline development and recreational use is light and the lake has a healthy aquatic plant community. Because long term data are lacking for this lake it is unclear what is "normal" water quality, but poorer recent years are concerning. Possible factors affecting water quality include low water levels and expansion of Round Lake Boulevard, but evidence that this is the case is weak.

The low water levels could be negatively affecting water quality by making the unconsolidated bottom sediments more susceptible to wind mixing. These sediments could be a source of non-algal turbidity or phosphorus. Water depths above the muck were less than two feet over approximately 80% of the basin in 2009.

Comparing 2000 and 2009 allows some insight into the effect of low water on water quality because both years had low water. 2009 lake levels were lowest, with an average of 862.84 ft and minimum of 862.35 ft. In 2000 water levels reached a similar low of 862.37 ft, but averaged a foot higher at 863.89. Water quality was much poorer in 2009 than 2000 (total phosphorus 24 vs 45 ug/L, chlorophyll-a 3.7 vs 16 ug/L, Secchi transparency 8.8 vs 5.5 ft). TP, chlorophyll-a, and Secchi transparency did all become poorer in late summer 2000 when water levels dropped lowest, but it is difficult to determine if this was due to water levels or normal seasonal variation. Therefore, it seems possible that low water contributed to poor water quality, but it is not likely the sole cause.

Another possible impact on water quality is the expansion of Round Lake Boulevard in summer 2004. This road is 100-300 feet from the lake along the entire eastern shore. It was expanded from two lanes to four. Several new stormwater treatment basins were installed next to the roadway to help protect the lake. Yet some residents were concerned. Water quality has gotten progressively poorer each of the three monitored years since the road was expanded. It seems unlikely that the road would be responsible for this water quality change given the practices in place to protect the lake and the fact that surrounding areas are residential, but it cannot be ruled out.

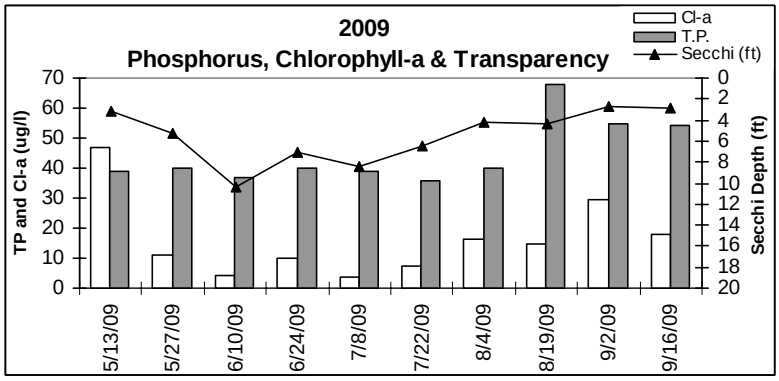
In the end, the reason for poorer water quality in recent years is uncertain. There are no apparent management changes that should be made. This leaves future monitoring and re-evaluation as the only recommendation.

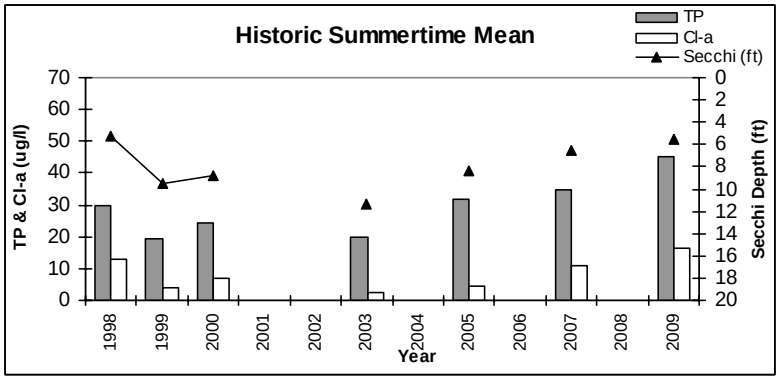
2009 Round Lake Water Quality Data

Round Lake 2009		Date	5/13/2009	5/27/2009	6/10/2009	6/24/2009	7/8/2009	7/22/2009	8/4/2009	8/19/2009	9/2/2009	9/16/2009			
		Time	10:10	9:30	9:35	9:35	9:35	10:00	9:45	9:00	9:30	8:45			
	Units	R.L.*	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Average	Min	Max
pH		0.1	8.07	7.61	7.75	8.20	8.41	8.44	8.16	7.91	8.54	8.09	8.12	7.61	8.54
Conductivity	mS/cm	0.010	0.375	0.444	0.429	0.417	0.383	0.397	0.375	0.410	0.377	0.415	0.402	0.375	0.444
Turbidity	FNRU	1	13.00	7.00	0.00	3.00	2.00	3.00	8.00	5.00	19.00	14.00	7	0	19
D.O.	mg/L	0.01	8.95	6.41	10.23	8.09	8.77	9.06	8.77	7.26	10.79	7.62	8.60	6.41	10.79
D.O.	%	1	89%	65%	103%	102%	103%	103%	102%	94%	119%	88%	97%	65%	119%
Temp.	°C	0.1	15.2	16.7	15.8	27.4	23.9	21.8	22.8	22.7	20.4	22.7	20.94	15.20	27.40
Temp.	°F	0.1	59.4	62.1	60.4	81.3	75.0	71.2	73.0	72.9	68.7	72.9	69.7	59.4	81.3
Salinity	%	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Cl-a	ug/L	1	46.7	10.8	4.1	10.2	3.7	7.6	16.4	14.9	29.6	17.8	16.2	3.7	46.7
T.P.	mg/L	0.005	0.039	0.040	0.037	0.040	0.039	0.036	0.040	0.068	0.055	0.054	0.045	0.036	0.068
T.P.	ug/L	5	39	40	37	40	39	36	40	68	55	54	45	36	68
Secchi	ft	0.1	3.1	5.3	10.4	7.0	8.4	6.4	4.3	4.3	2.8	2.9	5.5	2.8	10.4
Secchi	m	0.1	0.9	1.6	3.2	2.1	2.6	2.0	1.3	1.3	0.8	0.9	1.7	0.8	3.2
Field Observations															
Physical			2.00	2.50	2.00	2.00	2.00	3.00	3.50	3.00	3.00	3.50	2.7	2.0	3.5
Recreational			2.00	2.50	2.00	2.00	2.00	3.00	3.50	3.00	3.00	3.50	2.7	2.0	3.5

*reporting limit

Round Lake Water Quality Results





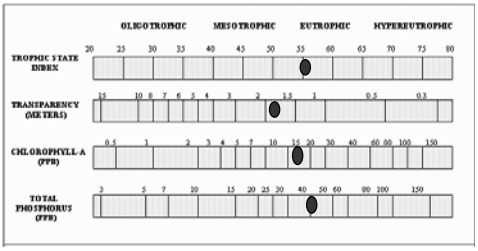
Round Lake Summertime Historic Mean

Agency	ACD	ACD	ACD	ACD	ACD	ACD	ACD
Year	1998	1999	2000	2003	2005	2007	2009
TP	29.8	19.6	24.1	20.0	32.0	34.7	45.0
Cl-a	12.8	3.7	6.9	2.4	4.6	10.9	16.2
Secchi (m)	1.4	2.9	2.7	3.4	2.5	2.0	1.7
Secchi (ft)	5.2	9.5	8.8	11.3	8.3	6.5	5.5
Carlson's Tropic State Indices							
TSIP	53	47	50	47	54	55	59
TSIC	56	44	48	39	46	54	58
TSIS	55	45	46	42	47	50	52
TSI	55	45	48	43	49	53	56

Round Lake Water Quality Report Card

Year	98	99	2000	2003	2005	2007	2009
TP	B	A	B	A	B	C	C
Cl-a	B	A	A	A	A	B+	B
Secchi	C	B	B	A	B	C	C
Overall	**B**	**A**	**B**	**A**	**B**	**C**	**C**

Carlson's Trophic State Index



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.

Locations: Rum River behind Anoka High School, south side of Industry Ave, 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

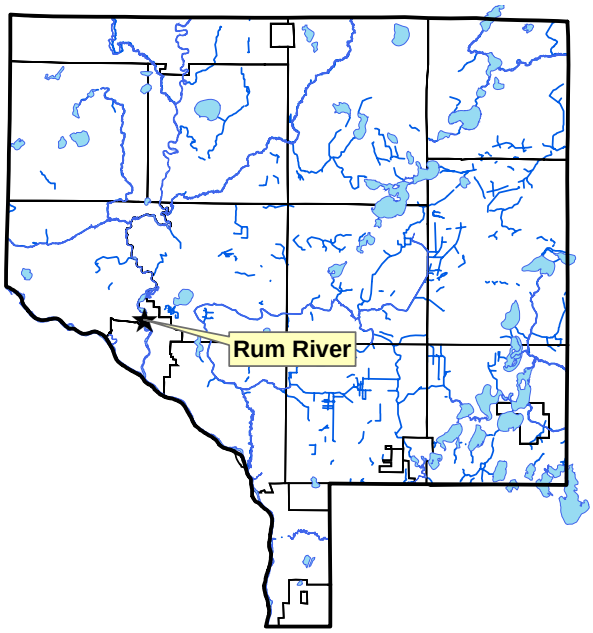
By Anoka High School in 2009

Monitored Since

2001

Student Involvement

113 students in 2009, approx 373 since 2001



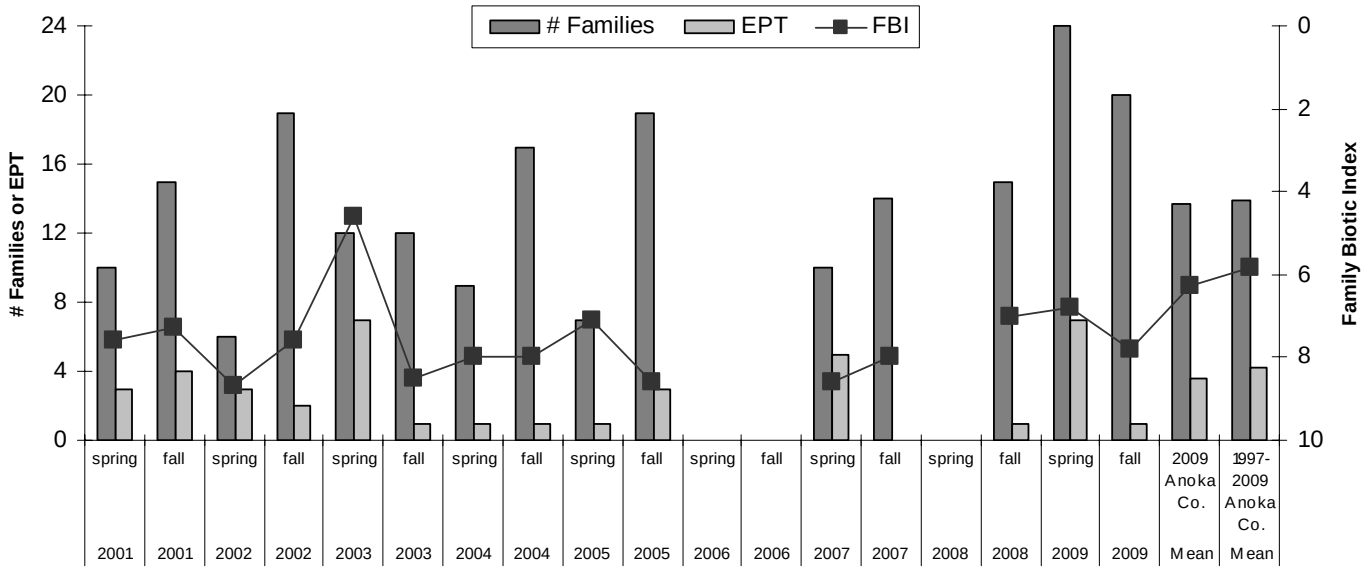
Background

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. Other than the Mississippi, this is the largest river in the county. 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. Sampling is not conducted in the main channel. Rather, it occurs in a backwater area. Water is not flowing in this location and the bottom is mucky. This site is not particularly representative of this reach of the river.

Results

Anoka High School monitored this site in both spring and fall 2009. The results for this site in 2009 were slightly better than most previous years, though this may be due to doubling of the number of students sampling compared to previous years. In 2009 more families (24 and 20) were found than every before at this site, nearly double the county-wide average. In the spring a high number of pollution-sensitive EPT families were found (7), but only one was found in fall. Because most species were not particularly sensitive to pollution, the Family Biotic Index was lower than the county average and similar to previous years. The various indices, taken together and across years, indicate a below average macroinvertebrate community.

Summarized Biomonitoring Results for Rum River behind Anoka High School



Biomonitoring Data for Rum River at Anoka High School

Year	2001	2001	2002	2002	2003	2003	2004	2004	2005	2005	2007	2007	2008	2009	2009	Mean	Mean
Season	spring	fall	spring	fall	spring	fall	spring	fall	spring	fall	spring	fall	fall	spring	fall	2009 Anoka Co.	1997-2009 Anoka Co.
FBI	7.60	7.30	5.90	7.60	4.60	8.50	8.00	8.00	7.10	8.60	8.6	8	7	6.80	7.80	6.3	5.9
# Families	10	15	6	19	12	12	9	17	7	19	10	14	15	24	20	13.6	13.9
EPT	3	4	3	2	7	1	1	1	1	3	5	0	1	7	1	3.6	4.2
Date	5/24	10/17	5/28	10/9	6/2	10/10	6/9	10/4	17-May	24-Oct	5/7	10/22	10/13	8-May	28-Sep		
sampling by	AHS	AHS	ACD	AHS	ACD	AHS	ACD	AHS	AHS	AHS	AHS	AHS	AHS	AHS	AHS		
sampling method	MH	MH	MH	MH	MH	MH	MH	MH	MH	MH	MH	MH	MH	MH	MH		
# individuals	100	178	179	144	126	569	192	572	124	360	208	244	626	880	585		
# replicates	1	1	1	2	1	1	1	1	1	1	1	1	1	1	2		
Dominant Family	corixidae	hemiptera	corixidae	taltridae	baetidae	corixidae	corixidae	corixidae	siphlonuridae	corixidae	corixidae	coenagrionidae	baetidae	siphlonuridae	hyalellidae		
% Dominant Family	66	30.9	91.1	20.1	51.6	43.9	33.9	57.3	82.3	69.7	91.8	37.3	26.5	40.7	39.1		
% Ephemeroptera	7	16.9	4.5	1.4	73	0.5	24.5	0.2	82.3	1.7	5.3	0	26.5	48.2	0.9		
% Trichoptera	0	0	0	0	2.4	0	0	0	0	0	0	0	0	0.1	0		
% Plecoptera	4	0	0.6	0	7.1	0	0	0	0	0	0.5	0	0	2.6	0		

AHS = Anoka High School, ACD = Anoka Conservation District

Supplemental Stream Chemistry Readings

Parameter	6-2-03	10-10-03	6-9-04	10-4-04	5-17-05	10-24-05	5-7-07	10-22-07	10-10-08	5-8-09	9-28-09
pH	7.66	8.63	8.27	9.12	8.45	8.04	8.50	7.42	7.75	7.91	7.82
Conductivity (mS/cm)	0.305	0.343	0.140	0.203	0.193	0.171	0.283	0.243	0.348	0.276	0.421
Turbidity (NTU)	3	1	3	2	5	5	17	13	3	6	5
Dissolved Oxygen (mg/L)	8.50	8.24	6.2	9.30	11.81	11.23 (95%)	11.41	9.72 (87%)	8.99 (85%)	10.82 (110%)	8.76 (87%)
Salinity (%)	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.01
Temperature (C)	17.7	15.9	20.2	11.6	13.1	9.0	15.3	10.6	12.3	17.2	15.5

Discussion

Biomonitoring results for this site are much different from the monitoring farther upstream in St. Francis. In St. Francis the Rum River harbors the most diverse and pollution-sensitive macroinvertebrate community of all sites monitored in Anoka County. At the Anoka location the biotic indices indicate a poorer than average river health. The reason for this dramatic difference is probably habitat differences, and to a lesser extent, water quality.

The habitat and overall nature of the river is different in St. Francis and Anoka. In the upstream areas around St. Francis the river has a steeper gradient, moves faster, and has a variety of pools, riffles, and runs. Downstream, near Anoka, the river is much slower moving, lacking pools, riffles and runs. The bottom is heavily silt laden. The area is more developed, so there are more direct and indirect human impacts to the river.

Water quality declines downstream, though it is still quite good at all locations. Chemical monitoring in 2004 and 2009 revealed that total suspended solids, conductivity, and chlorides were all higher near Anoka than upstream. This is probably due to more urbanized land uses and the accompanying storm water inputs. Given that water quality is still quite good even in these downstream areas, it is unlikely that water quality is the primary factor limiting macroinvertebrates at the City of Anoka.

One additional factor to consider when comparing the up and downstream monitoring results is the type of sampling location. Sampling 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 because those families generally favor rocky habitats and require high dissolved oxygen not found in stagnant areas.

Stream Water Quality - Chemical Monitoring

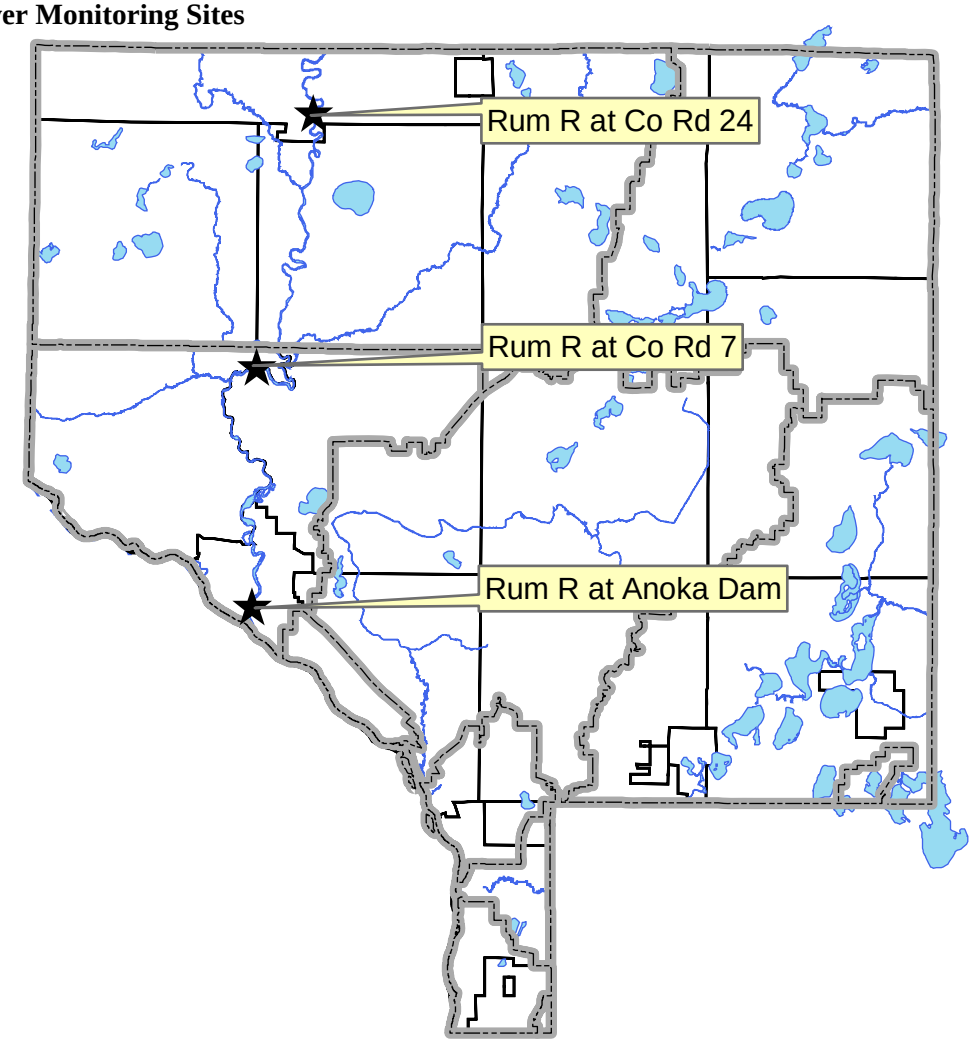
Description: In the Lower Rum River Watershed in 2009 stream monitoring was accomplished through two complimentary programs. First, the Upper Rum River Watershed Management Organization (URRWMO) monitored the Rum River at the boundary between the URRWMO and LRRWMO, as well as at another upstream site. Secondly, the Metropolitan Council monitored the Rum River near its outlet to the Mississippi through their Watershed Outlet Monitoring Program (WOMP). The Anoka Conservation District did the field work for both projects, ensured monitoring for both programs was conducted simultaneously so the data could be compared, and reports the data together for a more comprehensive analysis of the river from upstream to downstream.

Purpose: To understand water quality and hydrology throughout the twin cities metropolitan area.
To detect water quality trends and problems, and diagnose the source of problems.

Locations: Rum River at the Anoka Dam, City of Anoka

Results: Results are presented on the following page, with a focus on comparing river conditions from upstream to downstream. More detailed reporting for the WOMP monitoring station, including additional parameters and analysis are presented elsewhere by the Metropolitan Council (see http://www.metrocouncil.org/Environment/RiversLakes/).

2009 Rum River Monitoring Sites



RUM RIVER

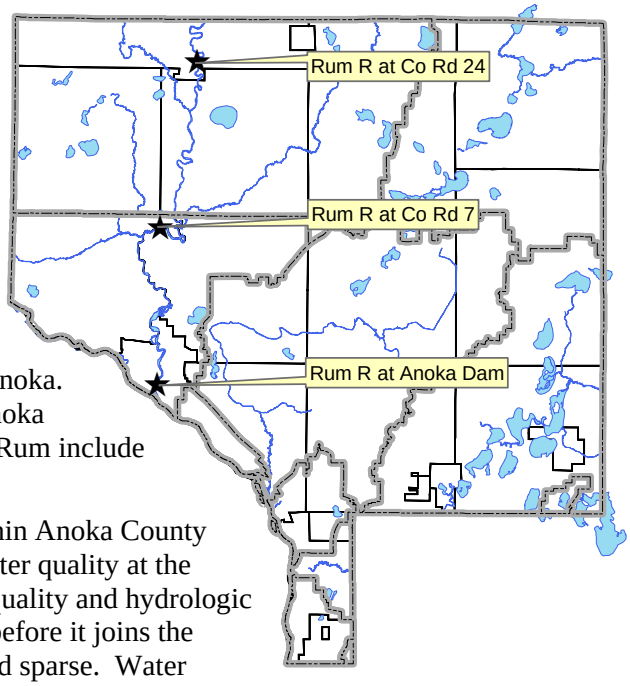
Rum River at Co. Rd. 24 (Bridge St), St. Francis	STORET SiteID =	S000-066
Rum River at Co. Rd. 7 (Roanoke St), Ramsey	STORET SiteID =	S004-026
Rum River at Anoka Dam, Anoka	STORET SiteID =	S003-183

Years Monitored

At Co. Rd. 24 – 2004, 2009

At Co. Rd. 7 – 2004, 2009

At Anoka Dam – 1996-2009 by the Met Council WOMP program



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 for 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. Watersheds 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 to suburban in the downstream areas.

Methods

In 2004 and 2009, monitoring was conducted at three locations simultaneously to determine if Rum River water quality changes in Anoka County, and if so, generally where changes occur. The URRWMO funded monitoring near where the river enters Anoka County (Co. Rd 24) and midway through the county near the lower boundary of their jurisdictional area (Co. Rd. 7). The Metropolitan Council monitored at the Anoka Dam, where there has been ongoing monitoring since 1996. The Anoka Conservation District did the field work for both projects, ensured monitoring for both programs was conducted simultaneously so the data could be compared, and reports the data together for a more comprehensive analysis of the river from upstream to downstream.

The river was monitored during both storm and baseflow conditions by grab samples. Eight water quality samples were taken each year; 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, and chlorides. Ten additional parameters were tested by the Metropolitan Council at their laboratory for the Anoka Dam site only and are not reported here. 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 and dates that were simultaneously tested at all three sites. 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.

Results and Discussion

Overall, Rum River water quality is good throughout Anoka County, however it does decline below the County Road 7 bridge (i.e. in the Cities of Andover, Anoka, and Ramsey). The declines in water quality below that point are modest, as are declines in water quality during storms. Dissolved pollutants (as measured by conductivity and chlorides), total phosphorus, turbidity, and total suspended solids were all generally near or below the median of all 40+ Anoka County streams that have been monitored.

Although water quality is good, several areas of concern were noted. First, dissolved pollutants increased at each monitoring site downstream. Dissolved pollutants were highest during baseflow, indicating pollutants have infiltrated into the groundwater which feeds the river and tributaries during baseflow. Road deicing salts are likely the most significant dissolved pollutant. Secondly, total suspended solids increased notably below County Road 7. This was most pronounced during storms.

It is important to recognize the limitations of this report. The data is only from 2004 and 2009 when all three sites were monitored simultaneously to allow comparisons. The dataset is relatively small. 2009 was a drought year and the flows and storms sampled were lower than normal. We did not sample any flood-like conditions when river water quality is likely worst. If a more detailed analysis of river water quality is desired, data from many years and a variety of conditions is available for the Anoka Dam site through the Metropolitan Council.

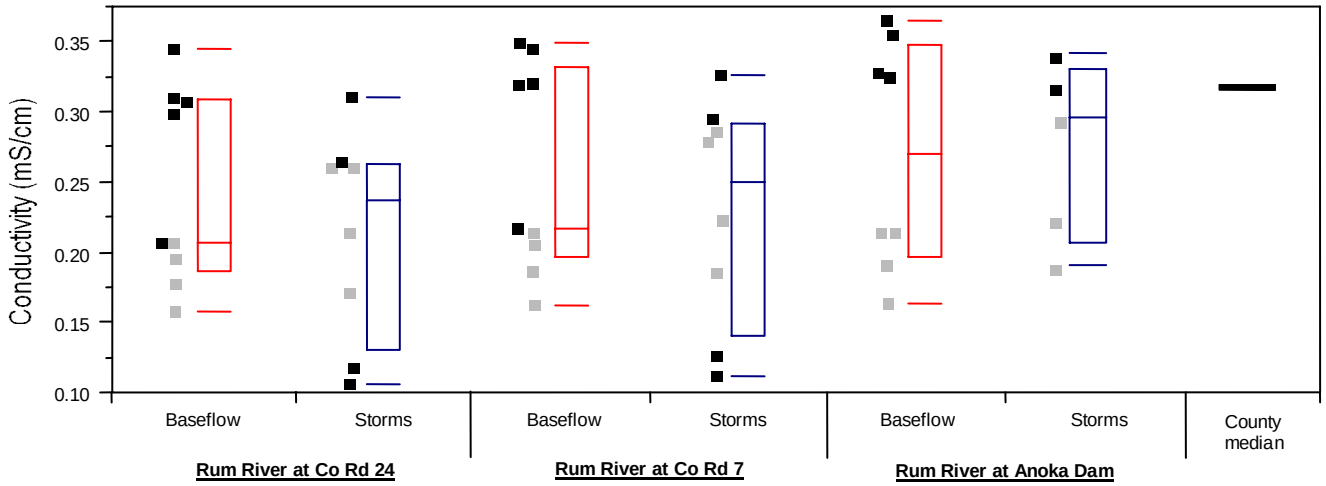
On the following pages data are presented and discussed for each parameter. The last section outlines management recommendations. The Rum River is an exceptional waterbody, and its protection and improvement should be a high priority.

Conductivity and chlorides

Conductivity and chlorides are measures 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 used. 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. They can also be of concern because the Rum River is upstream from the Twin Cities drinking water intakes on the Mississippi River.

Conductivity is acceptably low in the Rum River, but increases downstream (see figure below) and during baseflow. Across all three sites conductivity averaged 0.247 mS/cm, which is lower than the median for 40+ Anoka County streams of 0.318 mS/cm. The maximum observed conductivity was 0.363 mS/cm. Conductivity was lowest at all 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. Baseflow conductivity increases from upstream to downstream, reflecting greater road densities and deicing salt application. Storm conductivity, while lower than baseflow, did also increase from upstream to downstream. This is reflective of greater stormwater runoff and pollutants associated with the more densely developed lower watershed.

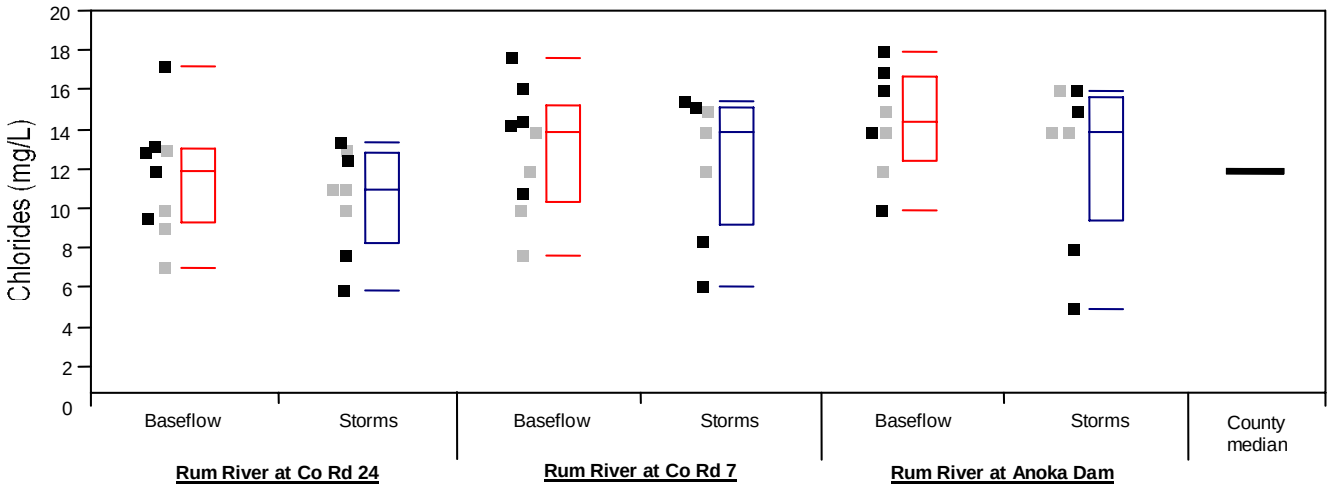
Conductivity results during baseflow and storm conditions Grey dots are individual readings from 2004; black dots are 2009 readings. Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).



Upstream → Downstream

Chloride results parallel those found for conductivity (see figure below), supporting the hypothesis that chloride is an important cause of the conductivity. Chloride levels in the Rum River (median 11, 14, and 14 mg/L from upstream to downstream) are similar to the median for Anoka County streams of 12 mg/L. The highest observed value was 18 mg/L, though higher levels may have occurred during snowmelts which were not monitored. The levels observed are much lower than the Minnesota Pollution Control Agency's (MPCA) chronic standard for aquatic life of 230 mg/L. Like conductivity, chlorides were slightly higher during baseflow than storms at each site and increased from upstream to downstream. Road deicing salt infiltration into the shallow groundwater is likely the primary contributor, as described above.

Chloride results during baseflow and storm conditions Grey dots are individual readings from 2004; black dots are 2009 readings. Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).

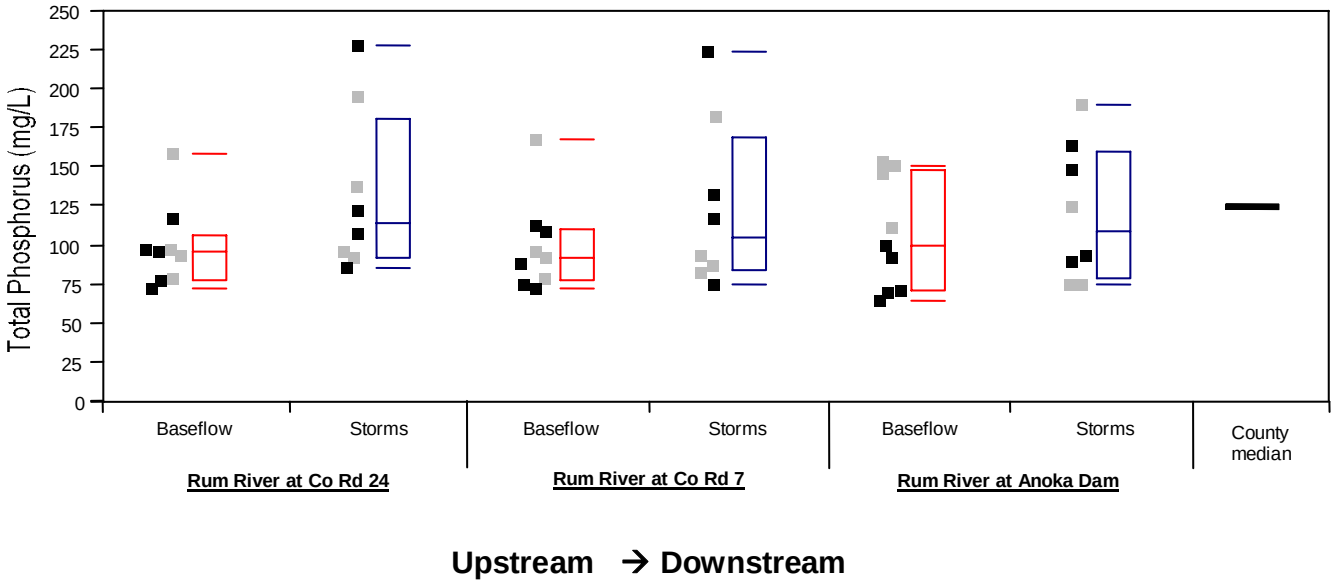


Total Phosphorus

Upstream → Downstream

Total phosphorus in the Rum River is acceptably low and is similar to the median for all other monitored 40+ Anoka County streams (see figure below). 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 at each of the three monitored sites was 99, 95, and 101 ug/L; there is no trend of increasing phosphorus downstream. All sites occasionally experience phosphorus concentrations higher than the median for Anoka County streams of 126 ug/L. All of the highest observed total phosphorus readings were during storms, including the maximums at each site of 230, 226, and 192 ug/L (upstream to downstream). 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 results during baseflow and storm conditions Grey dots are individual readings from 2004; black dots are 2009 readings. Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).



Upstream → Downstream

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 is 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. Suspended solids in the Rum River are moderately high, but only at the Anoka Dam and during storms. The results for turbidity and TSS differ, lending insight into the types of particles that are problematic.

Turbidity was low, with only slight increases during storms and no apparent increase at downstream monitoring sites (see figure below). The median turbidity at each site was 6, 5, and 5 FNRU (upstream to downstream), which is lower than the median for Anoka County streams of 9 FNRU. The maximum observed was 41 FNRU, but this seemed to be an isolated event given that the next highest was 19. The Rum River's turbidity did not regularly exceed the Minnesota Pollution Control Agency's water quality standard of 25 NTU.

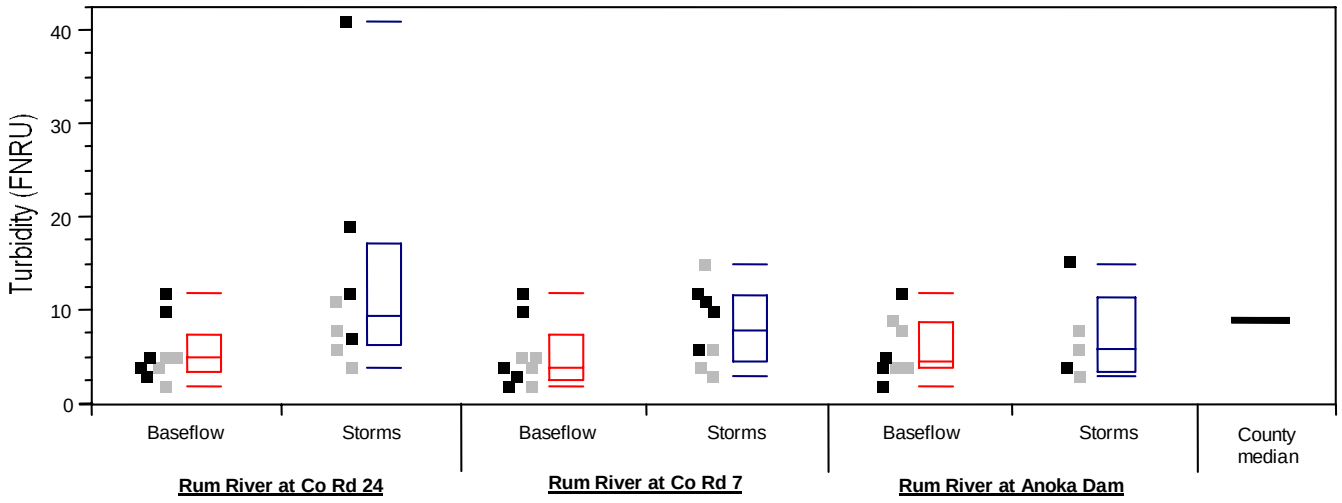
TSS was low at the upper two monitoring sites, with slight increases during storms (see figure below). The countywide TSS median for streams is 14 mg/L. Overall median TSS in the Rum River was 8 and 9 mg/L at

County Roads 24 and 7, respectively. During storms median TSS was 2 and 4 mg/L higher than during baseflow for the two sites. Maximum TSS observed at these two sites were 28 and 23 mg/L. The maximum readings and slight increases during storms are not unexpectedly high for a large river, and are within the range that should be considered healthy.

TSS increased noticeably between County Road 7 and the Anoka Dam (see figure below). At the Anoka Dam median TSS was similar to the other sites during baseflow (8 mg/L), but the three highest baseflow readings (25, 37, and 42 mg/L) were much higher than experienced at upstream sites. During storms TSS was only once below 15 mg/L and the maximum was 34 mg/L. While this does not exceed the Minnesota Pollution Control Agency's surrogate turbidity standard of 100 mg/L TSS, it is undesirable to have such notable water quality deterioration in such a short stretch of the river.

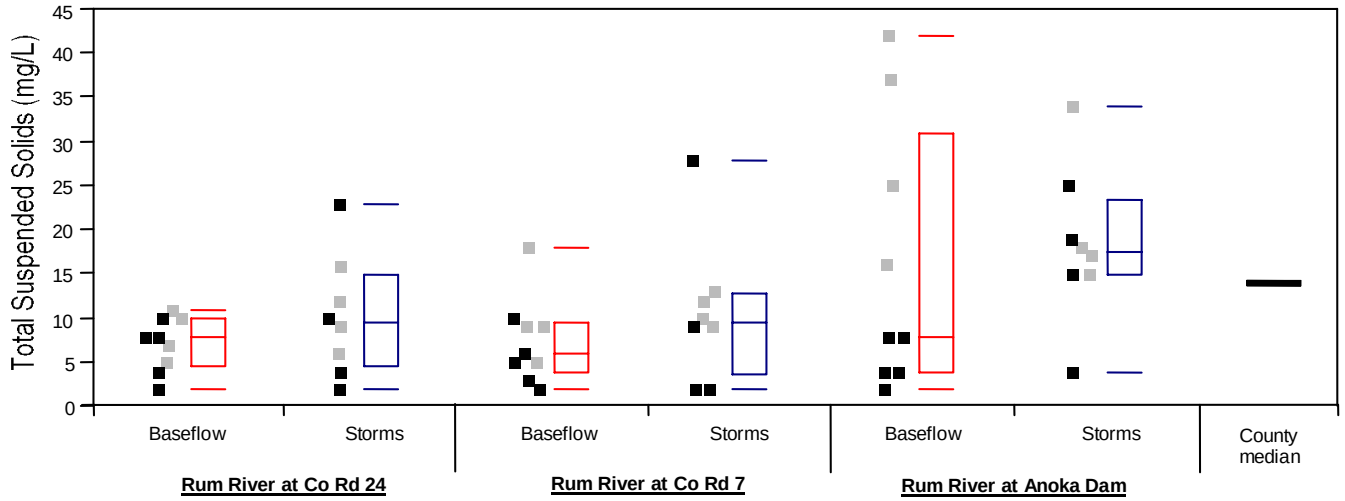
It should be noted that the data presented here do not include monitoring of any large flood events. The water is known to become muddier during such floods. In fact, the data presented in this report is skewed toward lower flow conditions that are likely to carry lower suspended solids because 2009 was a drought year. Notice in the figure below that 2009 generally had lower TSS than 2004.

Turbidity results during baseflow and storm conditions Grey dots are individual readings from 2004; black dots are 2009 readings. Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).



Upstream → Downstream

Total suspended solids results during baseflow and storm conditions Grey dots are individual readings from 2004; black dots are 2009 readings. Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).

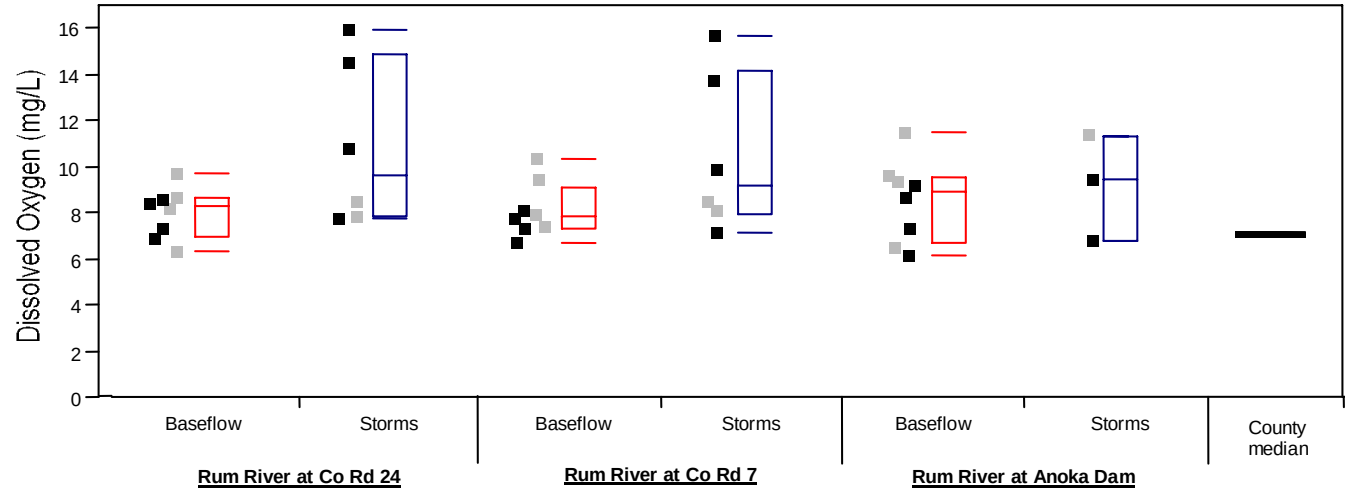


Upstream → Downstream

Dissolved Oxygen

Dissolved oxygen is necessary for aquatic life, including fish. Organic pollution consumes oxygen when it decomposes. If oxygen levels fall below 4 mg/L aquatic life begins to suffer. In the Rum River dissolved oxygen was always above 6 mg/L at all monitoring sites.

Dissolved oxygen results during baseflow and storm conditions Grey dots are individual readings from 2004; black dots are 2009 readings. Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).



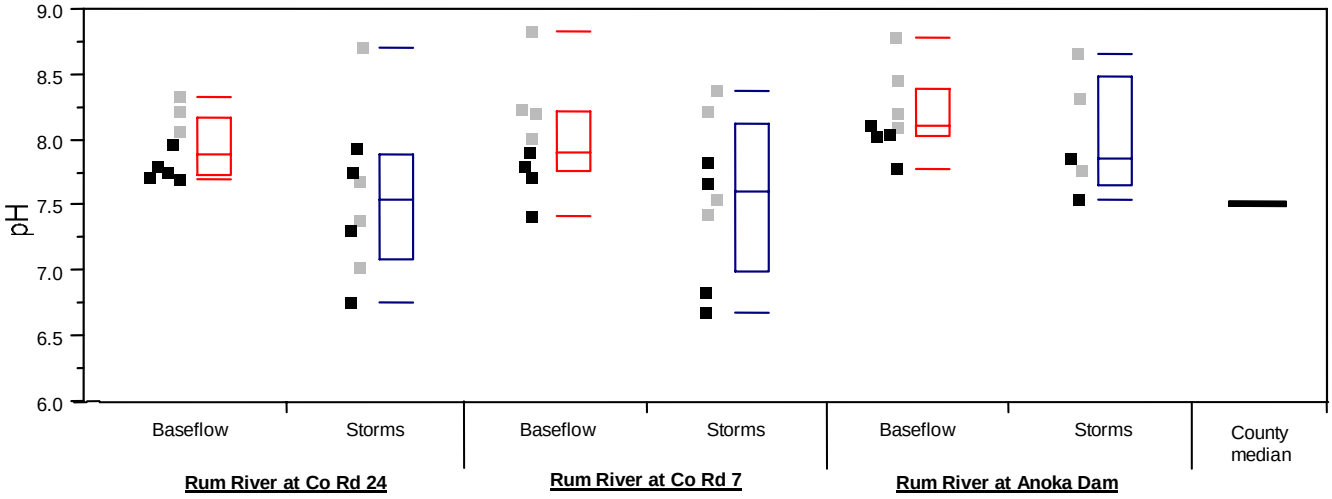
Upstream → Downstream

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 regularly within this range (see figure below). Each of the three sites exceeded 8.5 on one occasion, but the highest was only 8.85. This rare and modest exceedance of the state water quality standard is not concerning.

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, it's affect on this aquatic system is small.

pH results during baseflow and storm conditions Grey dots are individual readings from 2004; black dots are 2009 readings. Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).



Upstream → Downstream

Recommendations

While the Rum River's water quality is generally good, it does show some deterioration in the downstream areas that are most developed. 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. Measures to maintain the Rum River's good water quality should include:

- Enforce the building and clear-cutting setbacks from the river required by state scenic rivers laws to avoid bank erosion problems and protect the river's scenic nature.
- Use the best available technologies to reduce pollutants delivered to the river and its tributaries through the storm sewer system. Any new development should consider low impact development strategies that minimize stormwater runoff production. Aggressive stormwater treatment should be pursued in all areas of the watershed, not just those adjacent to the river.
- Seek improvements to the existing stormwater conveyance system below County Road 7. Total suspended solids in the river increase significantly in this portion of the watershed, reaching their highest concentrations during storms.
- Utilize all practical means to reduce road deicing salt applications. These may include more efficient application methods, application only in priority areas, alternate chemicals, or others. Road salt infiltration into the shallow groundwater has become a regional problem.

- Survey the river by boat for bank erosion problems and initiate projects to correct them.
- Continue education programs to inform residents of the direct impact their actions have on the river's health.
- Continue regular water quality monitoring. In addition to continuous monitoring of the Rum River by Metropolitan Council's Watershed Outlet Monitoring Program (WOMP), additional upstream monitoring should be conducted every 2-3 years. Monitoring should be coordinated to occur on the same days as the Met Council testing so direct comparisons are possible. Additionally, periodic monitoring of the primary tributary streams should also occur every 2-3 year. The Upper and Lower Rum River Watershed Management Organizations are best suited to do this watershed-level monitoring and should coordinate.

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 21 wetland hydrology monitoring stations.

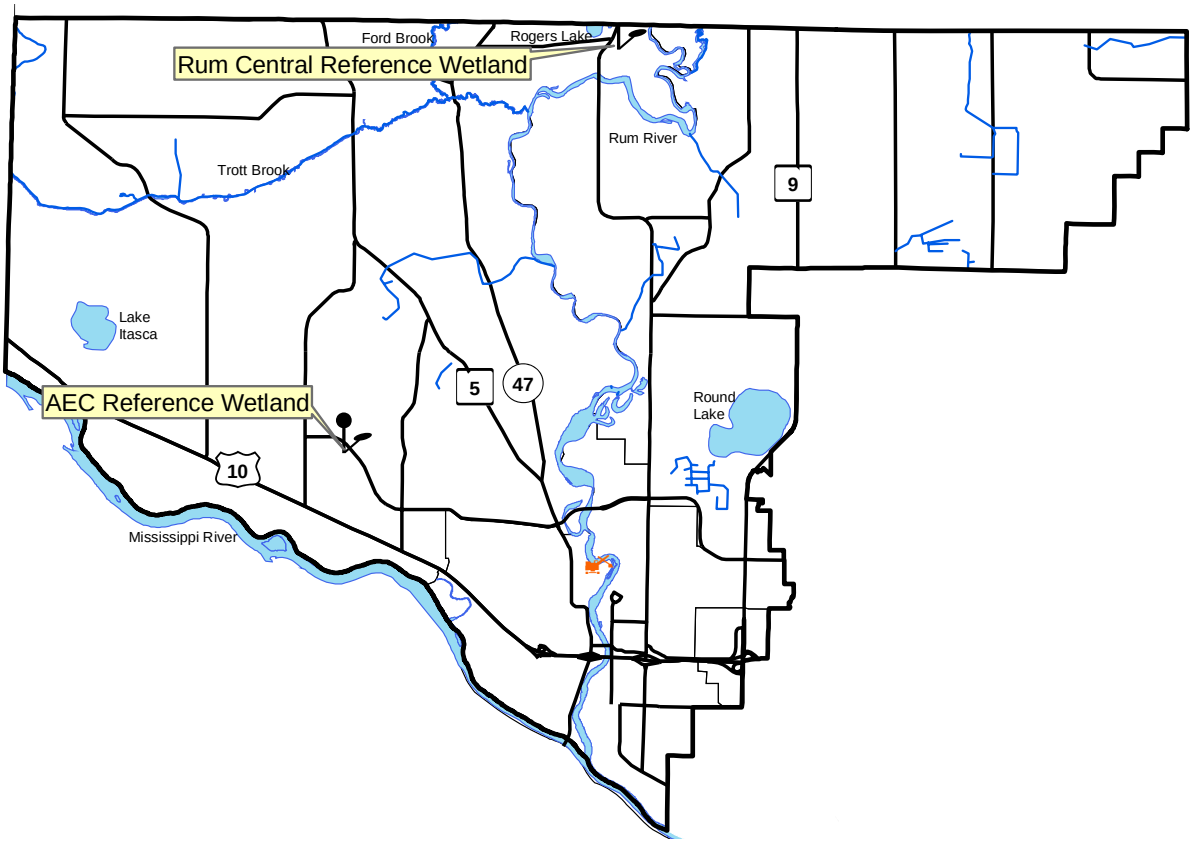
Purpose: To provide understanding of wetland hydrology, including the impact of climate and land use. These data aid in delineation of nearby wetlands by documenting hydrologic trends including the timing, frequency, and duration of saturation.

Locations: AEC Reference Wetland, Connexus Energy Property on Industry Ave, Ramsey

Rum River Central Reference Wetland, Rum River Central 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

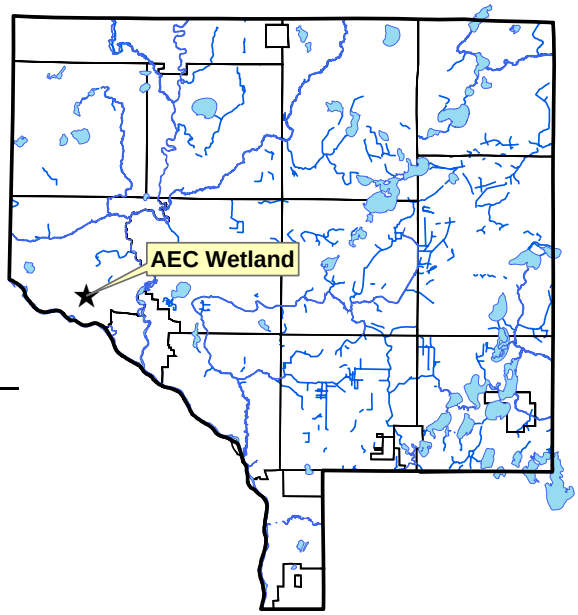


Wetland Hydrology Monitoring

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	-

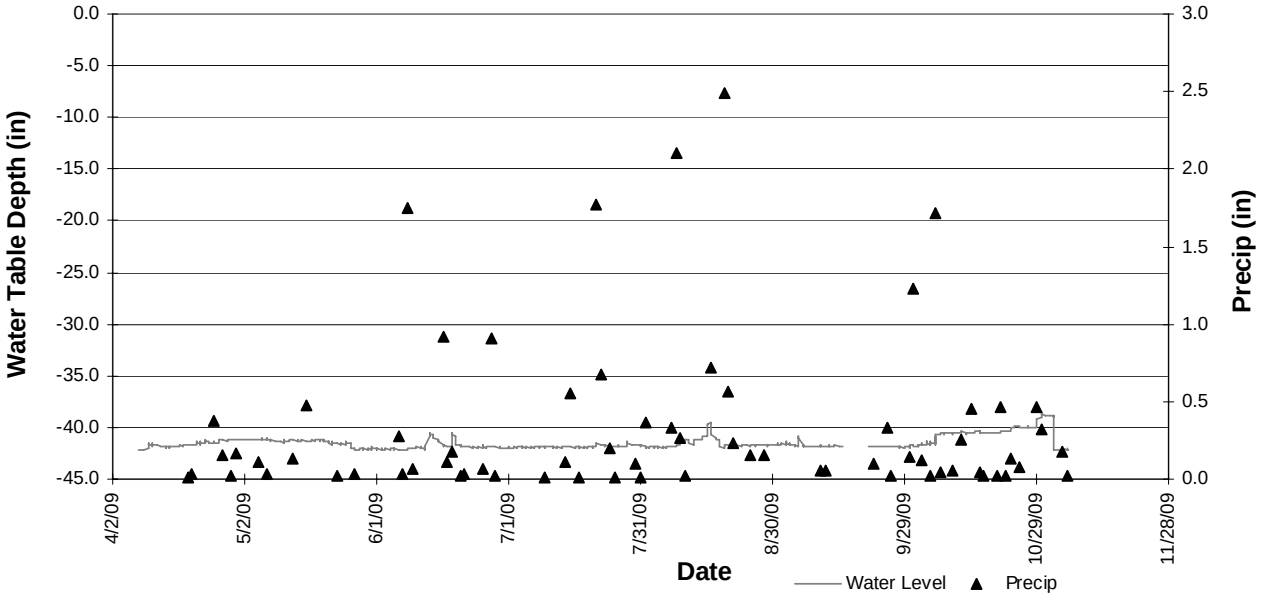
Surrounding Soils: Hubbard coarse sand

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.

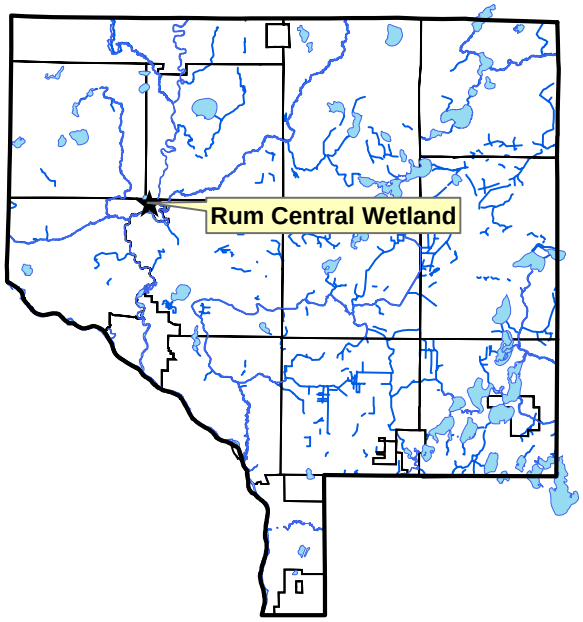
2009 Hydrograph



Well depth was 42 inches, so a reading of–42 indicates water levels were at an unknown depth greater than or equal to 42 inches.

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	-

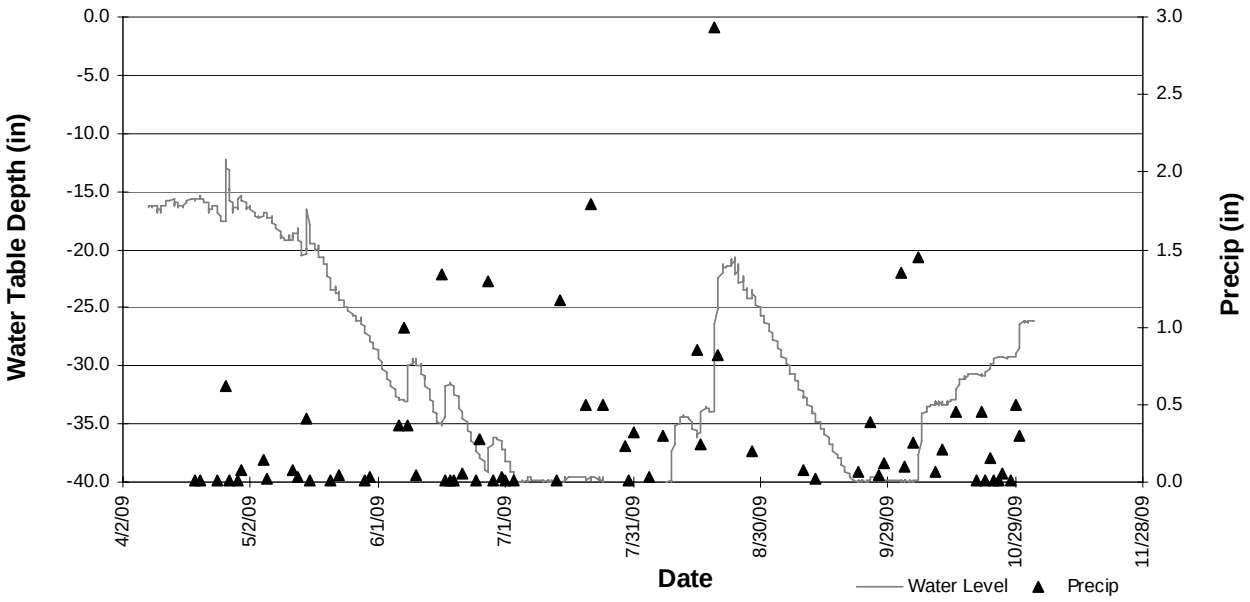
Surrounding Soils: Zimmerman fine sand

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.

2009 Hydrograph



Well depths were 40 inches, so a reading of–40 indicates water levels were at an unknown depth greater than or equal to 40 inches.

Water Quality Improvement Projects

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 described individually below.

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
Fund Balance		**$1,571.58**

2008-09 Rusin Riverbank Stabilization

The only 2009 water quality improvement project in the LRRWMO was follow-up work on a project that was largely installed in 2008. This work was on the Rusin property's Rum Riverbank. In 2008 a cedar tree revetment was installed to correct erosion. In 2009 there was some minor stabilization of the higher bluff, which was a planned part of this project. In 2008 two water quality improvement projects utilized LRRWMO cost share funds. The property owner received 50% cost share grant for materials.

The bluff work in 2009 focused upon establishing plants where there were none. The slope is extremely steep, and bare soils were eroding. Scattered work occurred wherever bare soils were found. Erosion control blanket was stapled to the ground for temporary protection. 36 grass and 12 wildflower plugs were planted, along with approximately 25 shrub seedlings. In some places, the invasive species Siberian pea shrub, European buckthorn, honeysuckle, and prickly ash were removed to lessen competition and ensure the new seedlings would receive adequate sunlight.

The cedar tree revetments installed at the waterline on the Rusin and neighboring Herrala properties in 2008 are performing well. All trees have remained in place and erosion appears to have stopped. No maintenance is anticipated to be needed. The landowners are pleased with its performance.

Anoka County Geologic Atlas

Description: A map-based report of groundwater and geology to be used for community planning and groundwater management. The Atlas provides detailed information about groundwater:

- Aquifers, including identifying future water sources,
- Aquifer sustainability,
- Recharge areas,
- Sensitivity to pollution,
- Flow directions,
- Connections to lakes, streams, and wetlands,
- Chemistry,
- Wellhead protection, and others...

Results are provided as GIS files and paper maps, and are especially useful to community planners.

Geologic Atlases are a partnership of the MN Geological Survey, MN DNR, and local governments. 94% of funding was secured by the MN Geological Survey (MGS) and MN Department of Natural Resources (DNR) from the Legislative-Citizen Commission for Minnesota Resources (LCCMR). A required local contribution totaling 6% of project expenses was provided by the seven Anoka County watershed organizations and the Anoka Conservation District. Completion of the project requires 4-5 years.

Purpose: To gain knowledge about groundwater and geology that enables improved management of groundwater, including availability, pollution prevention, and pollution management.

Locations: Throughout Anoka County

Results: An Anoka County Geologic Atlas began in 2009 with financial support from all seven Anoka County Watershed Management Organizations and the Anoka Conservation District. These funds were used to locate approximately 9,500 groundwater wells, with approximately an additional 500 to be located in early 2010. Boring logs from these wells and others already in the County Well Index will be used to create the geologic atlas. The MGS has already begun the process of using these wells to create the geologic atlas. Thereafter the DNR will perform a groundwater analysis for the atlas. In total, the geologic atlas is expected to be completed around 2014.

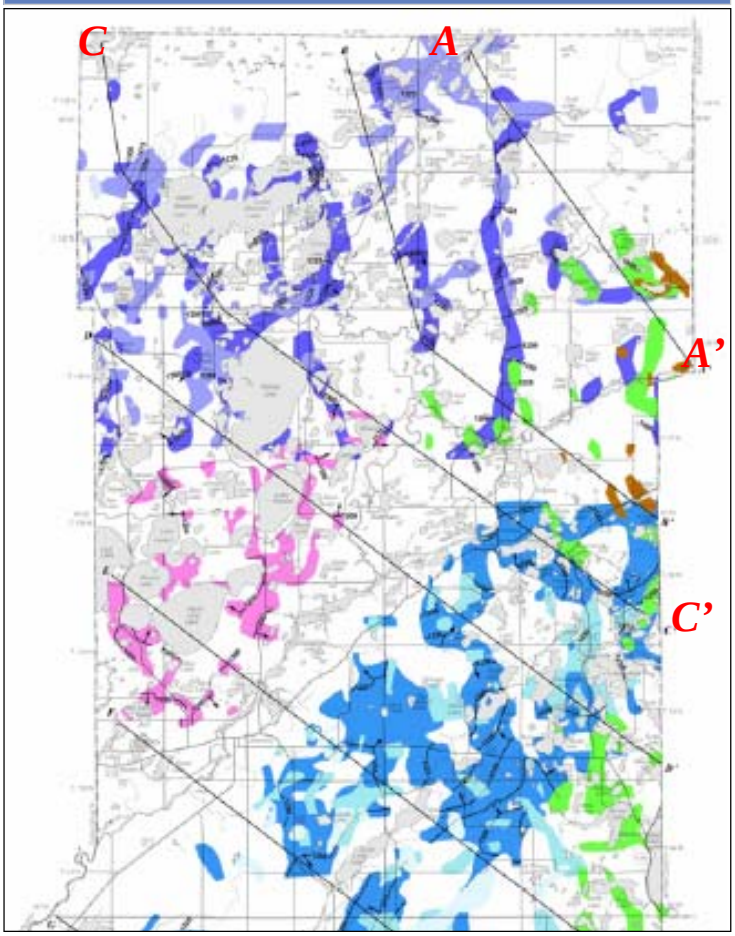
An example of portions of a geologic atlas from Crow Wing County are on the following page.

Example Geologic Atlas Work Products

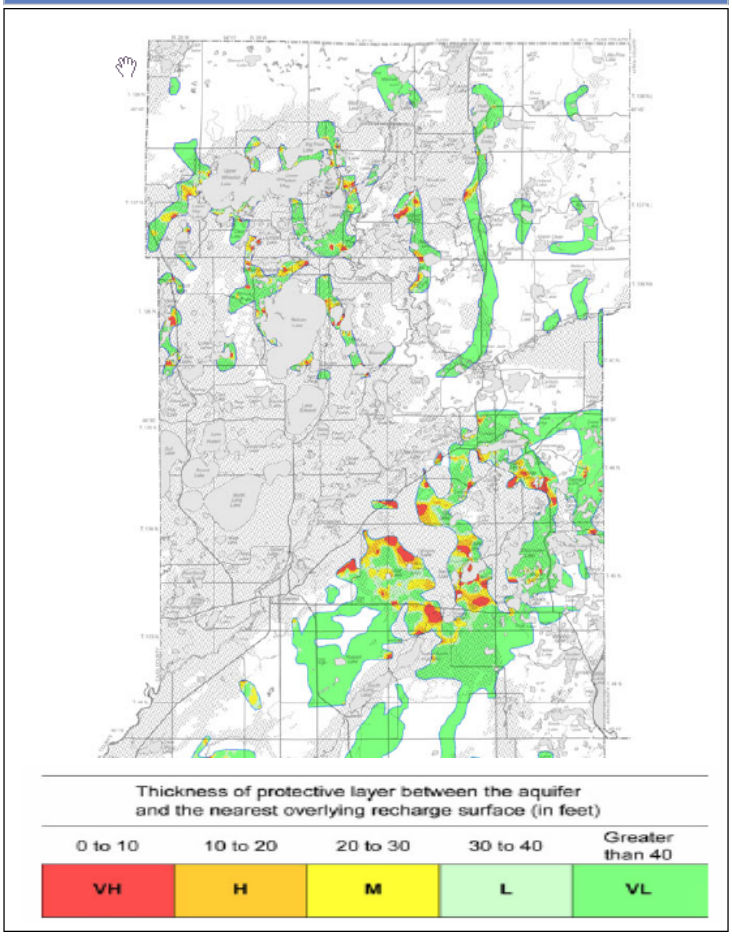
Crow Wing County Geologic Atlas

Excerpted from: Peterson, T. 2008. Hydrogeology, Pollution Sensitivity, and Lake and -Groundwater Interaction. MN Ground Water Association Newsletter 27-3.

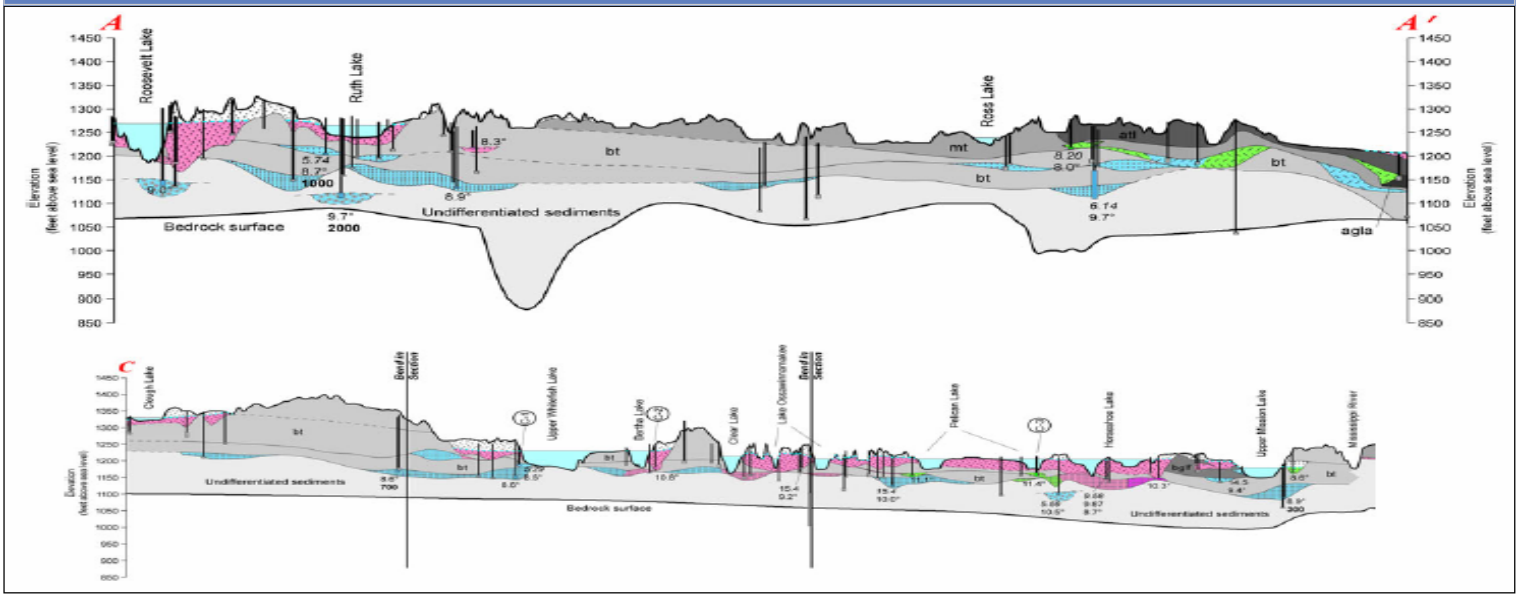
Extent and Distribution of Buried Aquifers Including Direction of Flow



Pollution Sensitivity of Buried Aquifers



Selected hydro-geologic cross sections showing groundwater residence time. Cross sections A-A' and the Northwest 2/3 of C-C' are shown. See above figure for cross section location.



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. The LRRWMO pays the ACD annual fees for maintenance and update of the website.

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. The website serves as the LRRWMO's alternative to a state-mandated newsletter.

Location: www.AnokaNaturalResources.com/LRRWMO

Results: The LRRWMO website contains information about both the LRRWMO and about natural resources in the area.

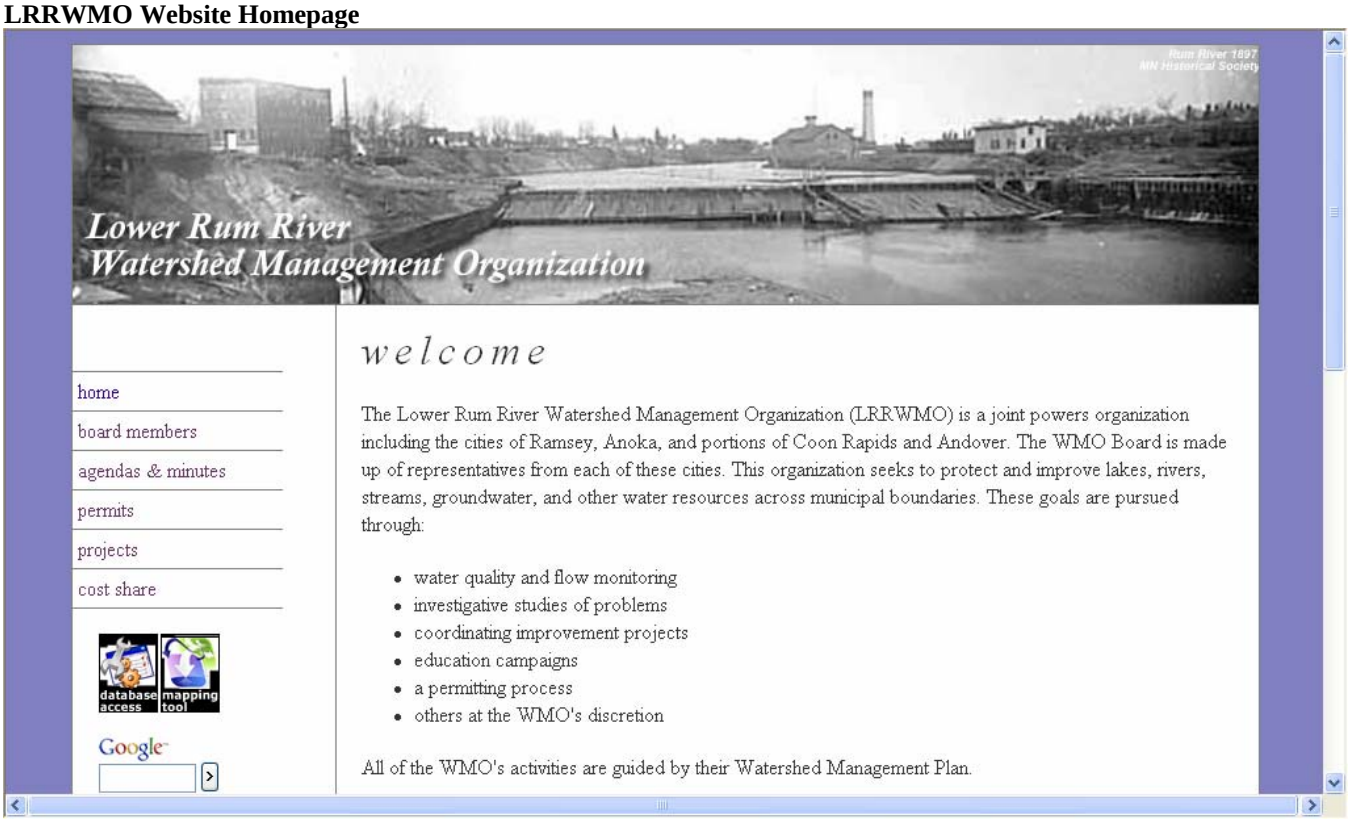
Information about the LRRWMO includes:

- a directory of board members,
- meeting minutes and agendas,
- descriptions of work that the organization is directing,
- highlighted projects,
- permit applications.

Other tools on the website include:

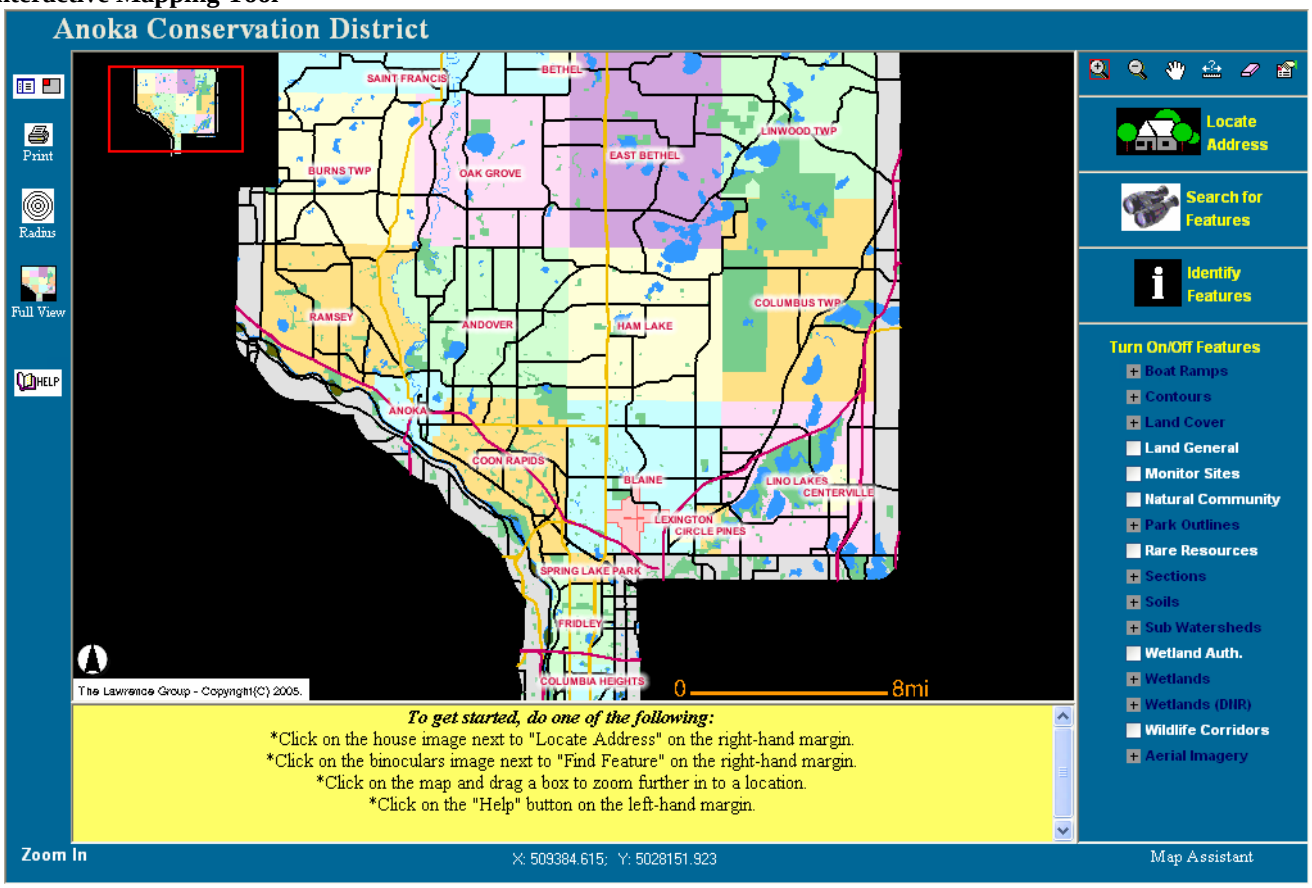
- an interactive mapping tool that shows natural features and aerial photos
- an interactive data download tool that allows users to access all water monitoring data that has been collected
- narrative discussions of what the monitoring data mean

LRRWMO Website Homepage

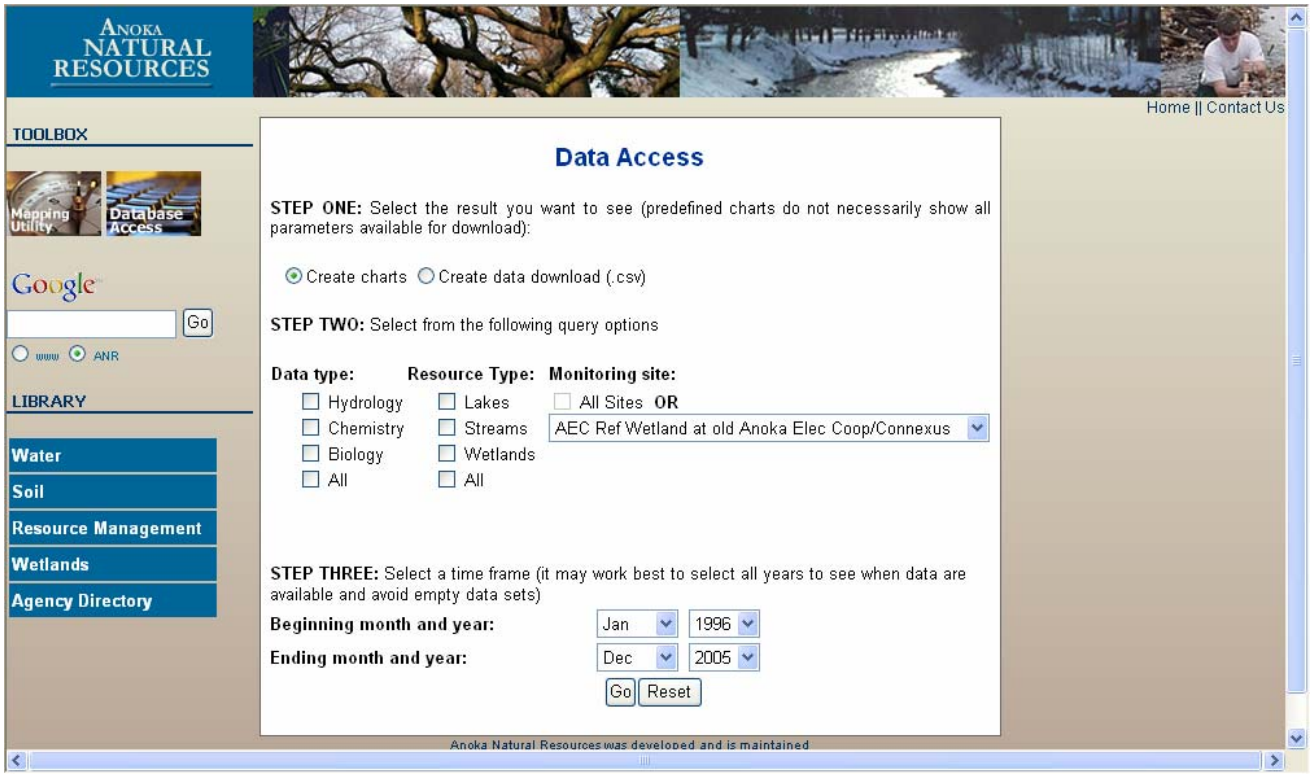


more on next page

Interactive Mapping Tool



Interactive Data Access Tool



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, such as our lake water quality monitoring program. We do not, however, know specifically which expenses are attributed to monitoring which lakes. 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. The process also takes into account equipment that is purchased for monitoring in a specific area.

Lower Rum River Watershed Financial Summary

Table to be added

Recommendations

- **Facilitate resident efforts to control aquatic plant growth on Rogers Lake** as a means to improving low dissolved oxygen problems. Treatments should occur in early spring, occur on no more than 15% of the lake, be coordinated, and proceed under DNR permits.
- **Continue monitoring Round Lake** water quality at least every other year to determine if poorer water quality recently is within this lake's natural variation, due to low water levels, or is indicative of new negative influences on the lake.
- **Emphasize protection of Rum River water quality.** The river's water quality declines slightly in the LRRWMO and anticipated future development could cause further deterioration.
- **Coordinate monitoring of the Rum River** with the neighboring Upper Rum River WMO and the Metropolitan Council, who runs a monitoring site at the Anoka Dam.
- **Diagnose the cause of periodically low dissolved oxygen in Trott Brook.**
- **Continue lake level monitoring, especially on Round Lake** where residents have expressed concerns with levels. Other nearby lakes should be monitored for comparison and in case problems develop.
- **Maintain a cost share program for water quality improvement projects** on private properties. This program should be actively promoted by identifying problems and contacting landowners.
- **Encourage public works departments to implement measures to minimize road deicing salt applications**. Monitoring and special investigations in the LRRWMO have shown that road salts are one of the largest and most widespread sources of stream degradation in this watershed.
- **Promote groundwater conservation.** Water tables in the LRRWMO appear depressed due to regional over-pumping. Metropolitan Council models predict 3+ft drawdown of surface waters in parts of the LRRWMO by 2030, and 5+ft by 2050.
- **Incorporate the above recommendations into the LRRWMO Watershed Plan**. The Plan provides an organized and prioritized way to address these issues.

2009 Lower Rum River Water Management Organization (LRRWMO) Permit Summary

Permit Name	Permit #	City	Summary
2009 Street Project	2008-17	Anoka	Storm sewer improvements along Oakwood Drive, Elm Street, 7th Ave, and Kings Lane. **Project was approved.**
2009 Street Reconstruction	2009-01	Andover	Street Reconstruction and storm sewer improvements in the north half of Woodland Meadows development. **Project was approved.**
Water Tower #3	2009-02	Ramsey	Water tower construction and access road from Elmcrest Park to tower. **Project was approved.**
166th and 167th Street Reconstruction	2009-03	Ramsey	Street and utility reconstruction. 1,865 square feet of wetland impacts. Replacement through BWSR Road wetland bank. **Project was approved.**
NAU Holdings Parking Lot Expansion	2009-04	Ramsey	61 Stall parking lot expansion. **Project was approved.**
Rain for Rent Storage Area Expansion	2009-05	Ramsey	Class V storage area expansion. **Project was approved.**
Comforts of Home	2009-06	Ramsey	Project on hold. **Project was denied because of 60-day review period**.
West Main Street Improvements	2009-07	Anoka	Reconstruction of West Main Street from 300 feet west of Ferry Street to Highway 10. **Project was approved.**
Andrie Street Reconstruction	2009-08	Ramsey	Reconstruction of Andrie Street/165th Lane. **Project was approved**
JBT Machining/QDP Technologies	2009-09	Ramsey	20,800 square foot commercial/industrial building. **Project was approved.**

ANDOVER WHO WE ARE

American Community Survey Data (2005-2007)

The following data was provided to the City by the U.S. Census Bureau. It is a brief demographic picture of the various cities having a population of 20,000 or more in the Twin Cities Metro area as of 2005-2007. Andover is listed as being in the class of developing suburbs.

* Andover's 65-and-older population was a metro area low at 3.8 percent.
* Married couples live in eight out of ten households—the highest percentage of any City in the metro area.
* Andover had the highest percentage of households with married couples with children under 18—with 44 percent.
* Andover had a median income of $88,170—among the highest in the metro area. Only Chanhassen and Maple Grove were higher.
* In Andover 97 percent of residents owned their own home.
* Andover had fewer than 10 percent of residents whose primary language was not English.
* Andover had over 85 percent of households with mortgages.
* Andover has the largest percentage of workers who commute 45 minutes or more.

LOOKING FOR A LOT TO BUILD ON?

The City has a current map and listing of lots that are ready for you to build your new home on. Please contact Will Neumeister in the City Planning Department for a free copy of the map and list at (763) 767-5140. Or you can look it up yourself on the Planning Department webpage under the topic "New Residential Development" on the City's website at www.ci.andover.mn.us

2009 SEASONAL ROAD RESTRICTIONS

Each spring Andover places road restrictions (weight limits) on City streets. Limiting vehicle weight minimizes damage to the streets when the frost comes out of the ground. This will extend the life of the street and reduce the need for early (and costly) reconstruction.

Road restrictions are typically put into effect in early March (depending on the weather) and kept in place through the end of April. Check with City Hall to verify when the restrictions will be initiated.

Residential streets are restricted to 5-ton per axle weight limit with some residential streets restricted to 4-ton per axle limit.

Road restrictions may prevent you from receiving or scheduling a large, heavy delivery to your home in March & April.

COMMUNITY GROUPS

Andover Women of Today:
(763) 789-0360

Andover/Ramsey Moms Club:
www.ourmomsclub.org

Andover Seniors:
Meet 1st & 3rd Mondays of each month at Noon. Any questions contact Jim Boos.
(763) 764-0963

TOPS Club: (763) 757-5822

Andover High School Football Boosters
Hotline: (763) 506-8555

Andover Lions:
Gary Wrobel (763) 286-9782 or (763) 434-9403 for membership interest/questions

DFL Meetings: (763) 434-1394

Republican Meetings: (763) 712-5378

Moms In Touch:
Moms praying for their children & local schools. Heidi Fluth
(763) 757-0111/www. MomsinTouch.org

Lamplighters 4-H Club:
Marsha Rouch (763) 862-8969

POTHOLE PATCHING

The winter season can be hard on City streets due to moisture and temperature changes. The Street Maintenance Department begins repairing damages and potholes in April (weather permitting) and will continue through to fall as needed. Some pothole repairs are made during the winter months if needed with a winter mix before asphalt plants are open. If you know of any major potholes on a City street, feel free to call (763) 755-5100 to report the location with the nearest address. We appreciate being notified so the pothole can be repaired quickly.

STREET SWEEPING

Street Sweeping procedures will begin mid April or as soon as weather permits. If a boulevard has salt/sand on it, please rake ONLY the salt/sand material to the edge of the blacktop or curb for pickup by the street sweepers. The boulevard is the distance from the edge of blacktop or curb to the property line (generally 13' to 15').

PLEASE - NO YARD WASTE MATERIAL SHOULD BE RAKED INTO CITY STREETS! If you need to dispose of leaves, take them to NRG Processing Solutions (compost site), 13285 Hanson Blvd, Coon Rapids, (763) 767-7964 or call your garbage hauler to see if they provide this service. Please watch for street sweepers in your area and move any vehicles or obstacles that may block sweeping operations. Operators are able to do a much cleaner job if streets are kept clear of obstacles. Street sweeping operations will also follow completed seal coat project areas on City streets.

SPRING CLEAN UP HELPS KEEP ANDOVER BEAUTIFUL!

Spring clean up begins with individual property owners. The following checklist is designed for homeowners to determine not only whether or not their neighbor's property is in compliance with the Andover City Code but also whether their own property is. Please use this list to evaluate your own property and bring it into compliance. **Complaints regarding possible code violations can be formally made by contacting City Hall at (763) 755-5100.**

continued on page 8

2009 CITY OF ANDOVER SPRING TREE SALE

The City of Andover will be offering another tree sale this spring with available tree species listed below. Order forms can be found online at location below. If you don't have web access, they are available at City Hall.

- All of the trees will be sold as bare-root stock type (they won't be in a container or balled and burlapped);
- Limited numbers of each species, so place your order early;
- Limit of six trees for each property;
- Ordering deadline is Monday, April 13, 2009;
- The sale is for Andover residents only;
- Pick up date is Saturday, May 2, 2009, at the City Hall Complex (detailed directions on order form); and
- Planting instructions will be given to all customers on the pick up day.

Species	*Description*	*Size*	*Cost/tree*
Northern Pin Oak *(Quercus Ellipsoidalis)*	True native oak to Anoka sand plain; gorgeous fall colors; prefers sandy soils; help restore.	6-8 feet	$27
Quaking Aspen *(Populus Tremuloides)*	Very adaptable; creamy white to light green bark; sun-loving; fast-growing.	6-8 feet	$18
Red Maple *(Acer Rubrum)*	Attractive fall colors; somewhat shade tolerant; medium growth rate; prefers moist, acidic soils.	6-8 feet	$20
American Linden *(Tilia Americana)*	Hardy; shade tolerant; long-lived.	5-6 feet	$16
Showy Mountain Ash *(Sorbus Decora)*	Hardy; white flowers; may produce clusters of showy, orange fruit.	5-6 feet	$19

*Go to the City of Andover website www.ci.andover.mn.us for the order form and to see pictures and more detailed descriptions of the different species; follow the links: "City Departments," "Natural Resources" and scroll down to "Tree Sale."

ADOPT-A-PARK PROGRAM

Andover has an Adopt-A-Park Program which allows community groups or an individual to adopt a park and keep it litter free during a two (2) year commitment. A sign will be placed in the park recognizing your contribution to the park system.

Contact Todd Haas, Asst. Public Works Director at (763) 767-5131 or e-mail at thaas@ci.andover.mn.us

ADOPT-A-CITY STREET

The City has an Adopt-A-City Street Program, which is available to residents who would like to volunteer to clean up a two (2) mile stretch of road for a two (2) year commitment. A sign will be erected on the section of road being cleaned to recognize your group name. If interested in adopting a City street for spring and fall clean up, please contact the Street Department Supervisor, Public Works Division at (763) 767-5178.

COMMISSION VACANCY

The City of Andover is seeking an individual to serve a 3-year term on the Andover YMCA Community Center Advisory Commission. There is no compensation for this position and meetings are held on the second Monday of each month in the evenings.

For more information, contact Erick Sutherland at (763) 767-5166.

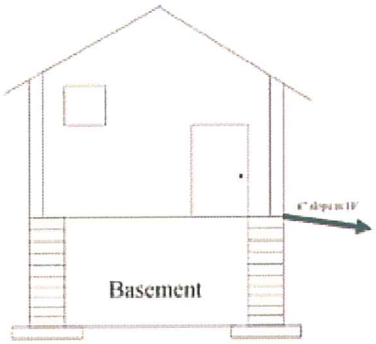
Home Maintenance Tip

From the Building Department

The City had several residential basement walls fail this past summer, sometimes even caving in, due to water not draining away from the exterior basement walls. Driveways or landscape block can trap rain water and prevent the water from properly draining away from the house. This can cause wet and moldy basement walls, and the water may push on the block in the basement walls, causing them to fail or cave in.

The Building Code recommends six (6) inches of slope in the first ten (10) feet out from the exterior walls of the house. Gutters and down spouts can help, but are unreliable because they often become clogged by leaves and branches or are overloaded by heavy rains that fall in a short period of time.

It is usually less expensive to add extra dirt around the house to obtain the proper slope than to pay for a new basement wall. Remember to keep this in mind when you do landscape projects. Questions? Call the Building Official at **763.576.2726**.



Lower Rum River Water Management Organization

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

Anoka Municipal Utility

Attention Residential Utility Customers

Let Anoka Municipal Utility process your next monthly utility bill automatically on the due date. With our AUTO BANK PAY plan you can have your utility payment automatically withdrawn from your checking or savings account on the due date each month.

You will still receive a utility bill so that you know how much will be deducted. Simply contact us at **763.576.2750** or visit www.ci.anoka.mn.us for more information.

Pay your residential utility bills through AUTO PAY PLAN

- NO DEPOSIT FOR RESIDENTIAL CUSTOMERS
- Save money (no stamps)
- Save time (no checks to write)
- No late fees, no worries!

Parks & Cemetery Administration Moving!

Beginning Oct. 19, 2009, the Parks, Recreation, and Cemetery Administrative Office will be located in the lower level of Anoka City Hall (2015 First Avenue). Telephone numbers and contact information will not change. For additional information regarding the move, visit the home page at www.ci.anoka.mn.us.

Assessing Staff to View Properties in "Quintile" Area

The assessor values all property in the city for property taxation purposes. State law requires the assessor to physically inspect all properties every five years. The assessor's office views approximately one-fifth of the existing parcels each year. The area designated for review is referred to as the "quintile." The "quintile" this year is identified on the map.

Quintile viewed in 2009 for 2010 Assessment

Appraisers are working in this area through early fall. These reviews will help determine the January 2, 2010 estimated/taxable market values for property taxes payable in 2011.

When appraisers visit homes they verify the accuracy of information used to determine market values for properties. This includes a home's size, age, style, condition, amenities, etc. By inspecting both the interior and exterior of a home, appraisers can make a thorough and equitable appraisal of each property. City appraisers carry picture identification cards and drive marked City of Anoka vehicles. Please call the assessor's office at **763.576.2730** with any related questions.

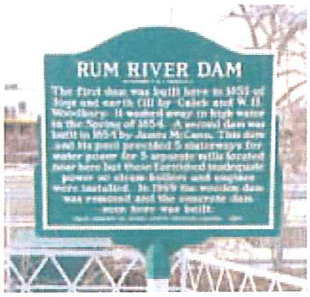
Certification of Delinquent Service Billings

Anoka City Ordinances and Minnesota Statutes allow for the annual certification of delinquent service billings, which may include: costs associated with eliminating weeds, false alarms, removing diseased trees, and removal of public health hazards from private property. City of Anoka utility accounts that are delinquent as of August 1st will also be collected utilizing special assessments. Delinquent accounts that remain unpaid as of September 1, 2009 will be assessed against the property and collected with the property taxes payable in 2010. An administrative fee plus interest will be charged. Property owners with closed accounts and delinquent billings will be mailed notices during September.

To avoid receipt of a notice of delinquent service billing and avoid additional costs, payments must be received by the City of Anoka by September 1, 2009. Senior citizens and permanently and totally disabled persons may apply for deferment of assessments by contacting the city assessor's office at **763.576.2730**.

Lower Rum River Water Management Organization

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



Public Services

City's 10th Annual Street Renewal Project

In the spring of 2009 the City will commence its tenth annual Street Renewal project. The 2009 project will include Oakwood Drive between Seventh Avenue and Kings Lane, all of Elm Street west of Kings Lane, Seventh Avenue from Oakwood Drive to East River Road, and Kings Lane from Birch Street to East River Road. Originally developed in the early 1950's, this area's infrastructure is well beyond its expected useful life.

In the course of these projects, we replace the sanitary sewer and water mains, including individual services to the front property line, we modernize the storm sewer system, and we completely replace the concrete curbs as well as the road surface. This year's project will directly affect 48 adjacent property owners.

We selected a contractor in February and the project was approved by City Council in early March.

Construction is expected to start in early May. We will be contacting affected property owners prior to the start of construction.

The project's substantial completion – that is, blacktopped streets – is anticipated prior to the start of school. The project's final completion is scheduled for early October.

You may be fertilizing more than your grass

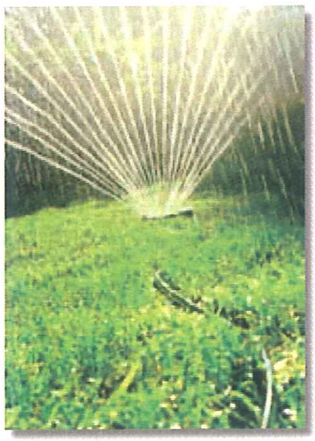
The storm drain in your street is a link to our lakes and rivers. The choices you make when caring for your lawn directly affect water quality.

A common cause of lake and river pollution is phosphorus runoff. In response to this, Minnesota has a law restricting the use of phosphorus lawn fertilizer. Although phosphorus is important for grass growth, many lawns have adequate soil phosphorus and do not need further phosphorus fertilization. If you suspect your lawn is in need of phosphorus, soil test first before using a phosphorus lawn fertilizer.

Phosphorus turns lakes and rivers green and stimulates the growth of algae in lakes and rivers. This crowds out other water plants and reduces oxygen available to fish. The result is unattractive, foul-smelling water that is bad for fish, wildlife, and humans.

Nitrogen, not phosphorus, greens up grass. Phosphorus-free lawn fertilizer still contains nitrogen, the plant nutrient that greens up grass. To keep our lakes and rivers healthy, we need to manage phosphorus carefully. For more information on storm water in Anoka, click on City Departments/Public Works at www.ci.anoka.mn.us.

Changes to City Watering Ordinance



The City of Anoka needs to produce an adequate water supply for everyday use in homes and businesses as well as provide an adequate water supply for fire protection. During high demand periods there are times when the water supply has diminished to low levels.

The first consideration should be given to conservation. There has been a heightened awareness of environmental issues and an increased desire to conserve natural resources that are addressed in the City's watering policy. In addition to the odd/even policy, the City is restricting watering between the hours of 10:00 a.m. - 7:00 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. It is the responsibility of all City residents to comply with these restrictions. Upon any violation, the City may issue written warnings and administrative fines.

Complete information on the City's Water Conservation Policy and watering restrictions can be found at our website, www.ci.anoka.mn.us, City Code, Chapter 66, Article IV, Section 66-131, or by calling the Public Works Department at 763.576.2780.

Lower Rum River Water Management Organization

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

General Information

Anoka City Hall
2015 First Avenue North, Anoka, MN 55303
Regular Hours: Monday - Friday, 8 a.m. - 4:30 p.m.
General Information: 763.576.2700
Toll Free: 1.866.576.2701 **Website:** www.ci.anoka.mn.us

Elected Officials

Mayor

Phil Rice 763.422.8710

City Council

Carl Anderson 763.427.2262
Mark Freeburg 763.421.9241
Steve Schmidt 612.699.5468
Jeff Weaver 763.427.9574

Important Phone Numbers

Administration 763.576.2710
Animal Containment Center 763.576.2850
Aquatic Center 763.421.7730
Assessing/Special Assessments 763.576.2730
Building Permits & Inspections 763.576.2720
Code Enforcement/Property Maintenance 763.576.2715
Community Development 763.576.2720
Electric Maintenance Shop 763.576.2930
Finance 763.576.2770
Fire Non-Emergency 763.576.2860
Fire Prevention 763.576.2862
Greenhaven Golf Course 763.576.2970
Housing & Redevelopment 763.576.2724
Section 8 Housing 763.576.2743
Human Resources 763.576.2740
Parks & Recreation, Cemeteries 763.576.2980
Planning & Zoning 763.576.2720
Police - Non Emergency 763.576.2800
Power Outage (during business hours) 763.576.2903
After 3pm 763.576.2860
Public Works (streets, water, sewer) 763.576.2780
Residential Recycling 763.576.2725
Utility Bill Inquiries 763.576.2780

City Offices Closed:

Thursday, January 1, 2009	**New Year's Day**
Monday, January 19, 2009	**Martin Luther King Jr. Day**
Monday, February 16, 2009	**President's Day**

City Boards & Commissions Meetings

Meeting dates and times are subject to change.
City Council - 1st & 3rd Mondays each month - 7 p.m.
Economic Development Commission
2nd Thursday each month - 7:30 a.m.
Heritage Preservation Commission
2nd Tuesday each month - 6 p.m.
Home Rule Charter Commission - Annually; others as needed
Housing and Redevelopment Authority
2nd Monday each month - 5 p.m.
Human Rights Commission - 3rd Thursday each month - 3 p.m.
Parking Advisory Board - 3rd Wednesday - 7:15 a.m.
Park Board - 3rd Tuesday each month - 7 p.m.
Planning Commission - 1st Tuesday each month - 7 p.m.
Utility Advisory Board - last Wednesday each month - 7:30 p.m.
Waste Reduction & Recycling Board
2nd Tuesday each month - 6 p.m.
Lower Rum River Water Management Organization
The LRRWMO meets the third Thursday of each month at Anoka City Hall at 8:30 a.m. in the Committee Room to discuss storm and surface water issues. The public is welcome.

Printed on Recycled Paper - Partially funded by the Anoka County Board of Commissioners and State Score Funds (SCORE - Select Committee on Recycling and the Environment).

ublic Services

ity's 10th Annual Street enewal Project

the spring of 2009 the City will commence its tenth annual eet Renewal project. The 2009 project will include Oakwood ive between Seventh Avenue and Kings Lane, all of Elm Street st of Kings Lane, Seventh Avenue from Oakwood Drive to East ver Road, and Kings Lane from Birch Street to East River Road. iginally developed in the early 1950's, this area's infrastructure is ll beyond its expected useful life.

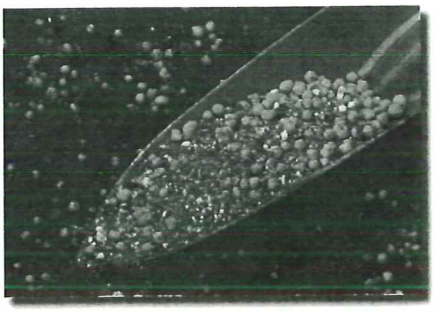
the course of these projects, we replace the sanitary sewer and ter mains, including individual services to the front property line, modernize the storm sewer system, and we completely replace : concrete curbs as well as the road surface. This year's project will ectly affect 48 adjacent property owners.

: selected a contractor in February and the project was approved City Council in early March.

onstruction is expected to start in early May. We will be contacting ected property owners prior to the start of construction.

ıe project's substantial completion – that is, blacktopped streets s anticipated prior to the start of school. The project's final mpletion is scheduled for early October.

ou may be fertilizing more ıan your grass



ıe storm drain in your eet is a link to our lakes d rivers. The choices u make when caring for ur lawn directly affect ıter quality.

common cause of ce and river pollution phosphorus runoff. response to this, Minnesota has a law restricting the use of osphorus lawn fertilizer. Although phosphorus is important for ass growth, many lawns have adequate soil phosphorus and do not need further phosphorus fertilization. If you suspect your lawn is in need of phosphorus, soil test first before using a phosphorus lawn fertilizer.

Phosphorus turns lakes and rivers green and stimulates the growth of algae in lakes and rivers. This crowds out other water plants and reduces oxygen available to fish. The result is unattractive, foul-smelling water that is bad for fish, wildlife, and humans.

Nitrogen, not phosphorus, greens up grass. Phosphorus-free lawn fertilizer still contains nitrogen, the plant nutrient that greens up grass. To keep our lakes and rivers healthy, we need to manage phosphorus carefully. For more information on storm water in Anoka, click on City Departments/Public Works at www.ci.anoka.mn.us.

Changes to City Watering Ordinance

The City of Anoka needs to produce an adequate water supply for everyday use in homes and businesses as well as provide an adequate water supply for fire protection. During high demand periods there are times when the water supply has diminished to low levels.

The first consideration should be given to conservation. There has been a heightened awareness of environmental issues and an increased desire to conserve natural resources that are addressed in the City's watering policy. In addition to the odd/even policy, the City is restricting watering between the hours of 10:00 a.m. - 7:00 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. It is the responsibility of all City residents to comply with these restrictions. Upon any violation, the City may issue written warnings and administrative fines.

Complete information on the City's Water Conservation Policy and watering restrictions can be found at our website, www.ci.anoka.mn.us, City Code, Chapter 66, Article IV, Section 66-131, or by calling the Public Works Department at 763.576.2780.

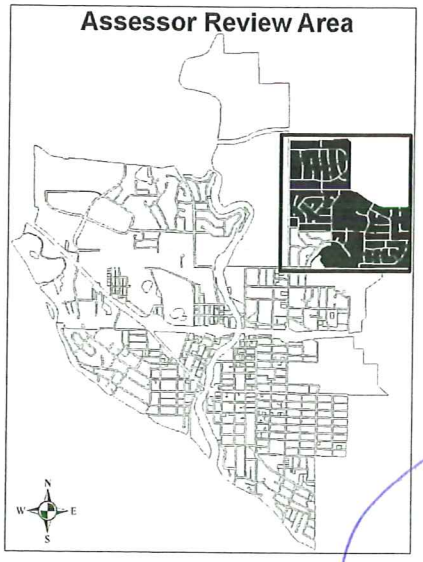
Spring 2009

Lower Rum River Water Management Organization

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

Assessing Staff to View Properties in "Quintile" Area

The assessor values all property in the city for property taxation purposes. State law requires the assessor to physically inspect all properties every five years. The assessor's office views approximately one-fifth of the existing parcels each year. The area designated for review is referred to as the "quintile." The "quintile" this year is identified on the map.



Quintile viewed in 2009 for 2010 Assessment

Appraisers are working in this area through early fall. These reviews will help determine the January 2, 2010 estimated/taxable market values for property taxes payable in 2011.

When appraisers visit homes they verify the accuracy of information used to determine market values for properties. This includes a home's size, age, style, condition, amenities, etc. By inspecting both the interior and exterior of a home, appraisers can make a thorough and equitable appraisal of each property. City appraisers carry picture identification cards and drive marked City of Anoka vehicles. Please call the assessor's office at **763.576.2730** with any related questions.

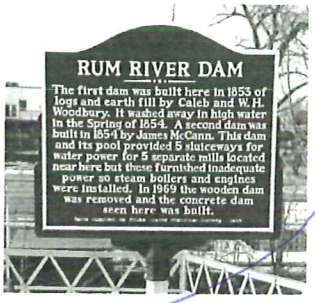
Certification of Delinquent Service Billings

Anoka City Ordinances and Minnesota Statutes allow for the annual certification of delinquent service billings, which may include: costs associated with eliminating weeds, false alarms, removing diseased trees, and removal of public health hazards from private property. City of Anoka utility accounts that are delinquent as of August 1st will also be collected utilizing special assessments. Delinquent accounts that remain unpaid as of September 1, 2009 will be assessed against the property and collected with the property taxes payable in 2010. An administrative fee plus interest will be charged. Property owners with closed accounts and delinquent billings will be mailed notices during September.

To avoid receipt of a notice of delinquent service billing and avoid additional costs, payments must be received by the City of Anoka by September 1, 2009. Senior citizens and permanently and totally disabled persons may apply for deferment of assessments by contacting the city assessor's office at **763.576.2730**.

Lower Rum River Water Management Organization

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



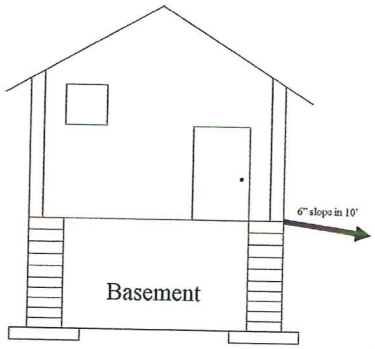
Home Maintenance Tip

From the Building Department

The City had several residential basement walls fail this past summer, sometimes even caving in, due to water not draining away from the exterior basement walls. Driveways or landscape block can trap rain water and prevent the water from properly draining away from the house. This can cause wet and moldy basement walls, and the water may push on the block in the basement walls, causing them to fail or cave in.

The Building Code recommends six (6) inches of slope in the first ten (10) feet out from the exterior walls of the house. Gutters and down spouts can help, but are unreliable because they often become clogged by leaves and branches or are overloaded by heavy rains that fall in a short period of time.

It is usually less expensive to add extra dirt around the house to obtain the proper slope than to pay for a new basement wall. Remember to keep this in mind when you do landscape projects. Questions? Call the Building Official at **763.576.2726**.



Lower Rum River Water Management Organization

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

Anoka Municipal Utility

Attention Residential Utility Customers

Let Anoka Municipal Utility process your next monthly utility bill automatically on the due date. With our AUTO BANK PAY plan you can have your utility payment automatically withdrawn from your checking or savings account on the due date each month.

You will still receive a utility bill so that you know how much will be deducted. Simply contact us at **763.576.2750** or visit www.ci.anoka.mn.us for more information.

Pay your residential utility bills through AUTO PAY PLAN

- NO DEPOSIT FOR RESIDENTIAL CUSTOMERS
- Save money (no stamps)
- Save time (no checks to write)
- No late fees, no worries!

Parks & Cemetery Administration Moving!

Beginning Oct. 19, 2009, the Parks, Recreation, and Cemetery Administrative Office will be located in the lower level of Anoka City Hall (2015 First Avenue). Telephone numbers and contact information will not change. For additional information regarding the move, visit the home page at www.ci.anoka.mn.us.

LOWER RUM RIVER
WATER MANAGEMENT ORGANIZATION

FINANCIAL STATEMENTS AND
REPORT OF CERTIFIED PUBLIC ACCOUNTANTS
YEAR ENDED JANUARY 31, 2010

ALLAN A. HANSON, CPA LTD.

Table of Contents

Allan Hanson CPA LTD.

715 Florida Ave. S., Ste. 400
Golden Valley, Minnesota 55426
Phone: 763-542-1184
Facsimile :763-542-8605

Board of Commissioners
Lower Rum River Water Management Organization
Anoka, Minnesota

I have reviewed the accompanying balance sheet of Lower Rum River Water Management Organization (a joint powers watershed management organization) as of January 31, 2010, and the related statement of revenues, expenditures, net assets and cash flows for the year then ended. in accordance *with Statements on Standards for Accounting and Review Services issued by the American Institute of Certified Public Accountants*. All information included in these financial statements is the representation of the management of Lower Rum River Water Management Organization.

A review consists principally of inquiries of company personnel and analytical procedures applied to financial data.. It is substantially less in scope than an audit in accordance with generally accepted auditing standard, the objective of which is the expression of an opinion regarding the financial statements taken as a whole. Accordingly, I do not express such an opinion.

Based on my review, I am not aware of any material modifications that should be made to the accompanying financial statements in order for them to be in conformity with generally accepted accounting principles.

My review was made for the purpose of expressing limited assurance that there are no material modifications that should be made to the financial statements in order for them to be in conformity with generally accepted accounting principles. The information included in the accompanying schedules is presented only for supplementary analysis purposes. Such information has been subjected to the inquiry and analytical procedures applied in the review of the basic financial statements, and I am not aware of any material modifications that should be made to it.

Allan A. Hanson
Certified Public Accountant

Minneapolis, Minnesota

June 16, 2010

LOWER RUM RIVER WATER MANAGEMENT ORGANIZATION
BALANCE SHEET
JANUARY 31, 2010

ASSETS		
Cash and cash equivalents	$	11,535
Grants receivable		3,032
Total Assets		14,567
LIABILITIES AND NET ASSETS		
Current Liabilities:		
Accounts payable		3,291
Permit deposits		1,232
Total Liabilities		4,523
Net Assets, Unrestricted		10,044
		14,567

See Notes to Financial Statements

LOWER RUM RIVER WATER MANAGEMENT ORGANIZATION
STATEMENT OF ACTIVITIES
BUDGET AND ACTUAL
FOR THE YEAR ENDED JANUARY 31, 2010

	Final Budget	Actual	Variance Favorable (unfavorable)
REVENUES			
Assessments from participating cities-Note 3	25,000	25,000	0
Permits - Note 3			
Service fees	2,000	(4,673)	(6,673)
Engineering fees	18,000	10,451	(7,549)
Miscellaneous revenue	0	3,054	3,054
Interest	1,000	105	(895)
Total Revenues	46,000	33,937	(12,063)
EXPENDITURES			
Engineering fees:			
Permits	16,000	10,451	5,549
3RD Generation Management Plan	0	12,346	(12,346)
Administrative	4,000	924	3,076
Legal and professional fees	2,950	2,455	495
Insurance	2,200	1,690	510
Secretarial services and supplies	8,700	8,858	(158)
Other	9,100	8,195	905
Total Expenditures	42,950	44,919	(1,969)
Excess of revenues over expenditures	3,050	(10,982)	(14,032)
Net Assets, Beginning of year		21,025	
Net Assets, End of year		10,043	

See Notes to financial statements

LOWER RUM RIVER WATER MANAGEMENT ORGANIZATION
STATEMENT OF CASH FLOWS
YEAR ENDED JANUARY 31, 2010

Cash flows from operating activities:		
Cash received:		
Assessments from participating cities	$	25,000
Permits		1,925
Miscellaneous		997
Interest		105
Net cash received:		28,027
Cash paid:		
Engineering fees		12,892
Legal and professional fees		15,709
Secretarial services and supplies		8,707
Insurance		1,690
Other		8,195
		47,193
Decrease in cash and cash equivalents		(19,166)
Cash and cash equivalents, beginning of year		30,701
Cash and cash equivalents, end of year		11,535

See Notes to Financial Statements

LOWER RUM RIVER WATER MANAGEMENT ORGANIZATION
NOTES TO FINANCIAL STATEMENTS

NOTE 1:

Nature of the Organization

The Organization is a watershed management organization which 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 Statutes 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 rates 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.

NOTE 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 management which is responsible for their integrity and objectivity.

Cash Equivalents - for 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".

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.

NOTE 3:
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,
	2010
Andover	6825
Anoka	5457
Ramsey	12,174
Coon Rapids	544
	25,000

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 which 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.