



2018 Activity Report



Greenfield • Independence • Loretto • Maple Plain • Medina • Minnetrista

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This report was prepared
for the Pioneer-Sarah Creek Watershed Management Commission
by JASS, Inc.

Questions regarding this report should be directed
to JASS, 763.553.1144 or judie@jass.biz

We gratefully acknowledge the assistance of:
James Kujawa, Kirsten Barta and Mary Karius, Hennepin County Dept. of Environment and Energy
Brian Vlach and Amy Timm, Three Rivers Park District
Brian Johnson, Metropolitan Council

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Barbara Zadeh

ANNUAL ACTIVITY REPORT

This annual activity report has been prepared by the Pioneer-Sarah Creek Watershed Management Commission in accordance with the annual reporting requirements of Minnesota Rules Chapter 8410.0150, Subps. 2 and 3. It summarizes the activities undertaken by the Commission during calendar year 2018.

PIONEER-SARAH CREEK WATERSHED MANAGEMENT COMMISSION

The Commission was established to protect and manage the natural resources of the Pioneer and Sarah Creek watersheds. It is a joint powers watershed organization formed as required under MN Statutes 103B.201-103B.255 and MN Rules Chapter 8410. A Board of Commissioners comprised of representatives appointed by the member communities was established as the governing body of the Commission. Its membership is comprised of the cities of Greenfield, Independence, Loretto, Maple Plain, Medina, and Minnetrista. The table in *Appendix 1* shows the names of the Commissioners appointed to serve in 2018.

MEETINGS

The Commission meets on the third Thursday of the month at Maple Plain City Hall. The meetings are open to the public and visitors are welcome. Meeting notices, agendas, and approved minutes are posted on the Commission's website, www.pioneersarahcreek.org.

STAFF AND CONSULTANTS

The Commission has no employees. Independent consultants perform technical, legal, administrative, and wetland services for the Commission and are selected biannually. The current staff and consultants are listed in *Appendix 1*.

THE WATERSHED

Located entirely within western Hennepin County, the Pioneer-Sarah Creek watershed covers approximately 70.5 square miles and includes the watersheds of Pioneer Creek and Sarah Creek. The Crow River demarcates most of the northern boundary. Portions or all of the six member cities are within the legal boundaries of the Pioneer-Sarah Creek watershed and are listed in Table 1. A map of the watershed can be viewed on the next page.

WATERSHED MANAGEMENT PLAN

The Commission's Third Generation Watershed Management Plan was approved by the Board of Water and Soil Resources (BWSR) for a period of six years on January 28, 2015. The Commission adopted the Plan on May 21, 2015.

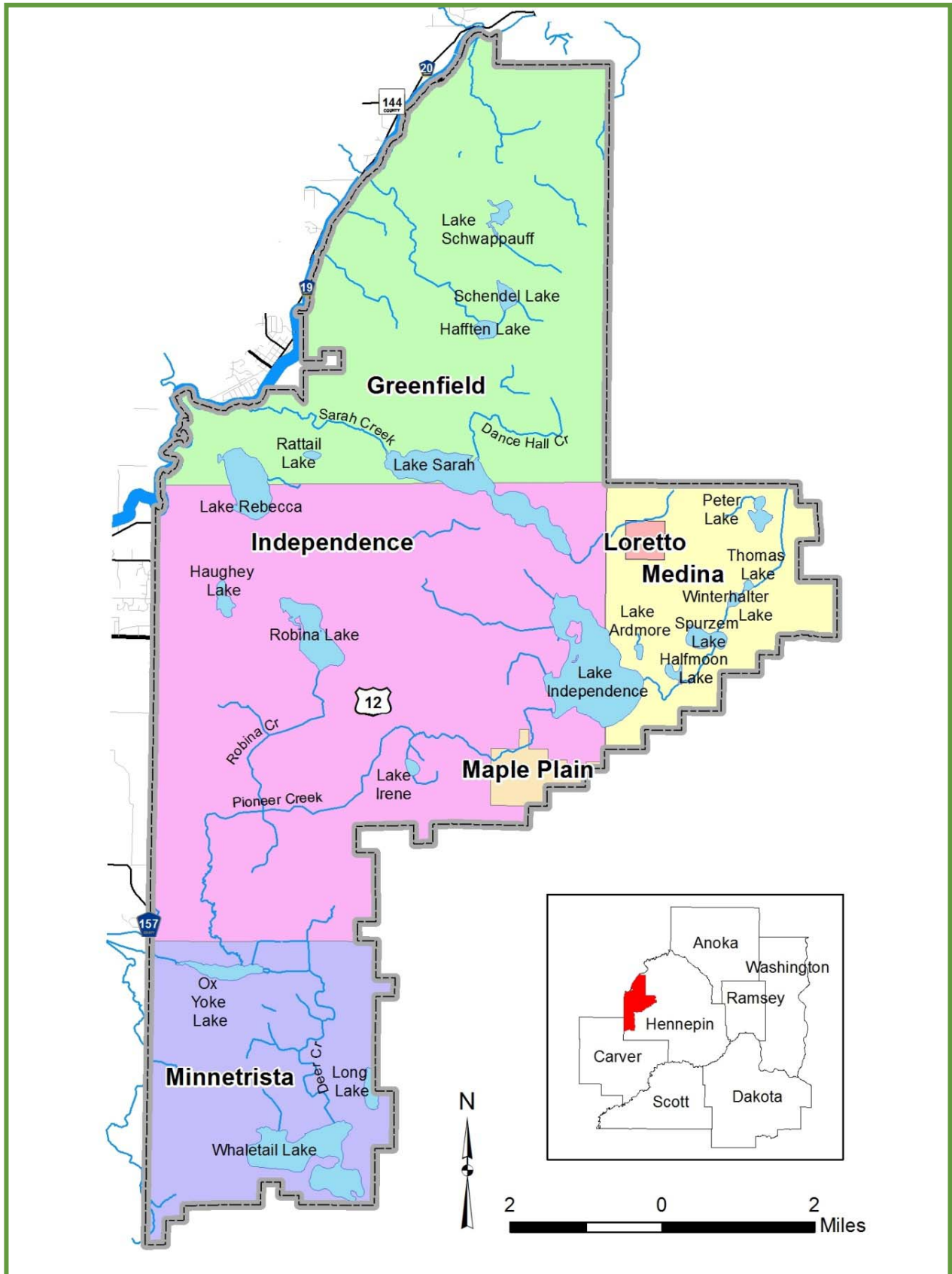


Table 1
Area of Members within the Pioneer-Sarah Creek Watershed

Local Government Unit	Area Within Watershed (Square Miles)	Percent of Watershed
Greenfield	21.5	30.5%
Independence	29.7	42.1%
Loretto	0.3	0.4%
Maple Plain	0.8	1.1%
Medina	7.5	10.7%
Minnetrista	10.7	15.2%
TOTAL:	70.5	100.0%

During development of the Plan, the Commission identified the following priorities to guide water resources planning and management functions:

- Educate the Commissioners and member City Councils and Planning Commissions regarding watershed and water resources management.
- Undertake a monitoring program to monitor water quality trends and to track progress toward meeting TMDLs.
- Partner with member cities and other parties to conduct subwatershed assessments and other studies to identify feasible and cost-effective Best Management Practices (BMPs) to protect and improve water quality.

On November 19, 2015, the Commission amended its Third Generation Watershed Management Plan to adopt a revision to the plan amendment process to conform to 2015 revisions to MN Rules 8410. In part, the revisions will allow the Commission to modify the CIP with only minimal need for plan amendments.

On July 20, 2017 the Commission adopted a second Minor Plan Amendment to revise the costs associated with project IN-2 Hydrologic Restorations on the Pioneer-Sarah Creek 2015 Capital Improvement Program (CIP). The revision would update the estimated costs of the design and construction phases of the Baker Campground Ravine project.

On June 21, 2018 the Commission amended its Third Generation Plan to revise the CIP to remove twenty projects that have already been completed or will not move forward, to update the estimated costs/timing of three projects, to group nine projects into the category *Watershedwide Ongoing Opportunity-Based Projects*, and to add ten new projects.

LOCAL PLANS

Local water management plans adopted by member cities pursuant to Minnesota Statutes, Section 103B.235 shall be consistent with the Commission's Third Generation Watershed Management Plan. Local plans must comply with MN Statutes, Section 103B.235 and MN Rules 8410 regarding local

plan content. (*Appendix 2*). At year-end the Commission had reviewed and approved the local surface water plans of the cities of Loretto, Medina, and Minnetrista. The plans for Independence and Maple Plain were under review on December 31. Responses to Staff's comments on Greenfield's Local Plan were received January 9, 2019.

2018 WORK PLAN IN REVIEW

Minnesota Rule 8410.0150 requires the Commission to submit to the Board of Water and Soil Resources a financial report, activity report and audit report for the preceding fiscal year. 8410.0150 Subp. 3 outlines the required content of the annual activity report. It includes an assessment of the previous year's annual work plan and development of a projected work plan for the following year.

The Commission's Third Generation Watershed Management Plan identifies issues, priorities and goals for the six-year period 2015-2020. Following is a summary of the work undertaken by the Pioneer-Sarah Creek Watershed Management Commission in 2018 to meet the goals, objectives and projected work plan outlined in its 2017 *Annual Report*. The projected Work Plan was approved at the Commission's April 19, 2018 meeting. (***) indicates activities undertaken in 2018 but not included in the 2018 Work Plan.)

A. ONGOING TECHNICAL AND ADMINISTRATIVE PROGRAMS

1. Continue to review local development/redevelopment plans for conformance with the standards outlined in the Commission's Third Generation Watershed Management Plan. Those standards include:

- a.** Maintain the current flood profile of the creeks and their tributaries.
- b.** Maintain the post-development 2-year, 10-year, and 100-year peak rate of runoff at pre-development level for the critical duration precipitation event.
- c.** Maintain the post-development annual runoff volume at pre-development volume.
- d.** Prevent the loss of floodplain storage below the established 100-year elevation.

The Commission reviewed eighteen plans for conformance with its standards in 2018. Twelve of the projects reviewed were in the city of Greenfield, four in Independence, and one each in Loretto and Medina. (Appendix 3)

2. Continue to serve as the local government unit (LGU) for administering the Wetland Conservation Act (WCA) for the cities of Greenfield, Loretto and Maple Plain. Preserve the existing functions and values of wetlands within the watershed. Promote enhancement or restoration of wetlands in the watershed.

In 2018 the Commission's technical staff assisted approximately 35 landowners/agency/developer contacts with wetland-related questions. On behalf of the Commission they reviewed the following types of wetland applications: eight wetland boundary/type; three no-loss, exemptions, three sequencing, and two wetland replacement plans. Wetland impacts totaled 14,301 SF; wetland replacement totaled 28,602 SF. Two WCA violations were investigated and resolved. The Commission was involved in five Technical Evaluation Panels (TEPs) throughout the watershed. The Commission does not have a wetland banking program.

3. Adopt a 2019 operating budget.

- a. Search for grant and other funds to supplement the regular budget.

Supported the Lake Sarah Improvement Association's application for a Hennepin County AIS Prevention grant for its innovative approach to AIS education and raising personal accountability for the prevention of the spreading of AIS. See Section D. below for more information regarding grant-funded projects.

- b. Operate a capital improvement program and share in the cost of projects.

On June 21, 2018 the Commission approved an operating budget totaling \$134,070, with a total assessment to the membership of \$128,000, a zero increase over 2018. The 2017 audit showed a carry-over of \$74,464 to help fund future CIPs.

4. Conduct a Level II Review and Assessment of the Commission's Progress toward its Third Generation Plan Objectives as part of the Board of Water and Soil Resources (BWSR) Performance Review and Assistance Program (PRAP).

In the summer of 2018, the Commission underwent a BWSR Level II Performance Review. The review contained three specific recommendations to enhance the Commission's service and its delivery of effective water and related land resource management. Briefly, they are:

a. Develop and implement a training plan for board members. This training will resume in 2019.

b. Make water quality data and trends easily accessible to the public. The website will be updated to make information about water quality trends in area lakes available in easy-to-understand and accessible formats. Future annual reports will also contain information on water quality trends.

c. Evaluate progress for the implementation of plan actions at a minimum of every two years. BWSR noted that the goals in the Commission's current water management plan are related to resource outcomes. However, efforts to measure the effects of projects on those resources are not apparent. The Commission should evaluate progress at a minimum of every two years as required in rule, make sure to measure outcomes, not just outputs, and report on progress toward achieving resource improvement. Future Work Plans will endeavor to fulfill this recommendation.

5. Publish a 2017 Annual Activity Report summarizing the Commission's yearly activities and financial reporting.

The 2017 Annual Activity Report was approved by the Commission at their April 19, 2018 meeting and submitted to BWSR by the April 30 statutory deadline.

6. Draft a 2018 Work Plan.

The Commission's 2018 Work Plan was also approved at the Commission's April 19, 2018 meeting.

B. WATER QUALITY AND QUANTITY

1. Support the Commission's management goals for water quality. Continue to make progress to improve the lakes and streams in the watershed as well as protect those that are not impaired.

The MPCA notified the Commission that Lake Rebecca was delisted from the impaired water's list for excessive nutrients in 2018.

a. Improve water clarity in the impaired waters by 10% over the average of the previous ten years by 2023.

b. Maintain or improve water quality in the lakes and streams with no identified impairments.

No waters in the Pioneer-Sarah Creek watershed were added to the impaired waters list in 2018.

2. Foster implementation of BMPs in the watershed through technical and financial assistance.

Utilized the auspices of the University of Minnesota's agriculture specialist and Hennepin County's Rural Conservationist to promote, educate, and facilitate best management practices to target audiences such as owners of small animal operations and lakeshore residents. Sought grants such as the Hennepin County Good Steward and Opportunity Grants to assist recipients with the costs of installing implementation practices.

Although the Commission regulates new development projects submitted by the member communities, city, county and commission staff received numerous calls and enquiries throughout the year where water quality and habitat restoration improvement assistance are requested. Most are followed through by the landowner, but not quantified or recorded by the staff. BMPs anywhere from a simple pollinator-friendly garden to an extensive manure/pasture management system for 2 or 3 horses, are undertaken with minimal assistance from staff and without a final determination of the water quality benefits derived from them.

3. Operate a monitoring program sufficient to characterize water quantity and quality and biotic integrity in the watershed and evaluate progress toward TMDL goals. Partner with Three Rivers Park District (TRPD) to conduct water quality monitoring in the watershed. Bring stream and lake monitoring efforts into line with the monitoring program outlined in the Third Generation Watershed Plan.

a. Partner with Three Rivers Park District (TRPD) to conduct bi-weekly water quality monitoring of "sentinel lakes" – Independence, Sarah, and Little Long, along with both basins of Whaletail.

These five lakes were monitored in 2018. They are all classified as "deep" lakes with the exception of Whaletail North, which is classified as a "shallow" lake. The water quality parameters that were collected at the surface for all of the lakes included total phosphorus, soluble reactive phosphorus, total nitrogen and chlor-

ophyll-a. Samples were also collected at the top of the hypolimnion and 1-m from the bottom for analysis of total phosphorus and soluble reactive phosphorus for those lakes classified as “deep” lakes. Results of the monitoring program are cited on “Lake Report Cards,” included in Appendix 4 and posted on the Commission’s website.

b. Partner with Three Rivers Park District (TRPD) to conduct flow and water quality monitoring on Pioneer Creek at Copeland Road and Sarah Creek at County Road 92, along with possible water quality and flow monitoring at up to two additional sites.

The stream sites monitored for continuous flow in 2018 were Sarah Creek at Highway 92, Pioneer Creek at Pagenkopf, and Pioneer Creek at Copeland. No water quality data was collected at these sites. However, two sites were monitored for continuous flow and water quality on a stream that flows into Lake Rebecca. These sites were located on a stream (designated as Rebecca North) that outlets on the east side of Lake Rebecca. There was one sampling site located at the channel inlet as water enters Lake Rebecca Park Reserve and another where water flows through an outlet prior to entering Lake Rebecca. These sites were intended to determine the amount of nutrient loading attributed to the watershed outside of Lake Rebecca Park Reserve and the amount of total nutrient loading entering Lake Rebecca through the channel. It was assumed that the difference between the two monitoring sites were representative of the nutrient loading attributed to the Lake Rebecca Park Reserve. (Appendix 5)

c. Participate in Metropolitan Council’s Citizen Assisted Monitoring Program (CAMP). The Commission budgeted funds to monitor one lake in 2018.

Hafften Lake was monitored through the CAMP program in 2018. The 2018 CAMP report will be available in spring 2019 at <https://metro council.org/Wastewater-Water/Services/Water-Quality-Management/Lake-Monitoring-Analysis.aspx>

d. *** A survey/study was conducted on Lake Independence to estimate the carp biomass/abundance relative to the threshold biomass that may cause ecological damage, and determine major spawning/migration routes of carp from Lake Independence into adjacent lakes. Lake Independence carp biomass and abundance was estimated using mark-recapture catch per unit effort data from boat electrofishing surveys. Carp captured from the boat electrofishing surveys were implanted with passive integrated transponder (PIT) tags and released to monitor their movement. PIT antenna data logger stations were installed at all major inlets and outlets for Lake Independence to detect the passage/movement of PIT-tagged carp. Lakes that have excessive carp biomass and abundance above the ecological threshold of 100 kg/ha can have degraded water quality and negative impacts on the submersed aquatic plant community.

C. EDUCATION

1. Annually evaluate the proposed Education and Outreach program and establish

education and outreach activities for the coming year, including goals and strategies identified in the WRAPS STUDY. These latter activities could be identified through a collaboration of the Technical Advisory Committee (TAC) and the Citizen Advisory Committee (CAC). A number of implementation strategies are identified in the Commission's Education and Outreach Plan found in Appendix E of the Third Generation Management Plan.

This evaluation did not occur in 2018. The Commission does, at its regular monthly meetings, welcome and encourage citizens to speak to issues, concerns and other interests during the Open Forum portion of the meeting. The Commission values this input and responds as appropriate.

2. Educate Commissioners, member City Councils and Planning Commissions about watershed and water resources management. Sponsor watershed and water resources training opportunities such as NEMO (Nonpoint Education for Municipal Officials).

NEMO activities were not scheduled in 2018. The Commission will continue to be involved in NEMO whenever programs and activities become available.

3. Become a member of WaterShed Partners, a coalition of more than 70 public, private and nonprofit organizations in the Twin Cities Metro area promoting public understanding that inspires people to act to protect water in their watershed through educational projects, networking, and resource sharing.

The Commission became a member of WaterShed Partners in 2018. Administrative Staff regularly attends their meetings and brings forward information to the Commission regarding their activities and educational projects. Resources are shared on the Commission's website and on their Facebook page.

4. Convene Citizen Advisory Committee (CAC) as necessary to make recommendations on education and outreach actions and assist the Commission with implementation.

The CAC was not convened in 2018.

5. Participate with collaborative groups to pool resources to undertake activities in a cost-effective manner, promote interagency cooperation and collaboration, and promote consistency of messages. Use the Commission's, member cities', and educational partners' websites and newsletters, social media, co-ops, local newspapers and cable TV to disseminate educational materials to all stakeholders about actions they can take to protect and improve water quality.

The WaterShed Partner website, <http://cleanwatermn.org/about-us/>, describes opportunities to protect the environment - Clean up dog poop, Adopt-a-Drain, Autumn raingarden maintenance tips, Tips to protect local waterways from runoff pollution, Organic lawn care, Salt tip card, Green up your lawn not lakes and rivers, and many more.

6. Continue to maintain the Commission's website to provide news to residents of the watershed. Maintain the Commission Facebook page.

In 2018 www.pioneersarahcreek.org had 1200 users for 1600 sessions. In the first month of 2019 those numbers were 130 and 151, respectively. In the final month

of 2018, the Facebook page posted 18 likes, 68 reaches and 16 engagements.

7. Provide opportunities for the public to learn about and participate in water quality activities. Enhance education opportunities for youth. Provide opportunities for bridge-building between stakeholders.

a. Promote river stewardship through the River Watch program. Encourage participation by local school students and their teachers. Funding for monitoring one site was included in the 2018 budget.

No sites were monitored as part of the River Watch program in 2018. However, three sites were included in WHEP (the Wetland Health Evaluation Program). They were PS-1, the Loretto Treatment Pond downstream from the new Loretto wastewater treatment facility; PS-2, the Selstad wetland that feeds into Lake Independence; and PS-8, the Dance Hall Creek wetland located at the end of the creek just before it flows into Lake Sarah. (Appendix 6)

For more information about the RiverWatch and WHEP programs, contact Mary Karius, Hennepin County Environment and Energy, Mary.Karius@hennepin.us.

b. Work with Boy Scouts for conservation hours, dependent on appropriate environmental projects being identified.

This task was not pursued due to risk and safety issues.

c. Work in partnership with the University of Minnesota's agriculture specialist to help build relationships with the agricultural community in the watershed in order to encourage TMDL implementation.

As an example, one project provided assistance to a landowner in creating a horse manure composting system that makes manure handling more convenient and less time consuming. This manure storage and composting facility conserves valuable fertility for their pasture and hay fields and prevents those nutrients from leaching to groundwater and running off to the adjacent creek.

d. Working in partnership with the Hennepin County Rural Conservationist, continue to work with landowners, writing county cost-share grants to help owners become compliant with the MN Buffer Law.

The deadline for compliance passed in late 2017. Land owners who did not respond to the County or did not get their property into compliance were referred to BWSR for enforcement. The MN Buffer Law requires Staff to check each parcel in the County at least once every three years and spot check up to 15% of parcels. Hennepin County has opted to section the County into thirds and check 1/3 each year. Those residents chosen for a spot check will be notified by letter.

In 2019, review and inspections will take place in the Pioneer-Sarah Creek watershed in the cities of Independence, Greenfield, Loretto, Maple Plain, Medina, and parts of Minnetrista.

D. STUDIES, PROJECTS AND CIPS.

1. Continue to support member cities as they identify studies and projects which benefit both the cities and the watershed.

Submitted FY20-21 Biennial Budget Request (BBR) to the Board of Water and Soil Resources. Among projects identified on the BBR are carp population control chain of lakes; feedlot BMPs; Dancehall Creek SWA-identified implementation projects; SWAs for Hafften, Schendel, Schwauppaufl Lakes drainage basin; Tomahawk Trail wetland external load reduction; Ardmore neighborhood projects; and Lake Independence alum treatment.

2. Continue to identify Watershed-wide TMDL implementation projects. Seek grant funding to assist with the costs associated with those projects.

Sought grant funding assistance for the Baker Park Reserve Campground Ravine Stabilization project. Received funding in the amount of \$416,000 through a BWSR Clean Water Fund grant and \$59,500 through the Hennepin County Natural Resources Opportunity Grant program. Local partners (the cities of Independence and Medina, Three Rivers Park District, and the Lake Independence Citizens Association [LICA]) are providing \$34,000. The Commission's share of this \$520,000 project is \$10,500.

3. Prioritize BMPs identified in the Dance Hall Creek Subwatershed Retrofit Assessment for implementation or further study.

In 2016 the City of Greenfield sent letters to the Dance Hall Creek landowners requesting their cooperation in beginning the implementation phase of the SWA. While no responses were forthcoming, the City and the Commission continue to make personal contacts to further this process.

4. Cost-share with the Lake Sarah Improvement Association (LSIA) to complete a round of curly-leaf pondweed (CLPW) treatment in 2018.

In 2018 the Commission entered into a joint powers agreement with the Three Rivers Park District to complete curly-leaf pondweed turion surveys, annual aquatic plant surveys and annual water quality monitoring to determine the effectiveness of the CLPW control program to reduce phosphorus loading to the lake. The parties will coordinate with LSIA to develop and implement a CLPW control strategy per the Lake Sarah TMDL Implementation Plan. The Commission's cost-share is 25%, not to exceed \$8,000 annually.

5. *** Enter into Joint Powers Agreement with the cities of Independence and Medina, and the Three Rivers Park District to facilitate the improvement of Lake Independence through the implementation of Phase I of the Baker Park Campground Ravine Stabilization project.

6. Convene the Technical Advisory Committee (TAC) for the purpose of receiving CIP applications from the member communities, reviewing them for validity, and recommendation to the Commission for incorporation on the Third Generation Plan CIP.

Additions, revisions and deletions were made to the Commission's Capital Improvement Program at the TAC's April and May meetings. The TAC's recommendations were approved by the Commission at their May meeting.

- a. Update CIP in anticipation of the PRAP.
- b. Seek grant funding to assist with the costs associated with projects identified on the Commission's CIP.

Applied for, and received BWSR Competitive Grant funding in the amount of \$416,00 for the Baker Park Reserve Campground Ravine Stabilization project.

- c. Prioritize capital projects in anticipation of funding during the initial round of the Watershed-based Funding Pilot Project.

The Commission identified three projects recommended in the Lake Ardmore Subwatershed Assessment for funding by the BWSR Watershed-based Funding Pilot Project. Those projects were 1) Project SS1, Stream Stabilization - stabilize 70 feet of stream bank in channel between Lakes Ardmore and Independence; 2) Project SR1, Shoreline Restoration - stabilize 160 feet of shoreline at boat launch; and 3) Project PD3, Pond Excavation - enlarge existing stormwater pond to provide additional treatment for urban runoff. Total cost of these projects is \$74,062.00. Grant funding under the pilot project totals \$58,317.

E. PLANNING

- 1. When requested, assist member cities to develop their local water plans. Review plans for compliance with the Third Generation Plan. Revisions to Minnesota Rules 8410 state that all cities and towns in the seven-county metropolitan area must complete and adopt their local water plans between January 1, 2017 and December 31, 2018.

At year-end the local plans from the cities of Loretto, Medina and Minnetrista had been approved and the plans from Greenfield, Independence and Maple Plain were under review by Commission Staff.

- 2. Budget for the expense of writing the Fourth Generation Plan, due in 2020. Development should begin in late 2018.

The 2017 Audit includes \$25,000 set aside for next generation plan expense.

FINANCIAL REPORTING

Appendix 7 includes the Commission's approved budget for 2018. The Commission's Joint Powers Agreement provides that each member community contributes toward the annual operating budget based on its share of the total market value of all property within the watershed. The 2018 assessments to the members are also found in Appendix 7.

A \$133,770 operating budget was approved by the Commission for 2018. \$5,500 was projected as proceeds from application fees, \$270 from interest income, and \$128,000 as assessments to members.

The Pioneer-Sarah Creek Watershed Management Commission maintains a checking account at US Bank for current expenses and rolls uncommitted monies to its account in the 4M Fund, the Minnesota Municipal Money Market Fund.

An amendment of Minnesota Rules, Chapter 8410 became effective on July 13, 2015. One of the revisions to the Rules extends the annual audit due date to 180 days after the end of the fiscal year, in the case of the Pioneer-Sarah Creek Commission, to June 30, 2019. The 2018 Audit Report, which is being prepared by Johnson & Company, Ltd., Certified Public Accountants, will be included in the Commission's *2019 Annual Activity Report*. Since the 2017 Audit was included in the *2017 Annual Activity Report*, no audit report will be included in this report.

The Commission follows Rule 54 of the Government Accounting Standard Board (GASB) to report Fund Balances. The fund balance classifications include:

- ≡ *Nonspendable* – amounts that are not in a spendable form. The Commission does not have any items that fit this category.
- ≡ *Restricted* – amounts constrained to specific purposes by their providers. One example would be ad valorem levy funds received from the County for capital improvement projects. The unused portion of these funds must be set aside in a restricted account for similar projects. Another example would be BWSR Legacy Grant proceeds where the funds are received prior to the onset of a project and where any unused portion must be returned to the grantor.
- ≡ *Committed* – amounts constrained to specific purposes by the Commission itself. An example would be residual funds carried over from one year to the next for Studies, Project Identification and Subwatershed Assessments.
- ≡ *Assigned* – amounts the Commission intends to use for specific purposes. Most line items in the Commission's Operating Budget fall under this category.
- ≡ *Unassigned* – amounts that are available for any purpose. These amounts are reported only in the general fund.

Amounts paid by the Commission per the 2018 Audit will be categorized as General Engineering, General Administration, Education, Programs, Projects, or Capital Projects.

2019 PROJECTED WORK PLAN

Following is the projected work plan for 2019 as approved by the Commission at its April 18, 2019 meeting.

A. ONGOING TECHNICAL AND ADMINISTRATIVE PROGRAMS

1. Continue to review local development/redevelopment plans for conformance with the standards outlined in the Commission's Third Generation Watershed Management Plan.
 - a. Maintain the current flood profile of the creeks and their tributaries.
 - b. Maintain the post-development 2-year, 10-year, and 100-year peak rate of runoff at pre-development level for the critical duration precipitation event.
 - c. Maintain the post-development annual runoff volume at pre-development volume.

- d. Prevent the loss of floodplain storage below the established 100-year elevation.
- 2. Discontinue serving as the local government unit (LGU) for administering the Wetland Conservation Act (WCA) for the member cities effective January 1, 2020.
- 3. Adopt a 2020 operating budget.
 - a. Search for grant and other funds to supplement the regular budget.
 - b. Fund a capital improvement program to share in the cost of projects.
 - c. Budget for the expense of undertaking a Major Plan Amendment to extend the term of the Third Generation Plan.
- 4. Continue to respond to recommendations included in the Board of Water and Soil Resources 2018 Level II Review and Assessment of the Commission's Progress toward its Third Generation Plan Objectives report.
 - a. Develop and implement a training plan for board members. *The Commissioner handbook will be updated and training will resume in 2019.*
 - b. Make water quality data and trends easily accessible to the public.
 - c. Evaluate progress for the implementation of plan actions at a minimum of every two years, making sure to measure outcomes, not just outputs. Report on progress toward achieving resource improvement.
- 5. Conduct the biennial solicitation of interest proposals for administrative, legal, technical and wetland consultants.
- 6. Publish a 2018 Annual Activity Report summarizing the Commission's yearly activities and financial reporting.
- 7. Draft a 2019 Work Plan.

B. WATER QUALITY AND QUANTITY

- 1. Support the Commission's management goals for water quality. Continue to make progress to improve the lakes and streams in the watershed as well as protect those that are not impaired.
 - a. Improve water clarity in the impaired waters by 10% over the average of the previous ten years by 2023.
 - b. Maintain or improve water quality in the lakes and streams with no identified impairments.
- 2. Foster implementation of BMPs in the watershed through technical and financial assistance.
 - a. Utilize the services of the University of Minnesota's agriculture specialist and Hennepin County's Rural Conservationist to promote, educate, and facilitate best management practices to target audiences.

b. Identify projects eligible for the Hennepin County Natural Resources Grant program.

3. Operate a monitoring program sufficient to characterize water quantity and quality and biotic integrity in the watershed and evaluate progress toward TMDL goals. Partner with Three Rivers Park District (TRPD) to conduct water quality monitoring in the watershed. Bring stream and lake monitoring efforts into line with monitoring program outlined in the Third Generation Watershed Plan.

a. Partner with TRPD to conduct bi-weekly water quality monitoring of “sentinel lakes” – Independence, Sarah, and Little Long, along with both basins of Whaletail.

b. Partner with the Park District to conduct flow and water quality monitoring at selected sites on Pioneer Creek and Sarah Creek, along with possible water quality and flow monitoring at up to two additional sites.

c. Participate in Metropolitan Council’s Citizen Assisted Monitoring Program (CAMP). The Commission has budgeted funds to monitor one lake in 2019.

4. Support watershed residents and organizations as issues arise, providing general, technical, and financial assistance where appropriate.

C. EDUCATION

1. Annually evaluate the proposed Education and Outreach program and establish education and outreach activities for the coming year, including goals and strategies identified in the WRAPS study. These later activities could be identified through a collaboration of the Technical Advisory Committee (TAC) and the Citizen Advisory Committee (CAC). A number of implementation strategies are identified in the Commission’s Education and Outreach Plan found in Appendix E of the Third Generation Management Plan.

2. Educate Commissioners, member City Councils and Planning Commissions about watershed and water resources management. Sponsor watershed and water resources training opportunities such as NEMO (Nonpoint Education for Municipal Officials).

3. Continue membership in WaterShed Partners, a coalition of more than 70 public, private and nonprofit organizations in the Twin Cities Metro area promoting public understanding that inspires people to act to protect water in their watershed through educational projects, networking, and resource sharing. Take a more active role in its activities.

4. Participate with collaborative groups to pool resources to undertake activities in a cost-effective manner, promote interagency cooperation and collaboration, and promote consistency of messages. Use the Commission’s, member cities’, and educational partners’ websites and newsletters, social media, co-ops, local newspapers and cable TV to disseminate education materials to all stakeholders about actions they can take to protect and improve water quality.

5. Continue to maintain the Commission’s website and Facebook page to provide news to residents of the watershed.

6. Provide opportunities for the public to learn about and participate in water quality activities. Enhance education opportunities for youth. Provide opportunities for bridge-building between stakeholders.

a. Promote river stewardship through the River Watch program. Encourage participation by local school students and their teachers. Funding for monitoring one site is included in the 2018 budget.

b. Work in partnership with Hennepin County's Agriculture Specialist to help build relationships with the agricultural community in the watershed in order to encourage TMDL implementation.

c. Working in partnership with the Hennepin County Rural Conservationist, continue to work with landowners, writing county cost-share grants to help owners become compliant with the MN Buffer Law.

D. STUDIES, PROJECTS AND CIPS.

1. Continue to support member cities as they identify studies and projects which benefit both the cities and the watershed.

2. Continue to identify Watershed-wide TMDL implementation projects.

3. Prioritize BMPs identified in the Dance Hall Creek Subwatershed Retrofit Assessment for implementation or further study. Continue to network with landowners to gain impetus toward completion of projects.

4. Under a joint powers agreement with the Three Rivers Park District, complete Curly-leaf Pondweed turion surveys in Lake Sarah during a five-year control program, complete annual aquatic plant surveys in Lake Sarah to monitor the response of native macrophytes to the CLP control program, and complete annual water quality monitoring to determine the effectiveness of the CLPW control program in reducing phosphorus loading to the lake.

5. Convene the Technical Advisory Committee (TAC) for the purpose of receiving CIP applications from the member communities, reviewing them for validity, and recommendation to the Commission for incorporation on the Third Generation Plan CIP.

a. Prioritize capital projects in anticipation of funding during the next round of the Watershed-based Funding Project.

E. PLANNING

1. Complete the review of member communities' local water management plans. Under Rule 8410.0160, Subp. 6, local plans were to be approved by the Commission by December 31, 2018. *This process will be completed with the review of Maple Plain's local plan in 2019.*

2. Budget for the expense of writing the Fourth Generation Plan, due in 2020, if a Major Plan Amendment to the Third Generation Plan is not approved by BWSR.

APPENDIX

2018 Commissioners

Member	Represented by	Responsibility	Phone/E-mail
Greenfield	Tom Cook 7738 Commerce Circle Greenfield, MN 55373	Treasurer Excomm	763.477.4263 tomdebcook@msn.com
Independence	Joe Baker 5580 Lake Sarah Heights Dr Independence, MN 55357	Chair Excomm	612.868.8702 joebaker149@gmail.com
Loretto	Brenda Daniels 150 Meadow Drive Loretto, MN 55357	Secretary Excomm	brenda199962@yahoo.com
Maple Plain	John Fay 5819 Three Oaks Avenue Maple Plain, MN 55359	Vice Chair Excomm	763.213.3271 jarrfay@mchsi.com
Medina	Mike McLaughlin 2887 Lakeshore Ave Maple Plain, MN 55359		612.819.1655 mclaughlin110@gmail.com
Minnetrista	John Tschumperlin 7575 Susan Lane Mound, MN 55364		612.791.1114 jtschumperlin@ci.minnetrista.mn.us

2018 Consultants

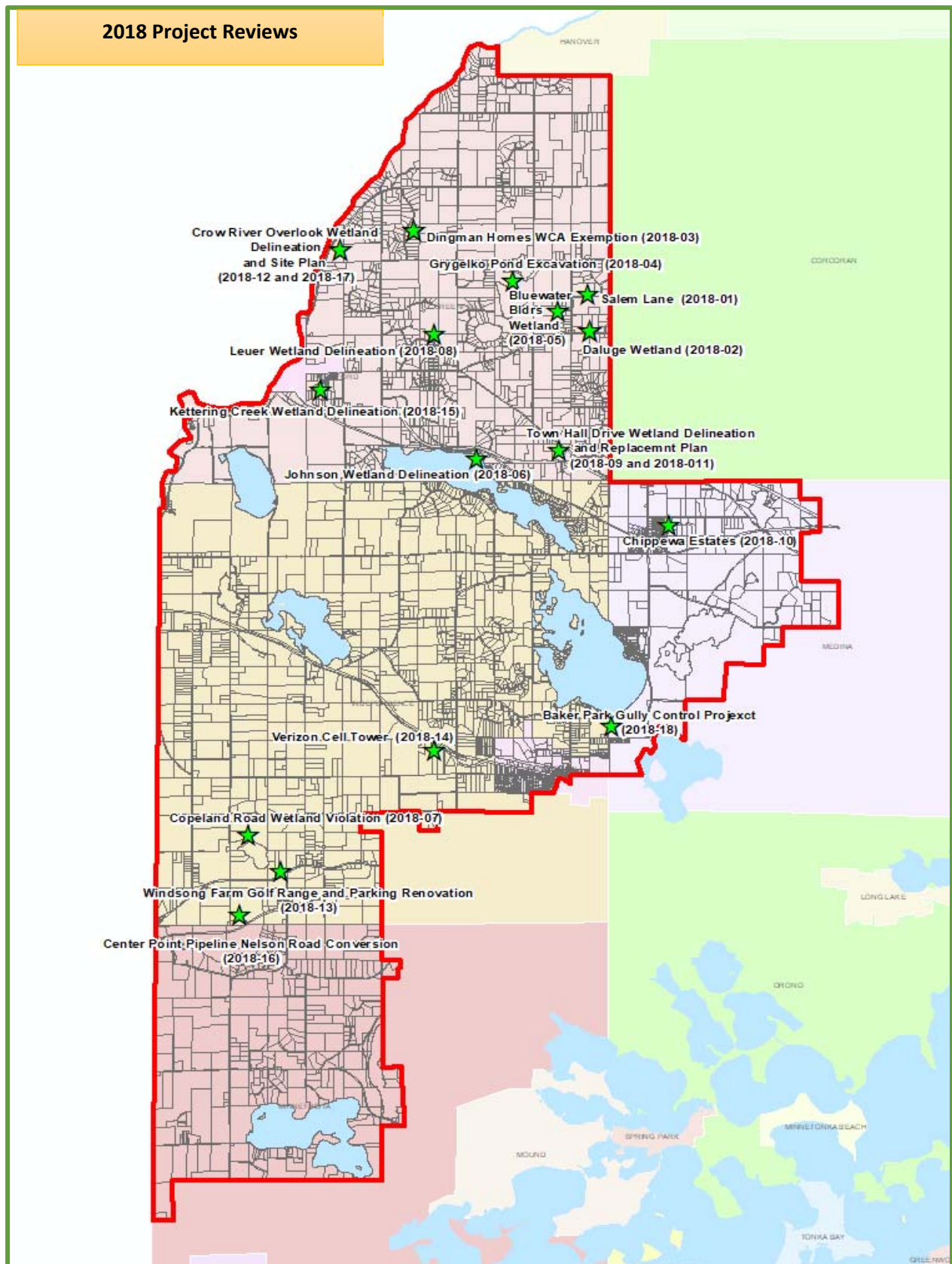
Name	Affiliation	Responsibility	Phone/Email
James Kujawa	Hennepin County Dept. of Env. and Energy	Technical Advisor TAC	612.348.7338 James.Kujawa@hennpin.us
Kirsten Barta	701 Fourth Ave S, Suite 700 Minneapolis, MN 55415	Rural Conservation Specialist	612.543.3373 Kirsten.barta@hennepin.us
Judie Anderson	JASS 3235 Fernbrook Lane	Administrator Deputy Treasurer	763.553.1144 judie@jass.biz
Amy Juntunen	Plymouth, MN 55447	Excomm, TAC	amy@jass.biz
Joel Jamnik	Campbell Knutson PA Grand Oak Office Center I 860 Blue Gentian Road #290 Eagan, MN 55121	Legal Counsel	651.234.6219 jjamnik@ck-law.com
Brian Vlach	Three Rivers Park District 12615 County Road 9 Plymouth, MN 55441	Water Quality TAC	763.694.7846 Bvlach@threeriversparkdistrict.org
Johnson & Co., Ltd.	3255 Fernbrook Lane Plymouth, MN 55447	Auditor	952.525.9500
Unnamed		Wetland consultant	
Karl Hakanson	Hennepin County Extension 2001 Plymouth Avenue North Minneapolis, MN 55411	Professional TAC	612.624.7948
Ed Matthiesen	Wenck Associates 7500 Highway 55 Suite 300 Golden Valley, MN 55427	Professional TAC	763.252.6851 ematthiesen@wenck.com

Local Water Management Plan Requirements

Local water management plans adopted by member cities pursuant to Minnesota Statutes, Section 103B.235 shall be consistent with the Commission's Third Generation Watershed Management Plan. Local plans must comply with MN Statutes, Section 103B.235 and MN Rules 8410 regarding local plan content.

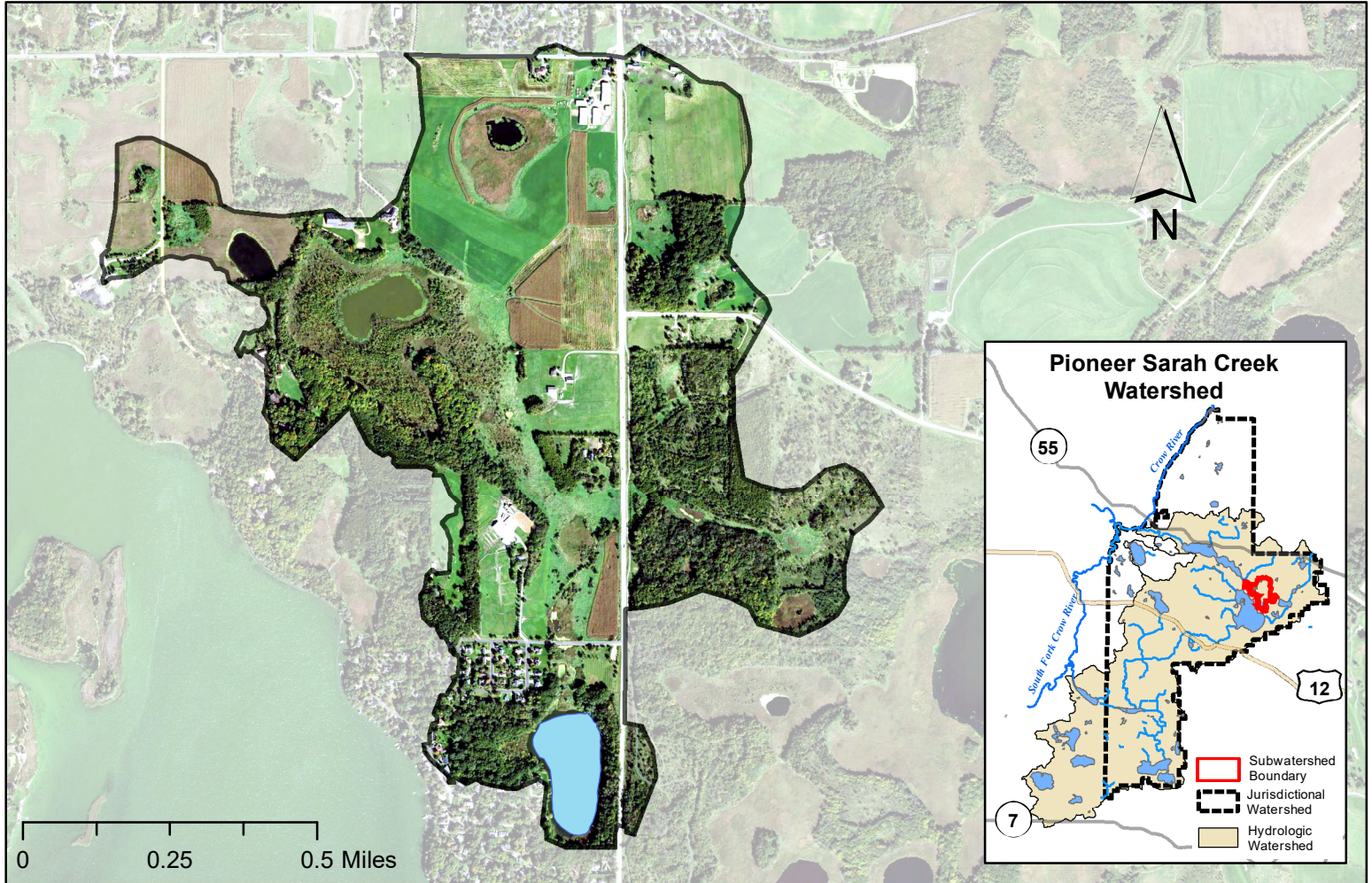
- Update the existing and proposed physical environment and land use. Information from previous plans that has not changed may be referenced and summarized but does not have to be repeated. Local plans may adopt sections of the Commission's Plan's Inventory and Condition Assessment by reference unless the city has more recent information, such as revised figures and data.
- Explain how the goals and policies, and rules and standards in the Commission's Plan will be implemented at the local level, including any necessary modifications of local ordinances, policies, and practices and specifically addressing adoption and enforcement of a manure management ordinance.
- Show how the member city will take action to achieve the load reductions and other actions identified in and agreed to in TMDL Implementation Plans and the WRAPS study, including identifying known upcoming projects including street or highway reconstruction projects that will provide opportunities to include load and volume reduction BMPs.
- Show how the member city will, through an executed and recorded maintenance and inspection agreement, inspect or cause to be inspected and documented at least every five years privately owned permanent BMPs installed to meet the goals and policies and rules and standards of the Commission's Plan, and the actions the member city will take to assure that the BMPs are maintained and operated as designed.
- Update existing or potential water resource related problems and identify nonstructural, programmatic, and structural solutions, including those program elements detailed in MN Rules 8410.0100, Subp. 1-6.
- Summarize the estimated cost of implementation and analyze the member city's ability to finance the recommended actions.
- Set forth an implementation program including a description of adoption or amendment of official controls and local policies necessary to implement the Rules and Standards; programs; policies; and a capital improvement plan.

Project No.	2018 Project Reviews	City	Rule D Stormwater	Reviewed for					Rate Control (cfs) (pre- and post-development)			Net Change Nutrient Control (lbs./yr) (pre- and post-development)		Net change			
				Rule E Erosion Control	Rule F Floodplain	Rule G Wetland	Rule H Bridge/ Culvert Crossing	Rule I Buffers	2-yr Pre vs Post	10-yr Pre vs Post	100-yr Pre vs Post	TP load #/yr reduction	TSS load #/yr reduction	Abstracti on (c.f.)	Filtration /biofiltrat ion (c.f.)	Runoff Volume (af / yr)	
2018-01	Salem Lane	Greenfield		•	•	•											
2018-02W	Warren DaLuge Wetland Violation	Greenfield				•											
2018-03W	8664 Whisper Creek Trail	Greenfield				•											
2018-04W	Grygelko Wetland Enhancement	Greenfield				•											
2018-05W	Bluewater Builders Wetland Delineation PID	Greenfield				•		•									
2018-06W	Johnson Wetland Delineation	Greenfield				•											
2018-07W	810 Copeland Road Violation	Independence				•		•									
2018-08W	Leuer Wetland Delineation	Greenfield				•											
2018-09W	Town Hall Drive Wetland Delineation	Greenfield				•		•									
2018-10	Chippewa Estates	Loretto	•	•					2.8/1.2	4.8/2.0	9.1/5.7	0.4	106		2,210		
2018-11W	Hilary Driveway Access	Greenfield				•											
2018-12W	7770 Woodland Trail Wetland Delineation	Greenfield				•											
2018-13	Windsong Farm Golf Club Range, Parking Re	Independence	•	•				•	6.8/3.3	14.5/8.4	27.8/20.9	4.2	944		6,972		
2018-14	VzW MIN MORIA	Independence		•	•												
2018-15W	Kettering Creek Wetland Delineation	Greenfield				•											
2018-16	Nelson Road Conversion	Independence		•													
2018-17	Crow River Overlook	Greenfield	•	•	•	•		•	14.0/4.0	29.7/15.3	98.0/42.4	26.4	4,310	13,907			
2018-18	Baker Park Campground Ravine Stabilization	Medina	•	•	•	•		•	no change	no change	no change	134	289,222	no change			

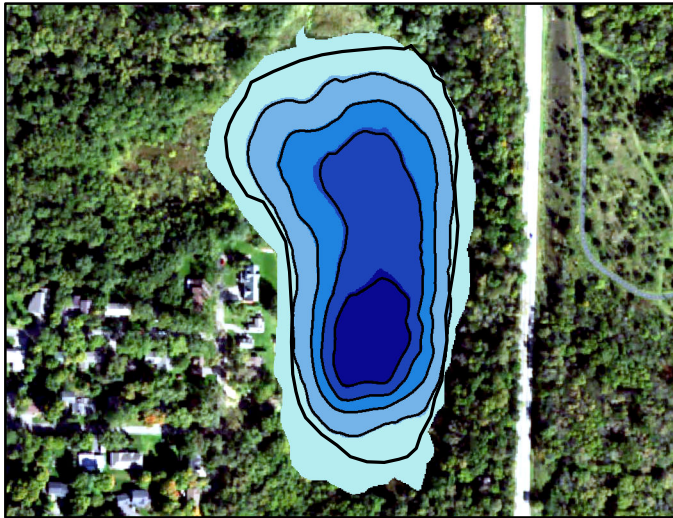


Lake Report Cards

Lake Ardmore Watershed Map

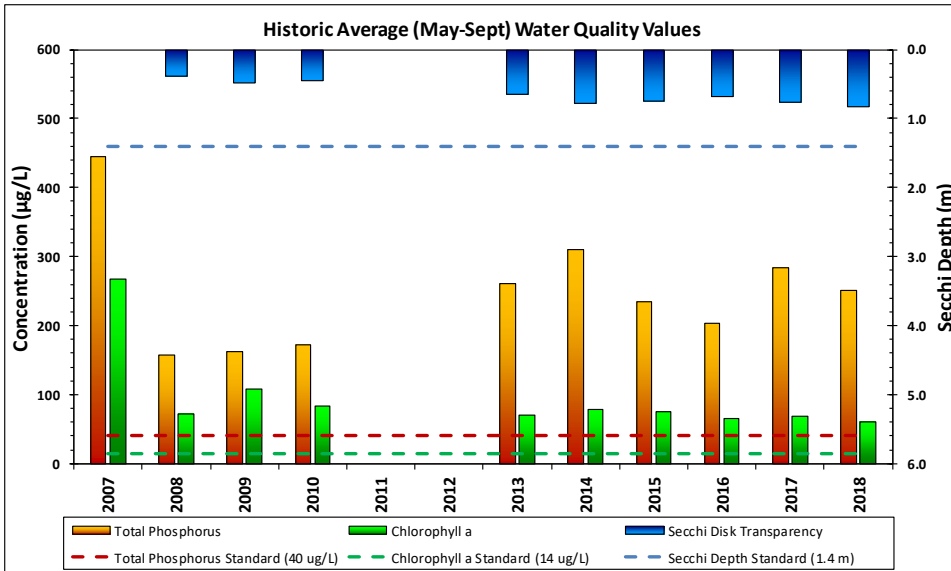


Lake Ardmore Bathymetry



Lake and Watershed Characteristics

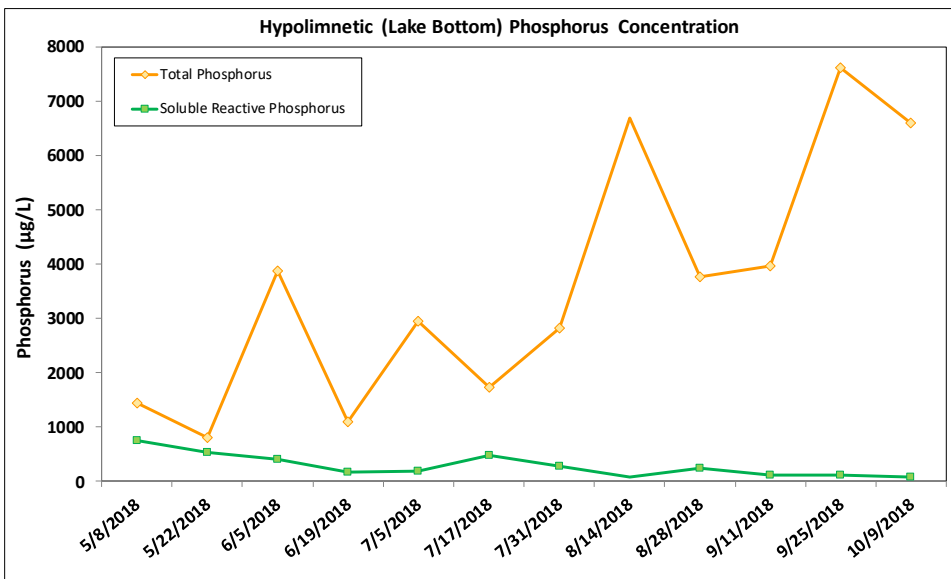
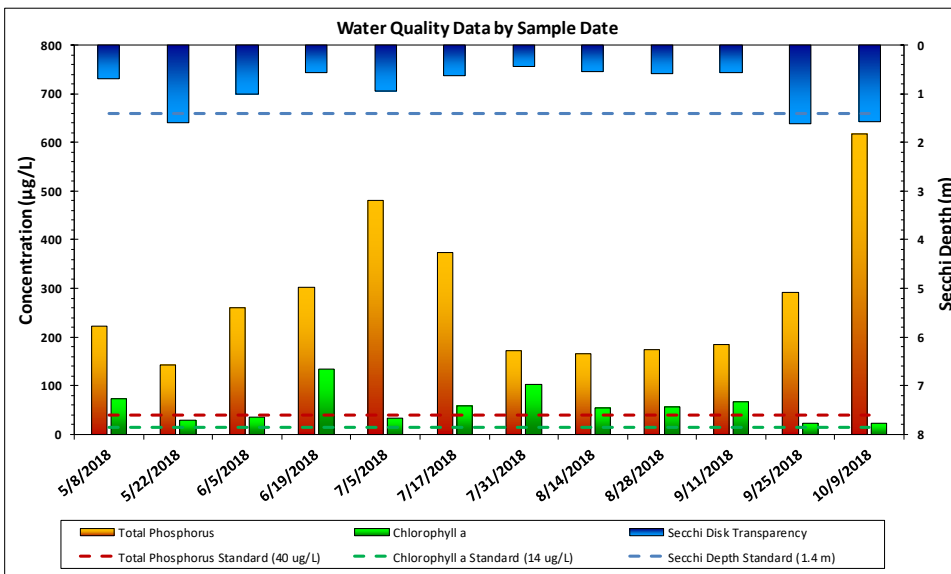
DNR #	27015300
Watershed Area	514 Acres
Lake Area	13.5 Acres
Percent Littoral Area	75%
Average Depth	9.4 ft.
Maximum Depth	24.4 ft.
Watershed Area:Lake Area	38:1
Impairment Classification	Needs Assessment
Classification	Deep Lake



Ardmore Water Quality Report Card

Year	TP	Chl-a	Secchi	Avg Grade
2007	F	F	F	F
2008	F	D	F	F
2009	F	F	F	F
2010	F	F	F	F
2011				
2012				
2013	F	D	F	F
2014	F	F	D	F
2015	F	D	D	D-
2016	F	D	F	F
2017	F	D	D	D-
2018	F	D	D	D-
MPCA Standard	C	B	C	C+

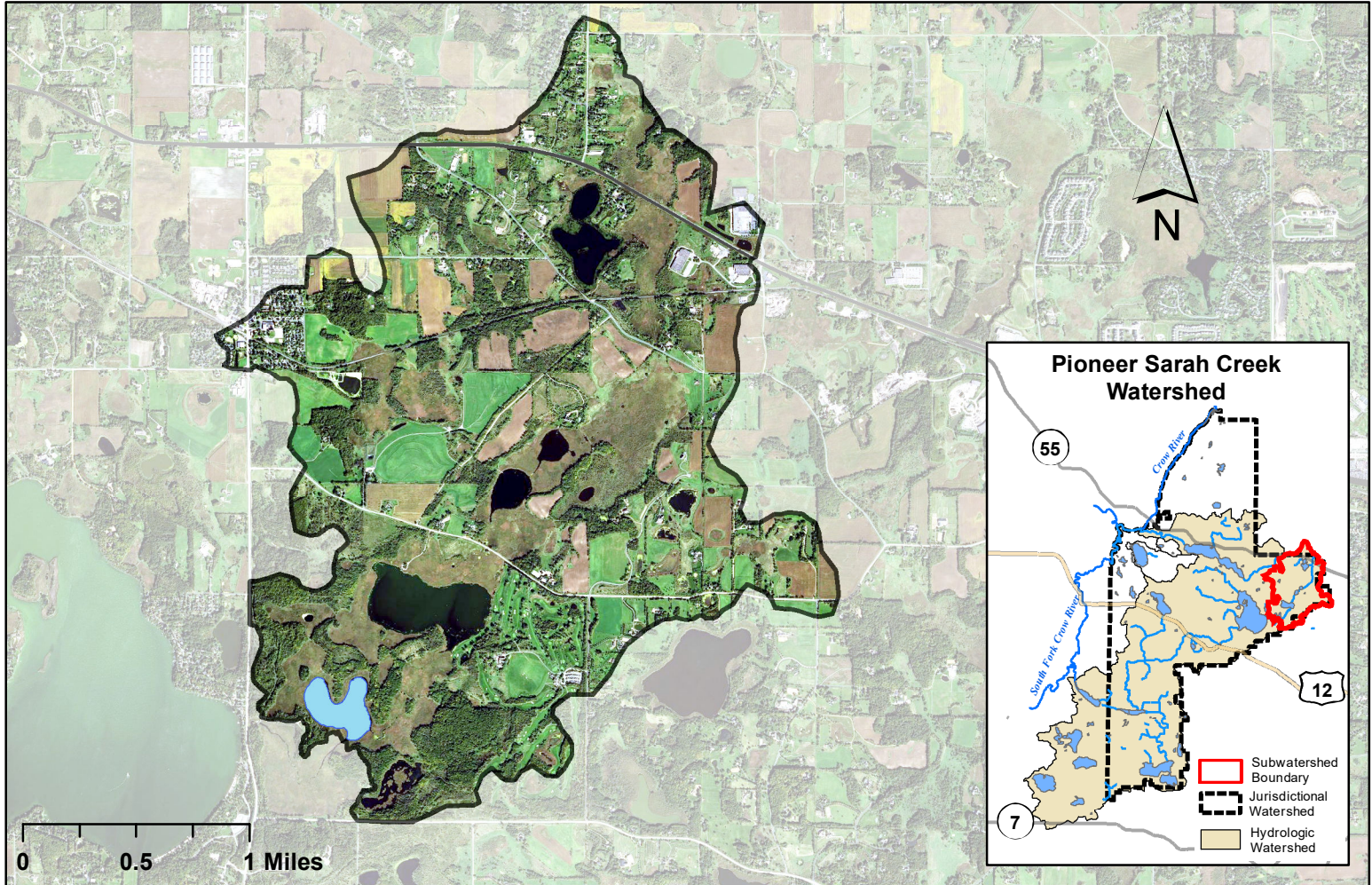
Met Council Grading System for Lake Water Quality



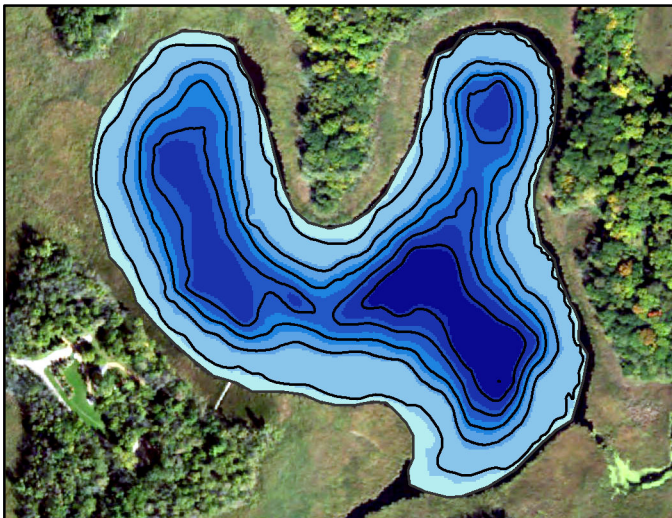
Division of Water Resources

December 2018

Half Moon Lake Watershed Map

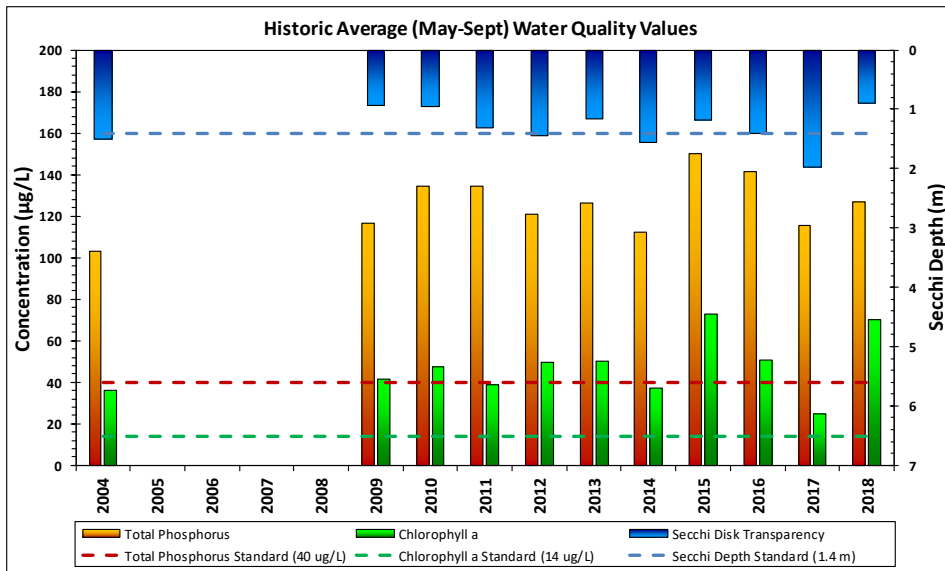


Half Moon Lake Bathymetry



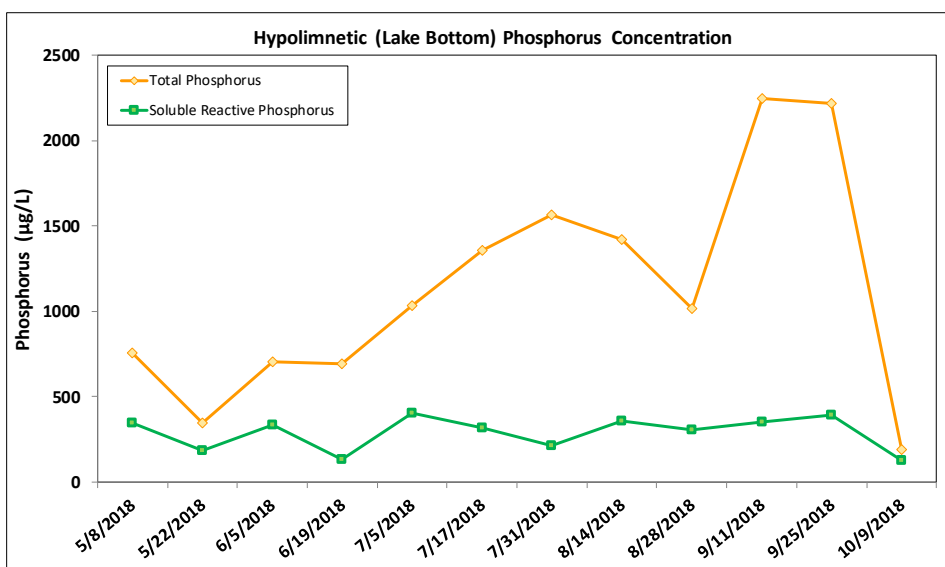
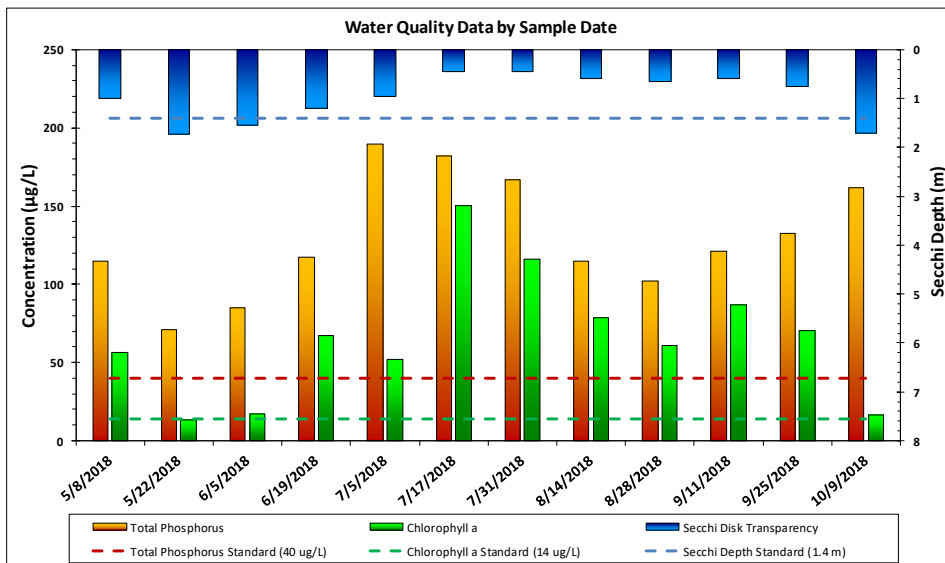
Lake and Watershed Characteristics

DNR #	27015200
Watershed Area	3,258 Acres
Lake Area	31.1 Acres
Percent Littoral Area	11%
Average Depth	13.4 ft.
Maximum Depth	30.3 ft.
Watershed Area:Lake Area	104.7:1
Impairment Classification	Proposed 2016
Classification	Deep Lake



Half Moon Lake Water Quality Report Card				
Year	TP	Chl-a	Secchi	Avg Grade
2004	D	C	C	C-
2005				
2006				
2007				
2008				
2009	D	C	D	D+
2010	D	C	D	D+
2011	D	C	C	C-
2012	D	D	C	D+
2013	D	D	D	D
2014	D	C	C	C-
2015	D	D	D	D
2016	D	D	C	D+
2017	D	C	C	C-
2018	D	D	D	D
MPCA Standard	C	B	C	C+

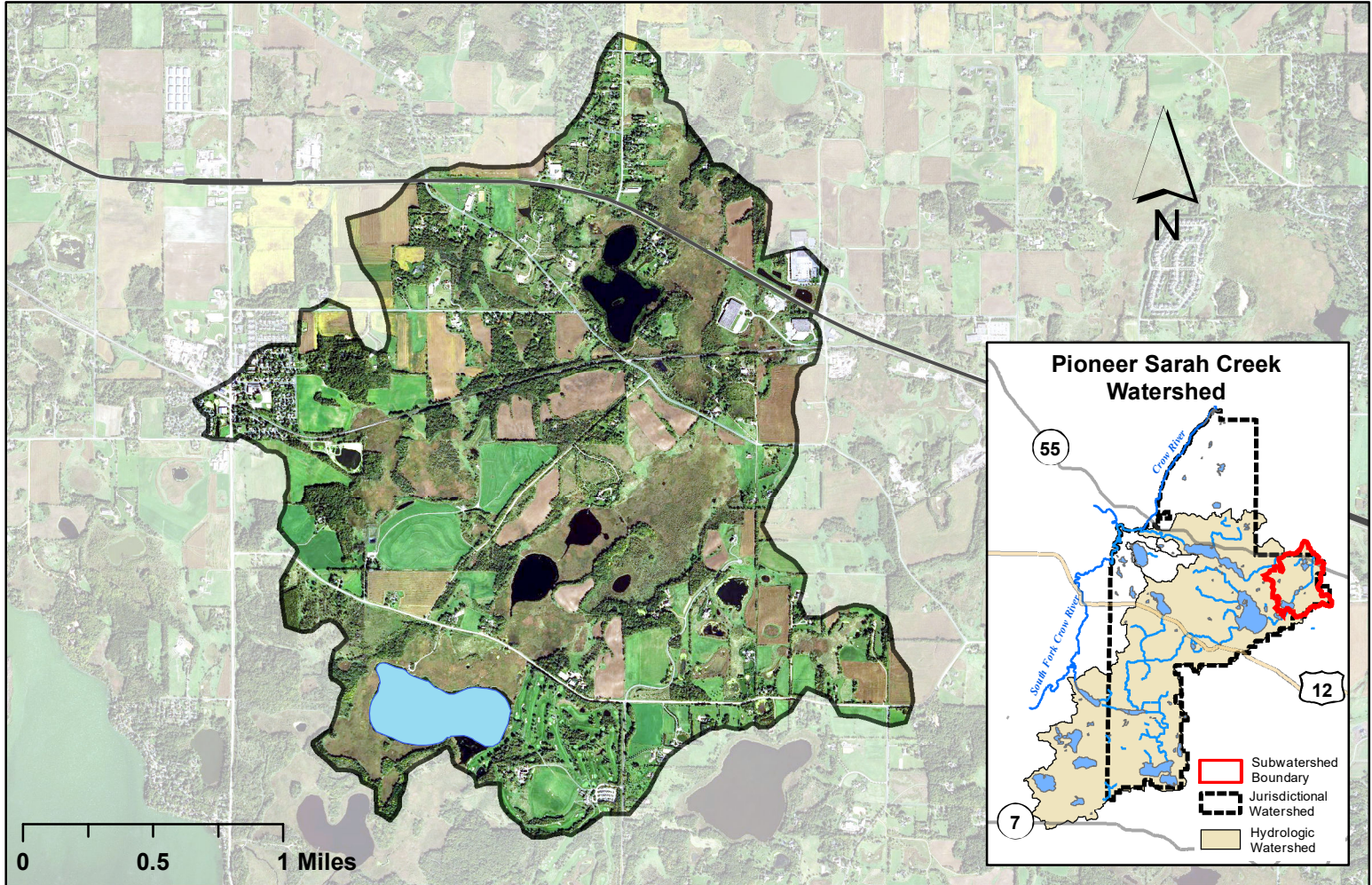
Met Council Grading System for Lake Water Quality



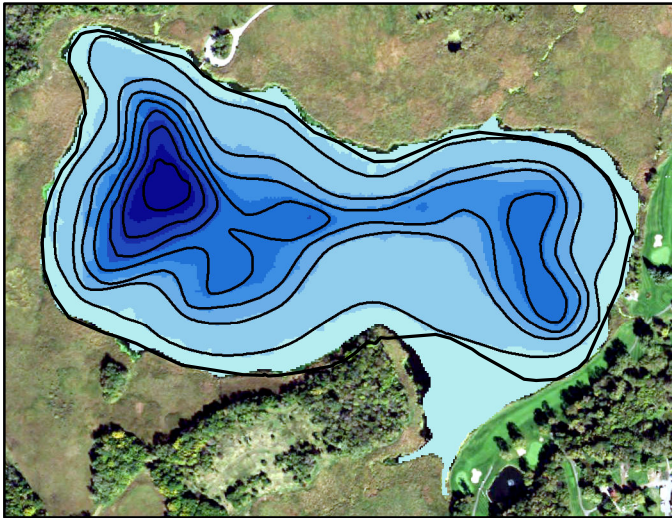
Division of Water Resources

December 2018

Spurzem Lake Watershed Map

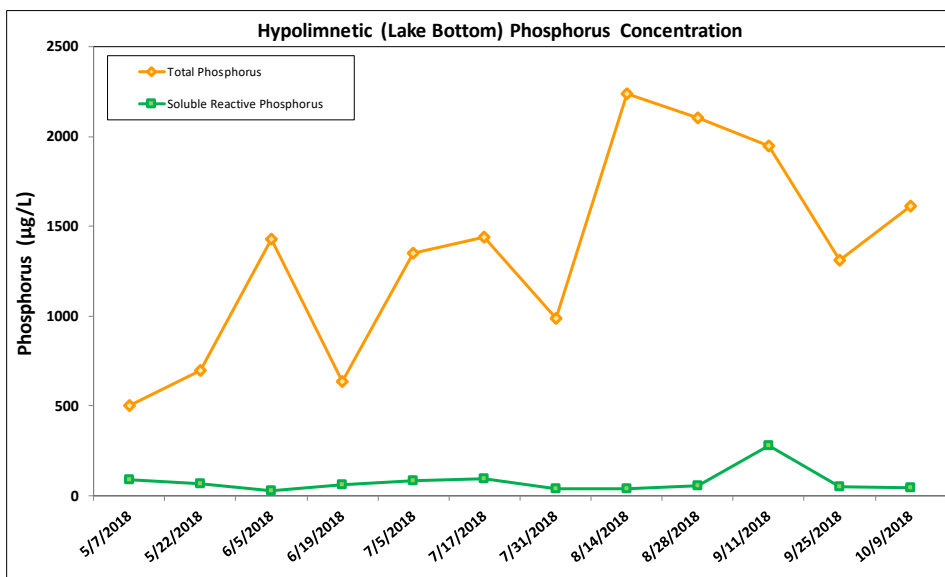
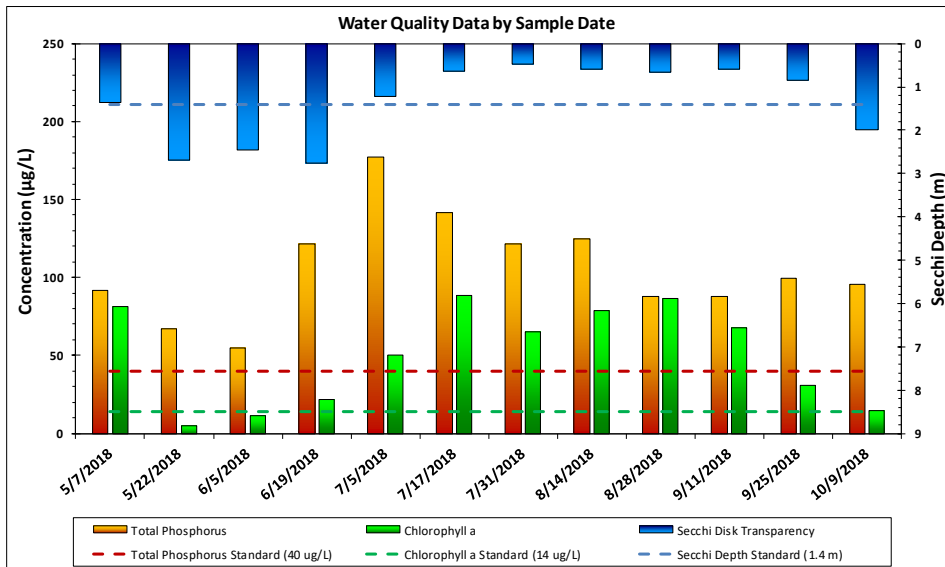
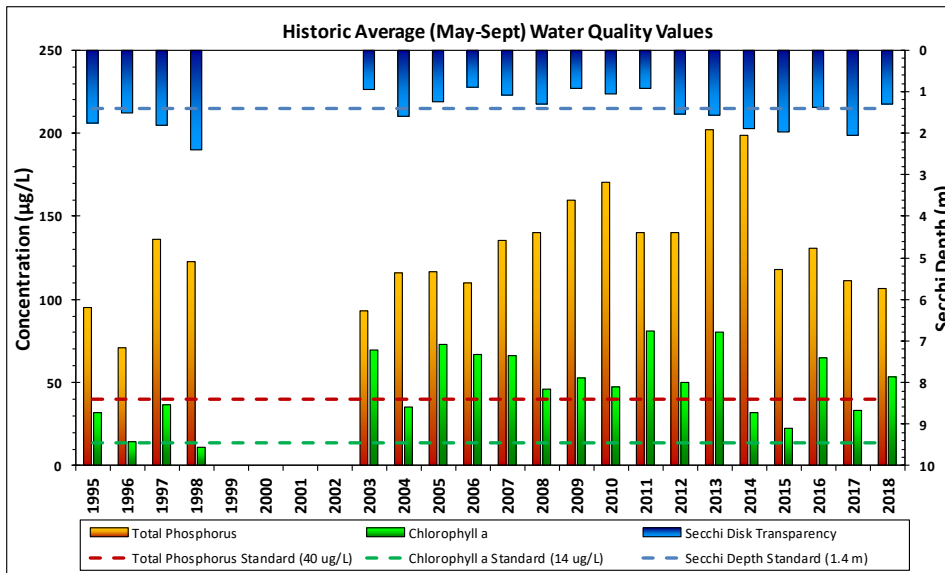


Spurzem Lake Bathymetry



Lake and Watershed Characteristics

DNR #	27014900
Watershed Area	2,915 Acres
Lake Area	78.6 Acres
Percent Littoral Area	70%
Average Depth	11.1 ft.
Maximum Depth	37.4 ft.
Watershed Area:Lake Area	37.1:1
Impairment Classification	Excess Nutrients 2008
Classification	Deep Lake



Spurzem Lake Water Quality Report Card				
Year	TP	Chl -a	Secchi	Avg Grade
1995	D	C	C	C-
1996	D	B	C	C
1997	D	C	C	C-
1998	D	B	B	C+
1999				
2000				
2001				
2002				
2003	D	D	D	D
2004	D	C	C	C-
2005	D	D	C	D+
2006	D	D	D	D
2007	D	D	D	D
2008	D	C	C	C-
2009	F	D	D	D-
2010	F	C	D	D
2011	D	F	D	D-
2012	D	D	C	D+
2013	F	F	C	D-
2014	F	C	C	D+
2015	D	C	C	C-
2016	D	D	C	D+
2017	D	C	C	C-
2018	D	D	C	D+
MPCA Standard	C	B	C	C+

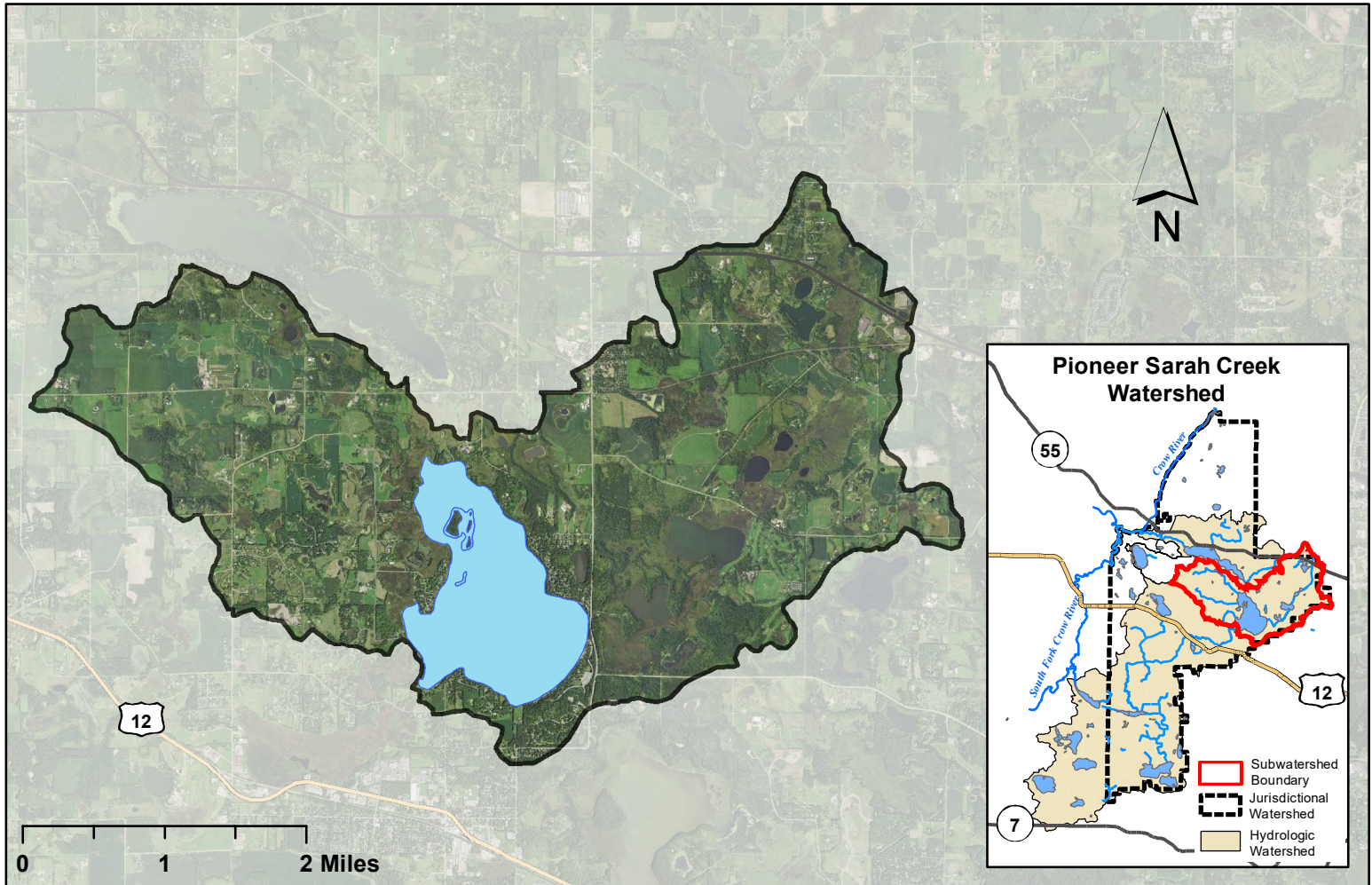
Met Council Grading System for Lake Water Quality



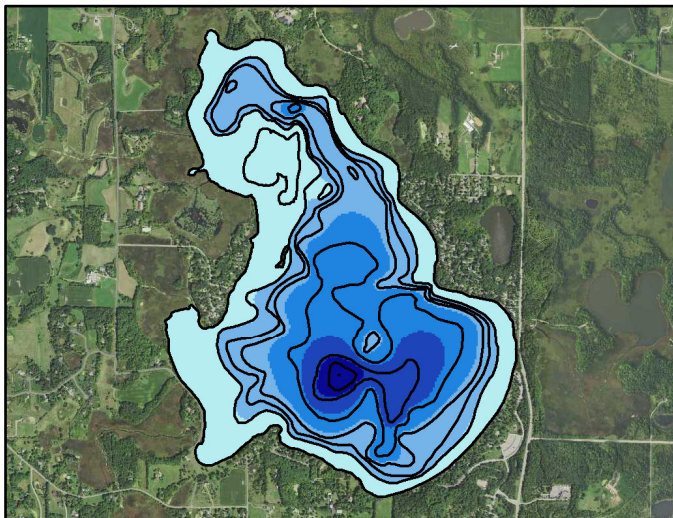
Division of Water Resources

December 2018

Lake Independence Watershed Map

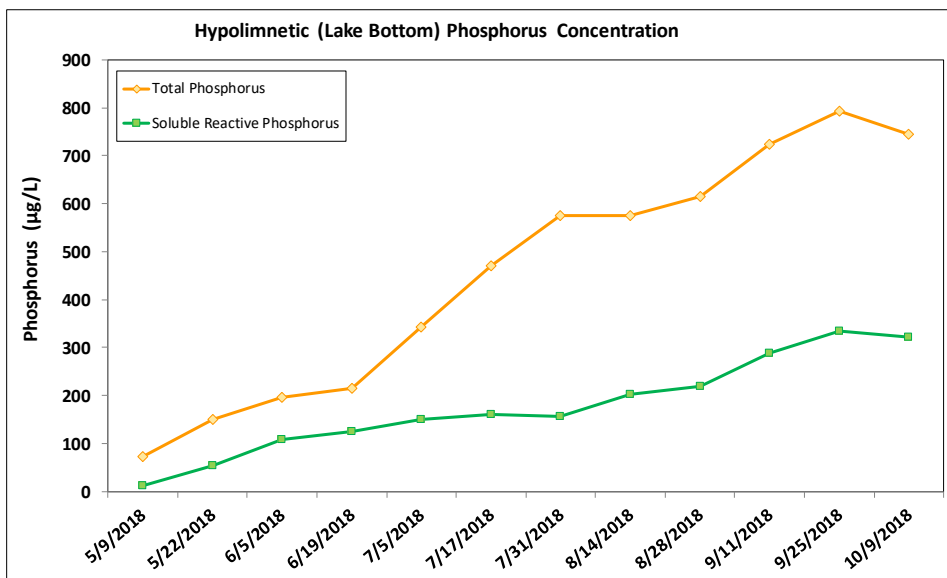
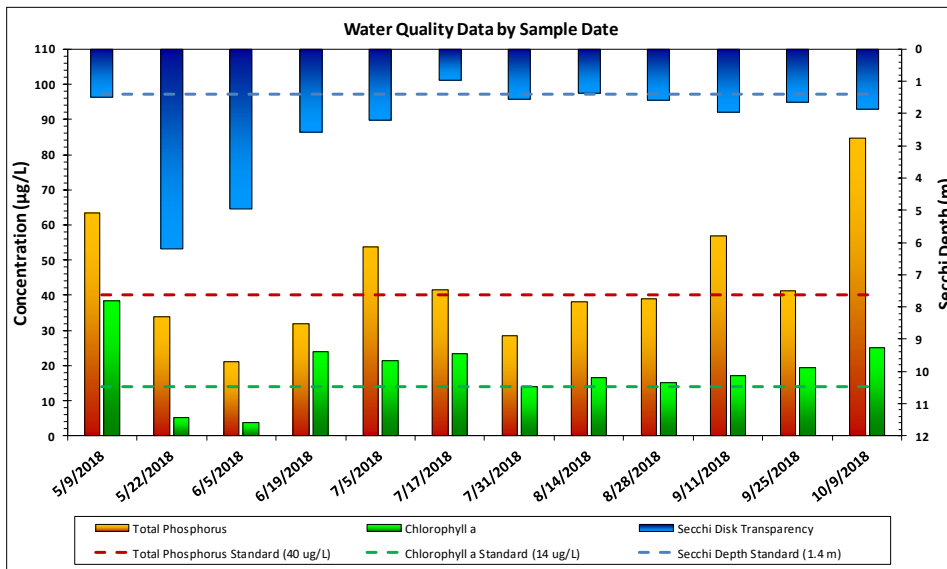
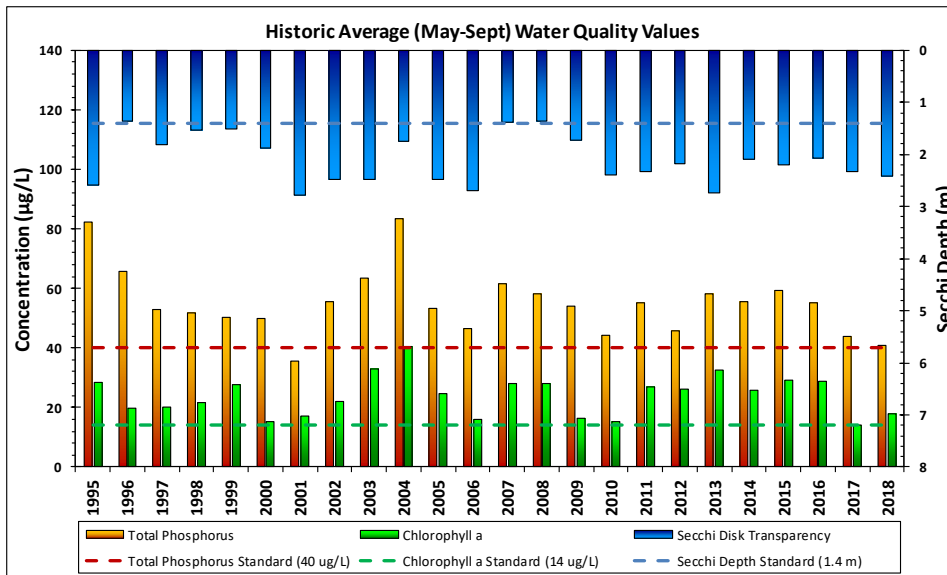


Lake Independence Bathymetry



Lake and Watershed Characteristics

DNR #	27017600
Watershed Area	7,632 Acres
Lake Area	832 Acres
Percent Littoral Area	51%
Average Depth	15.9 ft.
Maximum Depth	58 ft.
Watershed Area:Lake Area	9.2:1
Impairment Classification	Excess Nutrients 2002
Classification	Deep Lake



Lake Independence Water Quality Report Card				
Year	TP	Chl-a	Secchi	Avg Grade
1995	D	C	B	C
1996	C	B	C	C+
1997	C	B	C	C+
1998	C	C	C	C
1999	C	C	C	C
2000	C	B	C	C+
2001	C	B	B	B-
2002	C	C	B	C+
2003	C	C	B	C+
2004	D	C	C	C-
2005	C	C	B	C+
2006	C	B	B	B-
2007	C	C	C	C
2008	C	C	C	C
2009	C	B	C	C+
2010	C	B	B	B-
2011	C	C	B	C+
2012	C	C	C	C
2013	C	C	B	C+
2014	C	C	C	C
2015	C	C	C	C
2016	C	C	C	C
2017	C	B	B	B-
2018	C	B	B	B-
MPCA Standard	C	B	C	C+

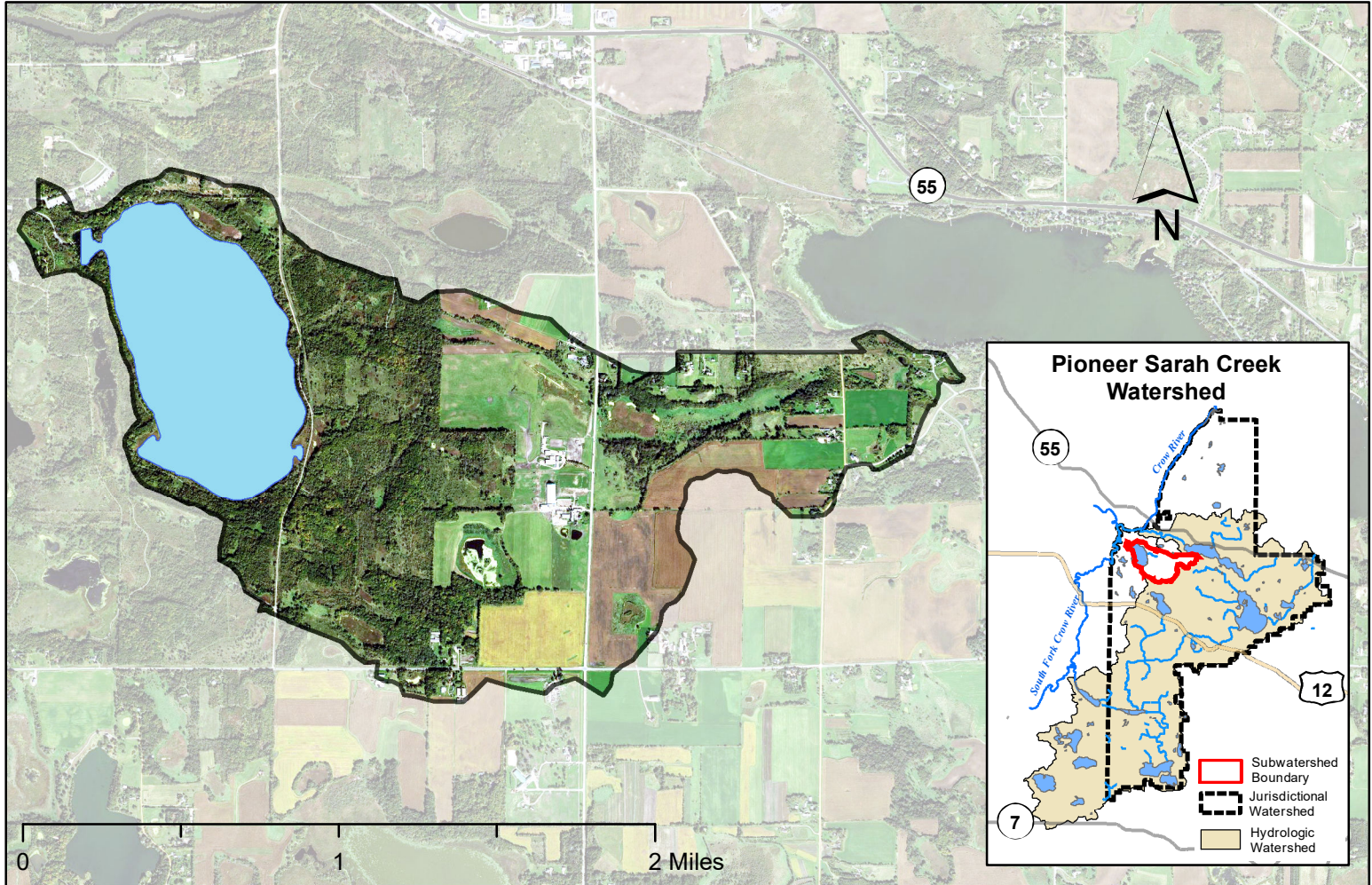
Met Council Grading System for Lake Water Quality



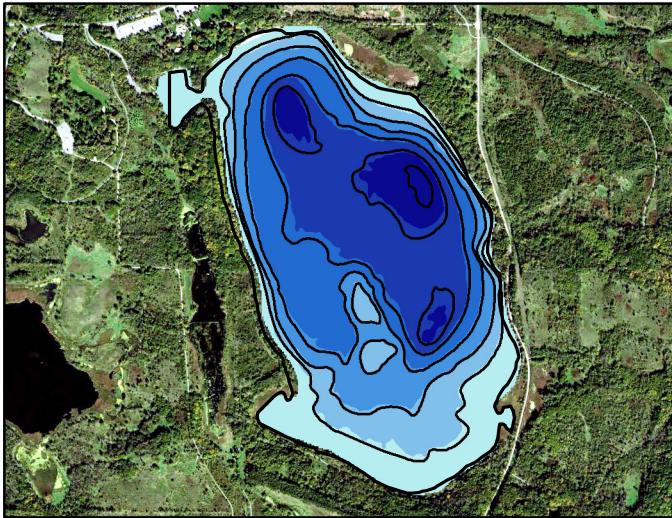
Division of Water Resources

December 2018

Lake Rebecca Watershed Map

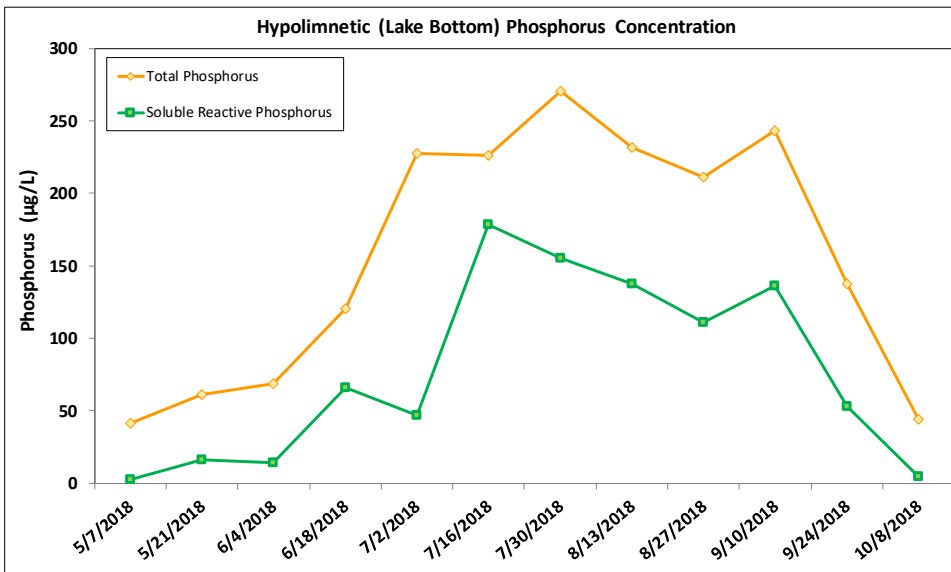
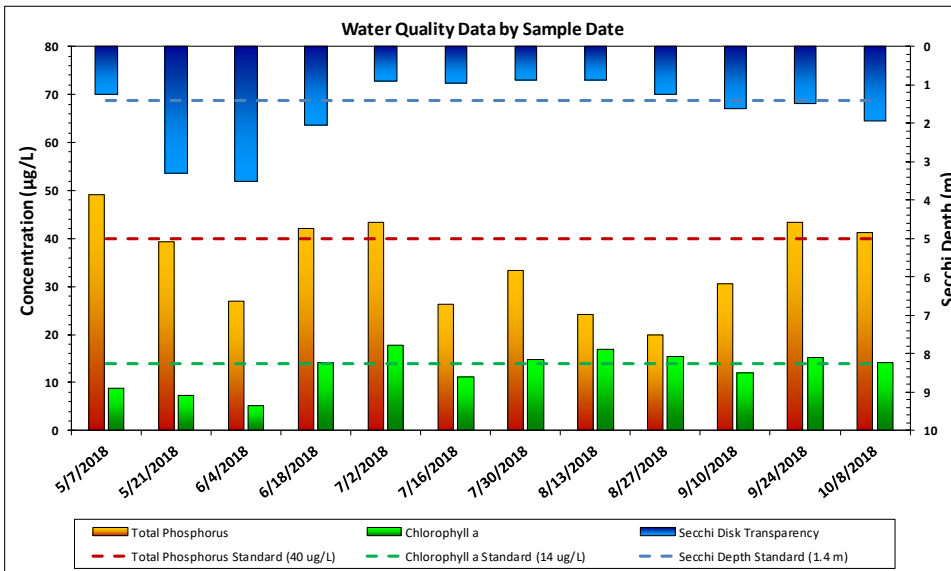
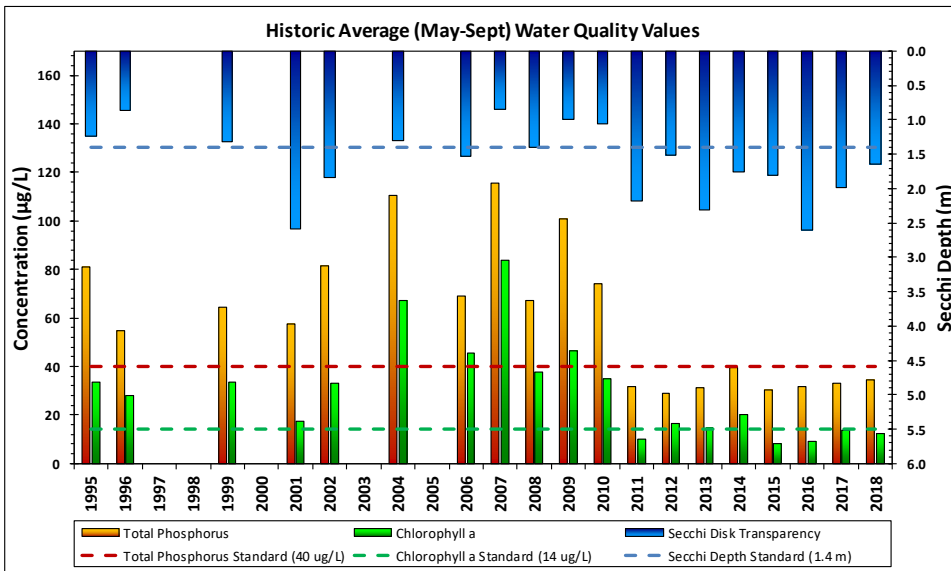


Lake Rebecca Bathymetry



Lake and Watershed Characteristics

DNR #	27019200
Watershed Area	1,277 Acres
Lake Area	261 Acres
Percent Littoral Area	50%
Average Depth	14.4 ft.
Maximum Depth	31.1 ft.
Watershed Area:Lake Area	4.9:1
Impairment Classification	Excess Nutrients 2008
Classification	Deep Lake



Lake Rebecca Water Quality Report Card				
Year	TP	Chl-a	Secchi	Avg Grade
1995	D	C	C	C-
1996	C	C	D	C-
1997				
1998				
1999	C	C	C	C
2000				
2001	C	B	B	B-
2002	D	C	C	C-
2003				
2004	D	D	C	D+
2005				
2006	D	C	C	C-
2007	D	F	D	D-
2008	C	C	C	C
2009	D	C	D	D+
2010	D	C	D	D+
2011	B	B	C	B-
2012	B	B	C	B-
2013	B	B	B	B
2014	C	C	C	C
2015	B	A	C	B
2016	B	A	B	B+
2017	C	B	C	C+
2018	C	B	C	C+
MPCA Standard	C	B	C	C+

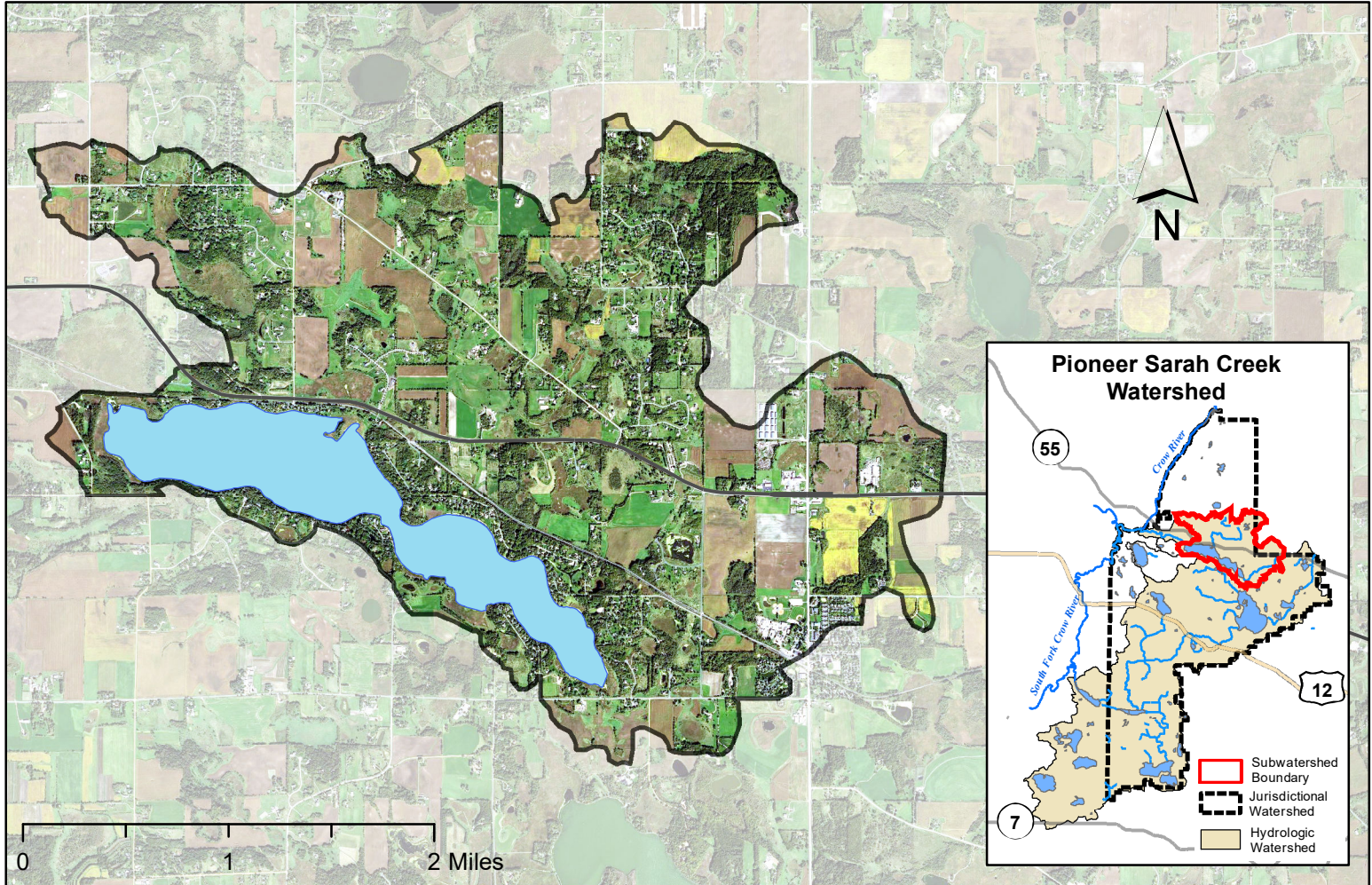
Met Council Grading System for Lake Water Quality



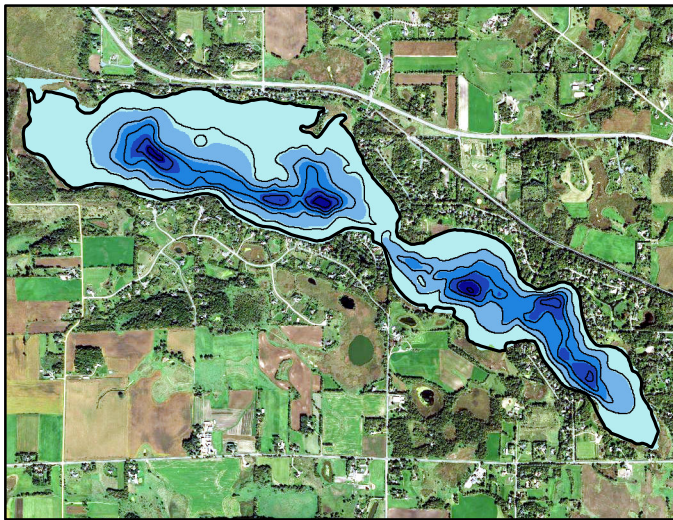
Division of Water Resources

December 2018

Lake Sarah Watershed Map

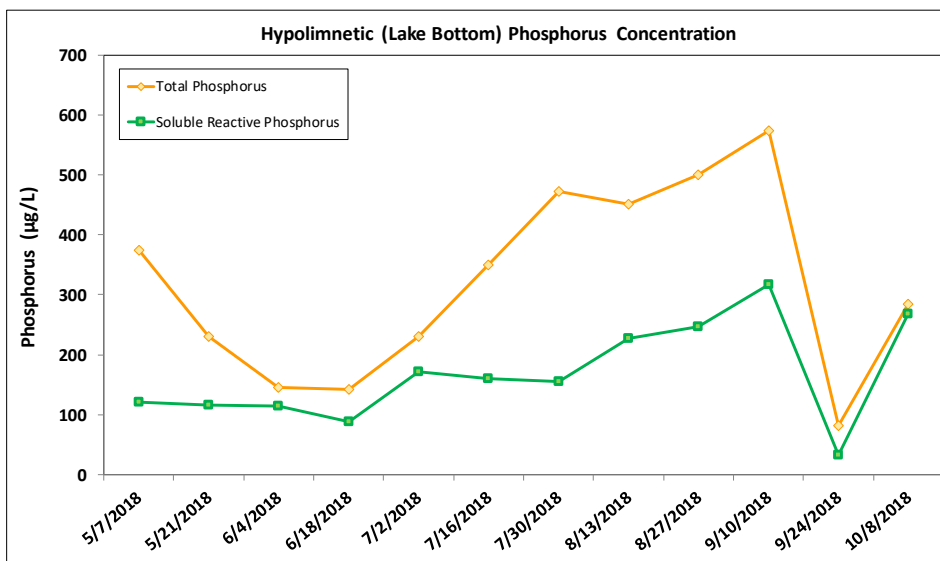
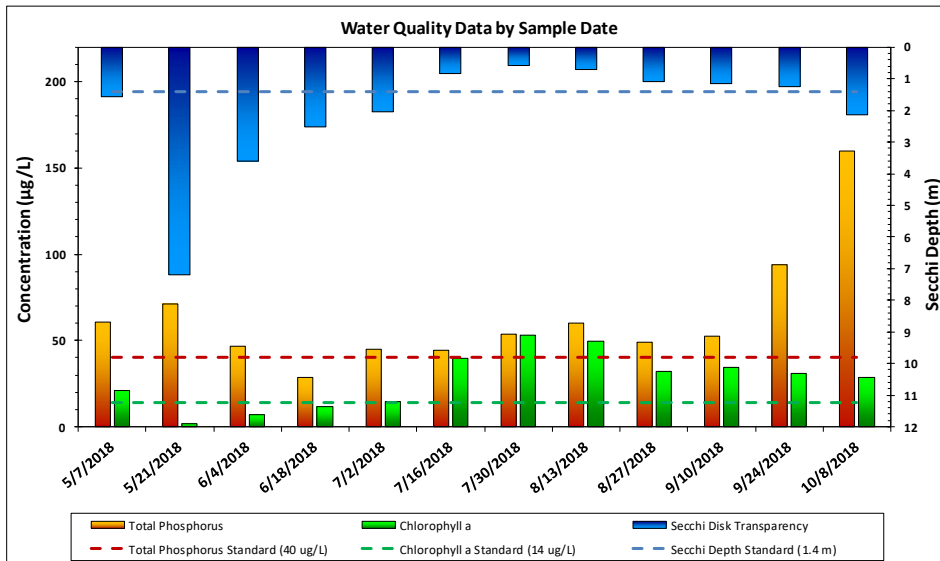
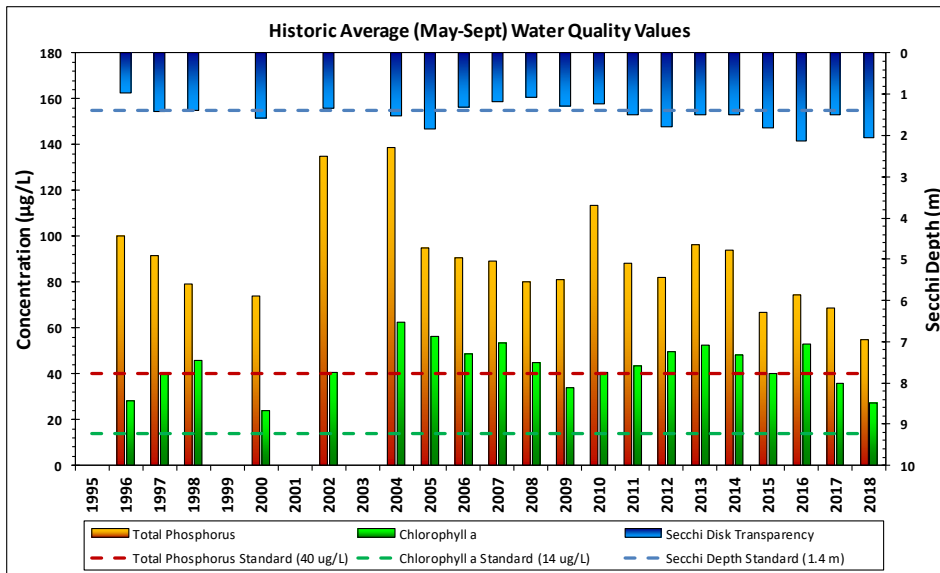


Lake Sarah Bathymetry



Lake and Watershed Characteristics

DNR #	27019100
Watershed Area	4,519 Acres
Lake Area	536 Acres
Percent Littoral Area	61%
Average Depth	13.7 ft.
Maximum Depth	49.9 ft.
Watershed Area:Lake Area	8.4:1
Impairment Classification	Excess Nutrients 2006
Classification	Deep Lake



Lake Sarah Water Quality Report Card				
Year	TP	Chl-a	Secchi	Avg Grade
1995				
1996	D	C	D	D+
1997	D	C	C	C-
1998	D	C	C	C-
1999				
2000	D	C	C	C-
2001				
2002	D	C	C	C-
2003				
2004	D	D	C	D+
2005	D	D	C	D+
2006	D	D	C	D+
2007	D	D	D	D
2008	D	C	D	D+
2009	D	C	C	C-
2010	D	C	C	C-
2011	D	C	C	C-
2012	D	D	C	D+
2013	D	D	C	D+
2014	D	D	C	D+
2015	C	C	C	C
2016	D	D	C	D+
2017	D	C	C	C-
2018	C	C	C	C
MPCA Standard	C	B	C	C+

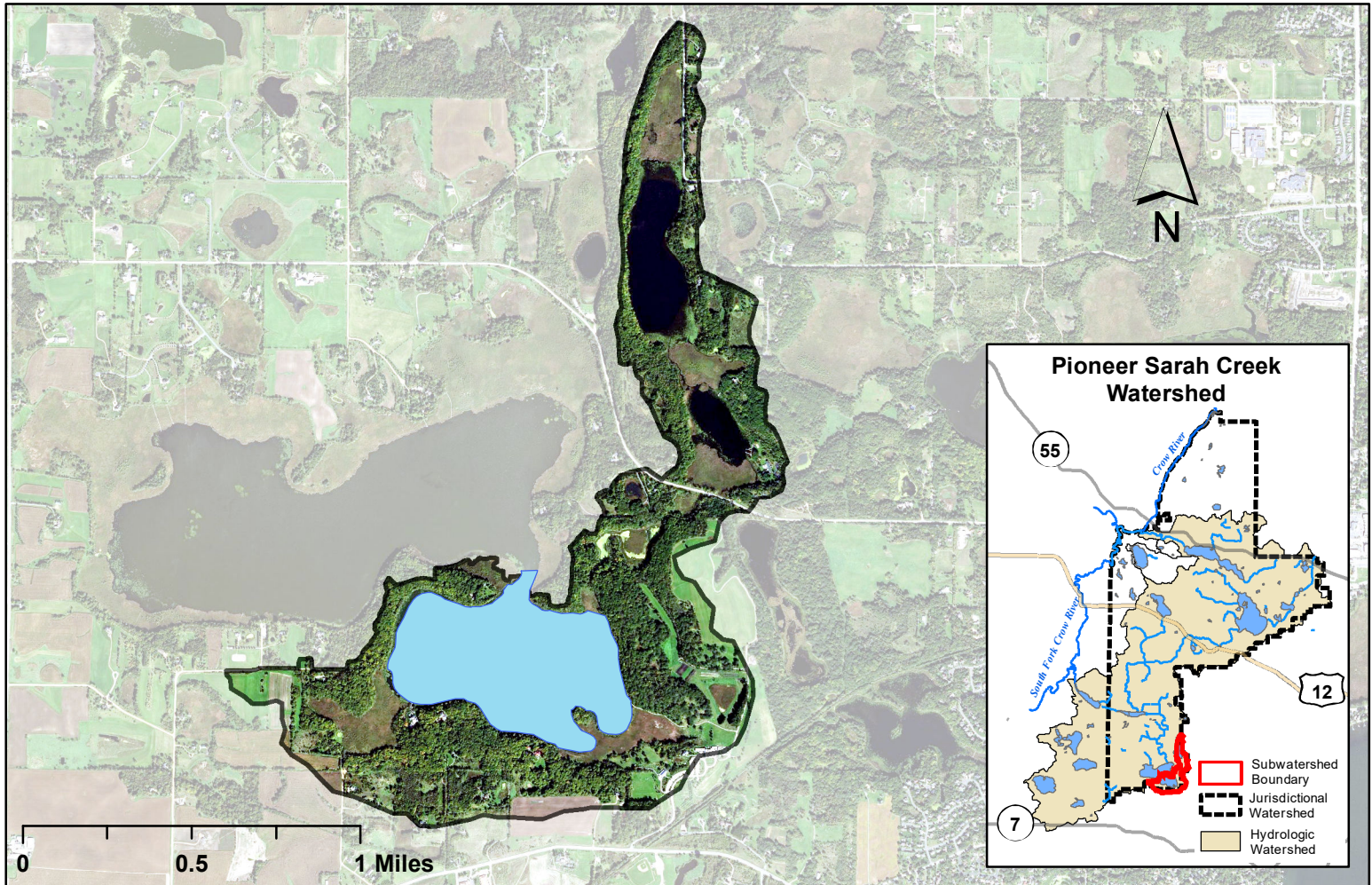
Met Council Grading System for Lake
Water Quality



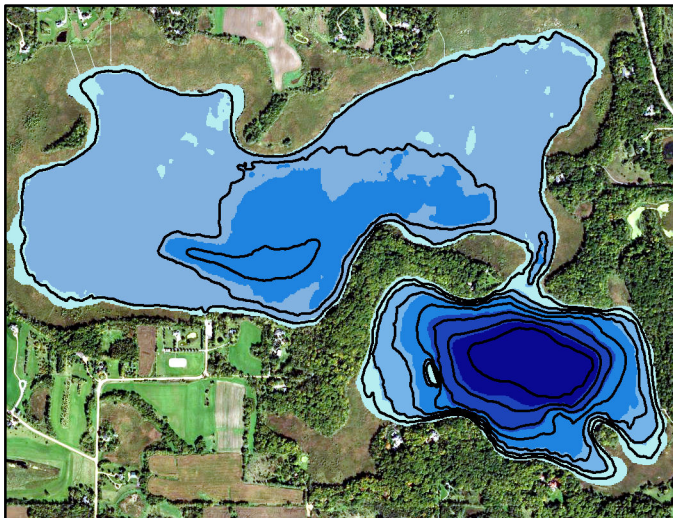
Division of Water
Resources

December 2018

Whaletail South Watershed Map

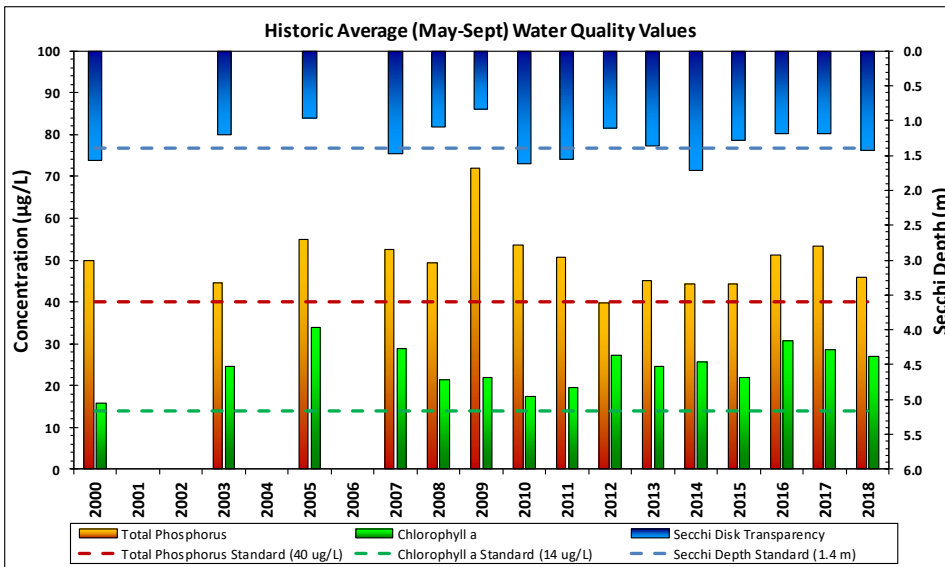


Whaletail South Bathymetry



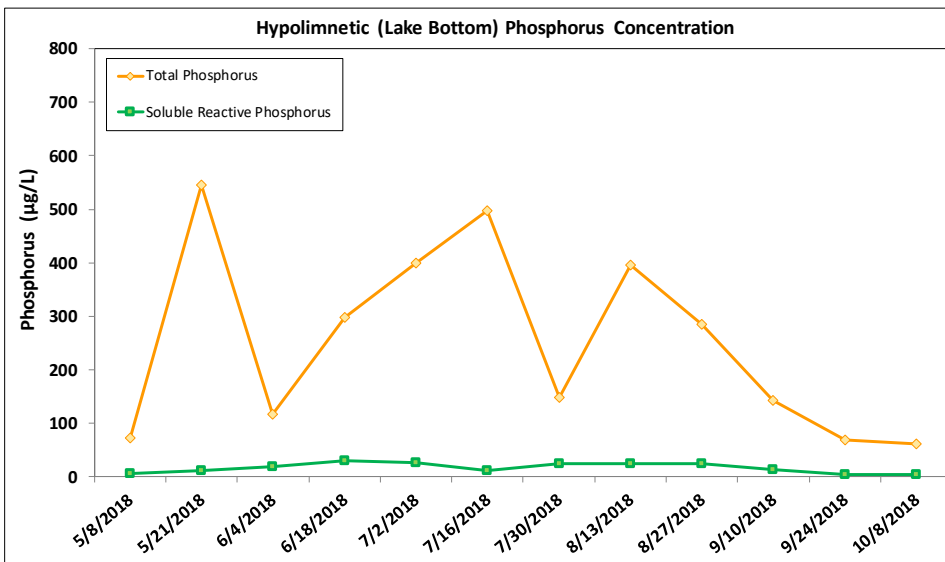
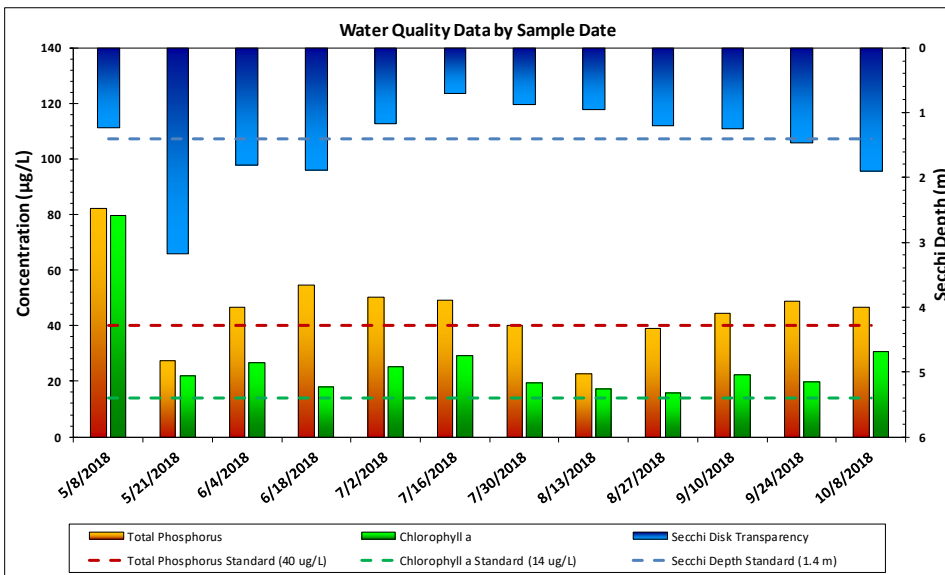
Lake and Watershed Characteristics

DNR #	27018402
Watershed Area	661 Acres
Lake Area	156 Acres
Percent Littoral Area	66%
Average Depth	12.1 ft.
Maximum Depth	23.3 ft.
Watershed Area:Lake Area	4.2:1
Impairment Classification	Proposed 2016
Classification	Provisional Deep Lake



Whaletail South Water Quality Report Card				
Year	TP	Chl-a	Secchi	Avg Grade
2000	C	B	C	C+
2001				
2002				
2003	C	C	C	C
2004				
2005	C	C	D	C-
2006				
2007	C	C	C	C
2008	C	C	D	C-
2009	D	C	D	D+
2010	C	B	C	C+
2011	C	B	C	C+
2012	C	C	D	C-
2013	C	C	C	C
2014	C	C	C	C
2015	C	C	C	C
2016	C	C	D	C-
2017	C	C	D	C-
2018	C	C	C	C
MPCA Standard	C	B	C	C+

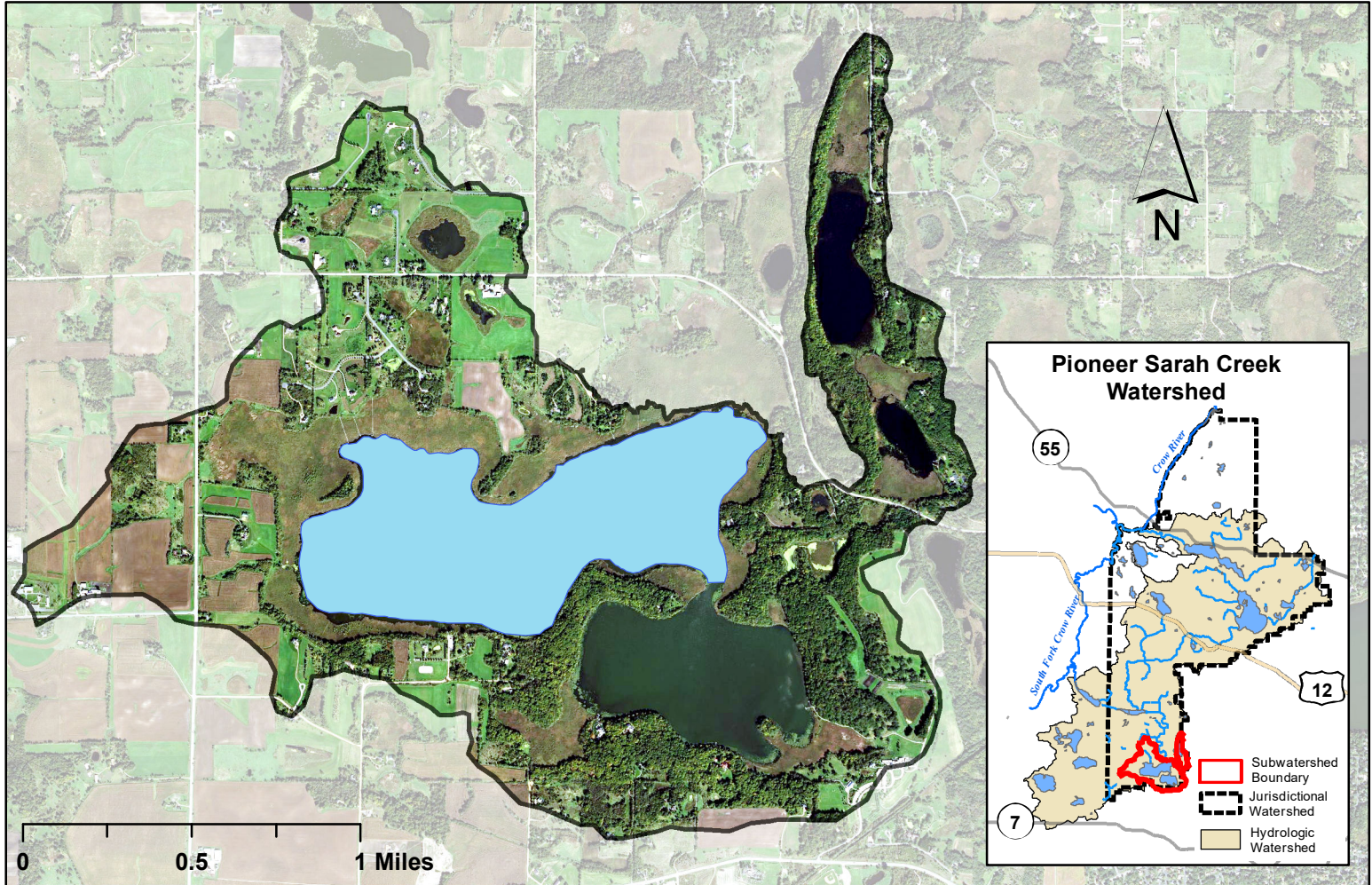
Met Council Grading System for Lake Water Quality



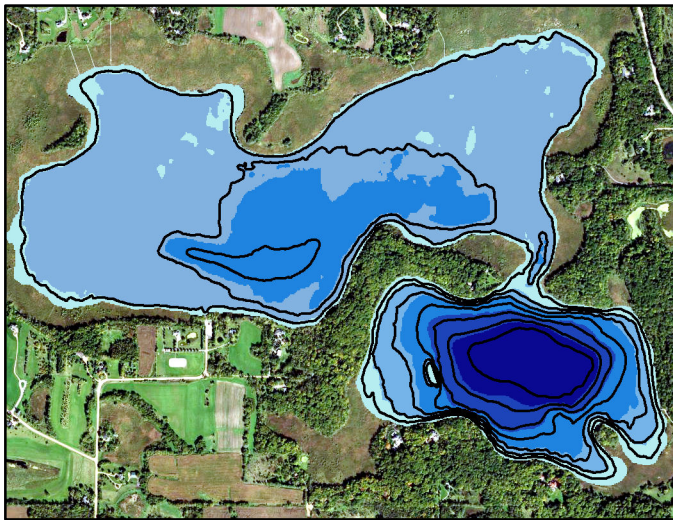
Division of Water Resources

December 2018

Whaletail North Watershed Map

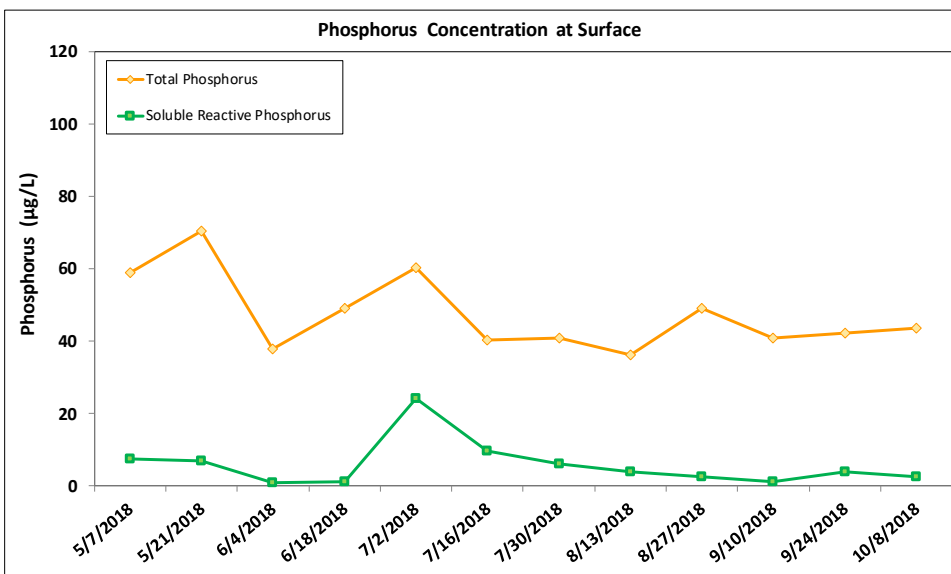
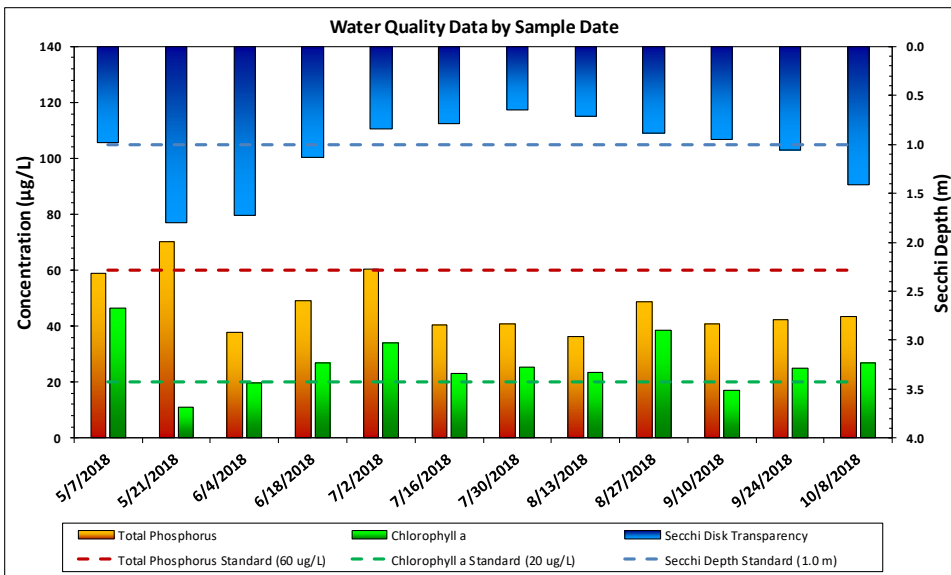
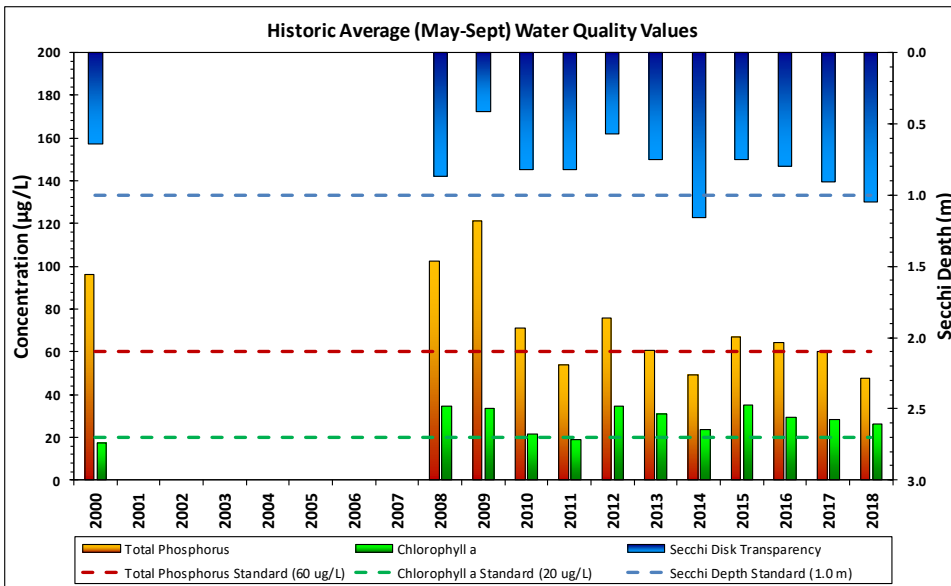


Whaletail North Bathymetry



Lake and Watershed Characteristics

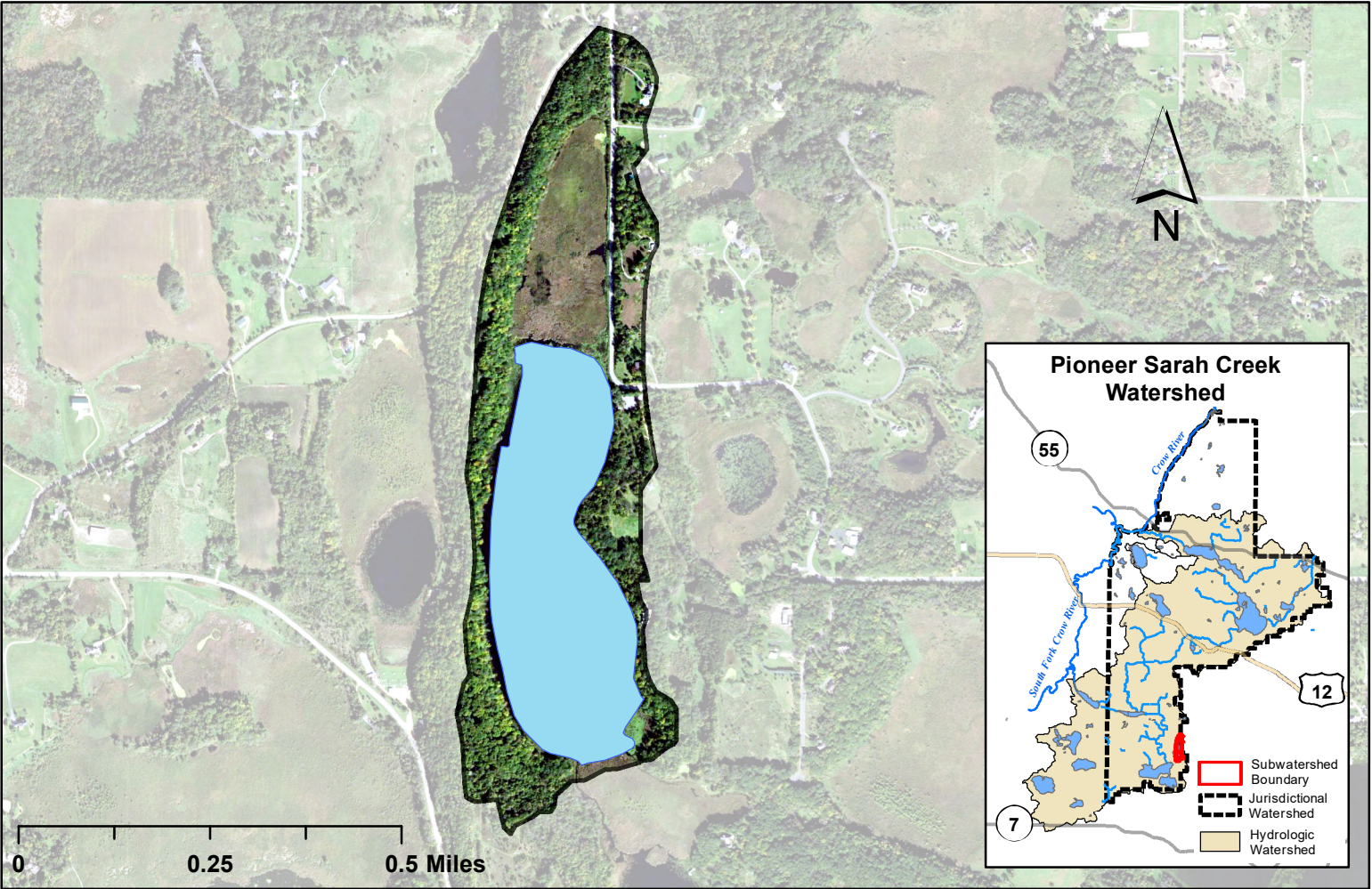
DNR #	27018401
Watershed Area	1,585 Acres
Lake Area	370 Acres
Percent Littoral Area	100%
Average Depth	5.2 ft.
Maximum Depth	10.3 ft.
Watershed Area:Lake Area	4.3:1
Impairment Classification	Proposed 2016
Classification	Provisional Shallow Lake



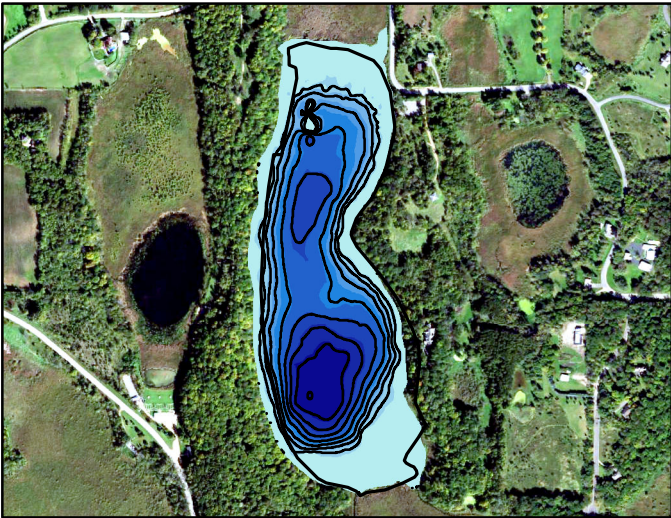
Whaletail North Water Quality Report Card				
Year	TP	Chl-a	Secchi	Avg Grade
2000	D	B	F	D+
2001				
2002				
2003				
2004				
2005				
2006				
2007				
2008	D	C	D	D+
2009	D	C	F	D
2010	D	C	D	D+
2011	C	B	D	C
2012	D	C	F	D
2013	C	C	D	C-
2014	C	C	D	C-
2015	C	C	D	C-
2016	C	C	D	C-
2017	C	C	D	C-
2018	C	C	D	C-
MPCA Standard	C	C	D	C

Met Council Grading System for Lake Water Quality

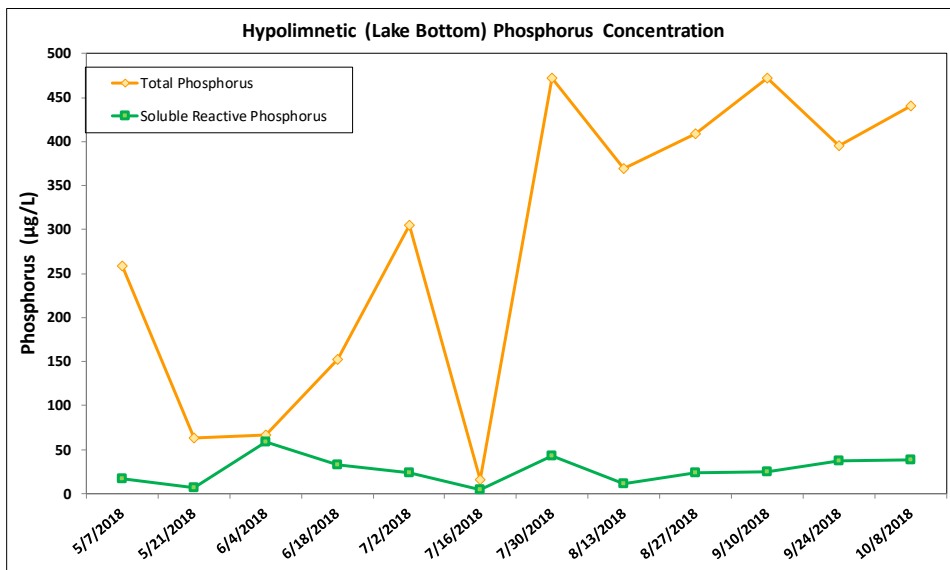
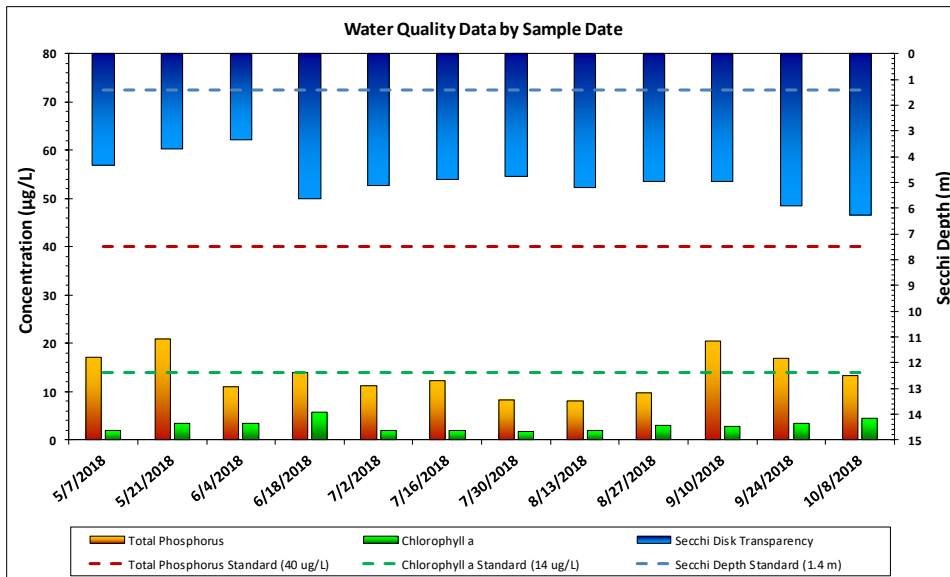
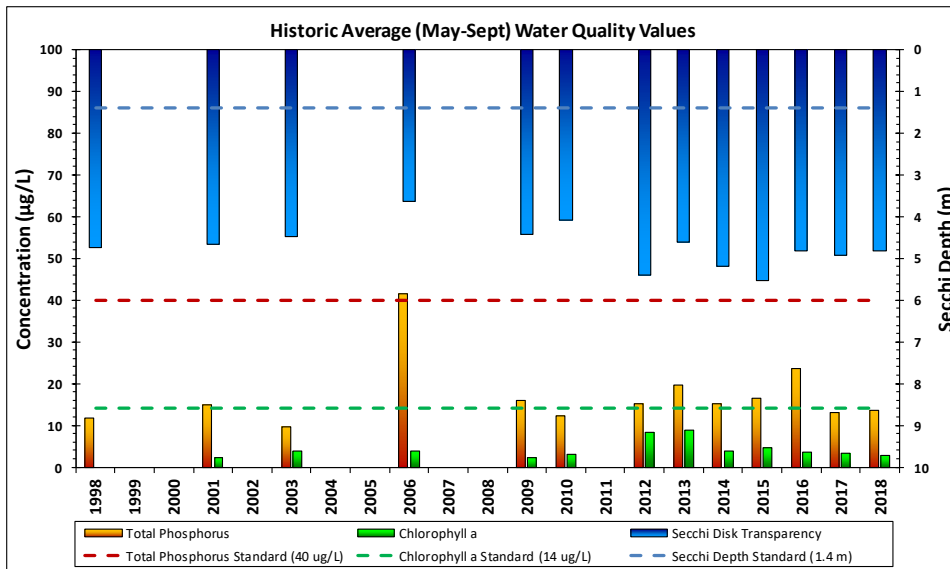
Little Long Lake Watershed Map



Little Long Lake Bathymetry



Lake and Watershed Characteristics	
DNR #	27017900
Watershed Area	92 Acres
Lake Area	53.5 Acres
Percent Littoral Area	40%
Average Depth	27.8 ft.
Maximum Depth	80.5 ft.
Watershed Area:Lake Area	1.7:1
Impairment Classification	None
Classification	Deep Lake



Little Long Lake Water Quality Report Card				
Year	TP	Chl-a	Secchi	Avg Grade
1998	A	A	A	A
1999				
2000				
2001	A	A	A	A
2002				
2003	A	A	A	A
2004				
2005				
2006	C	A	A	B+
2007				
2008				
2009	A	A	A	A
2010	A	A	A	A
2011				
2012	A	A	A	A
2013	A	A	A	A
2014	A	A	A	A
2015	A	A	A	A
2016	B	A	A	A-
2017	A	A	A	A
2018	A	A	A	A
MPCA Standard	C	B	C	C+

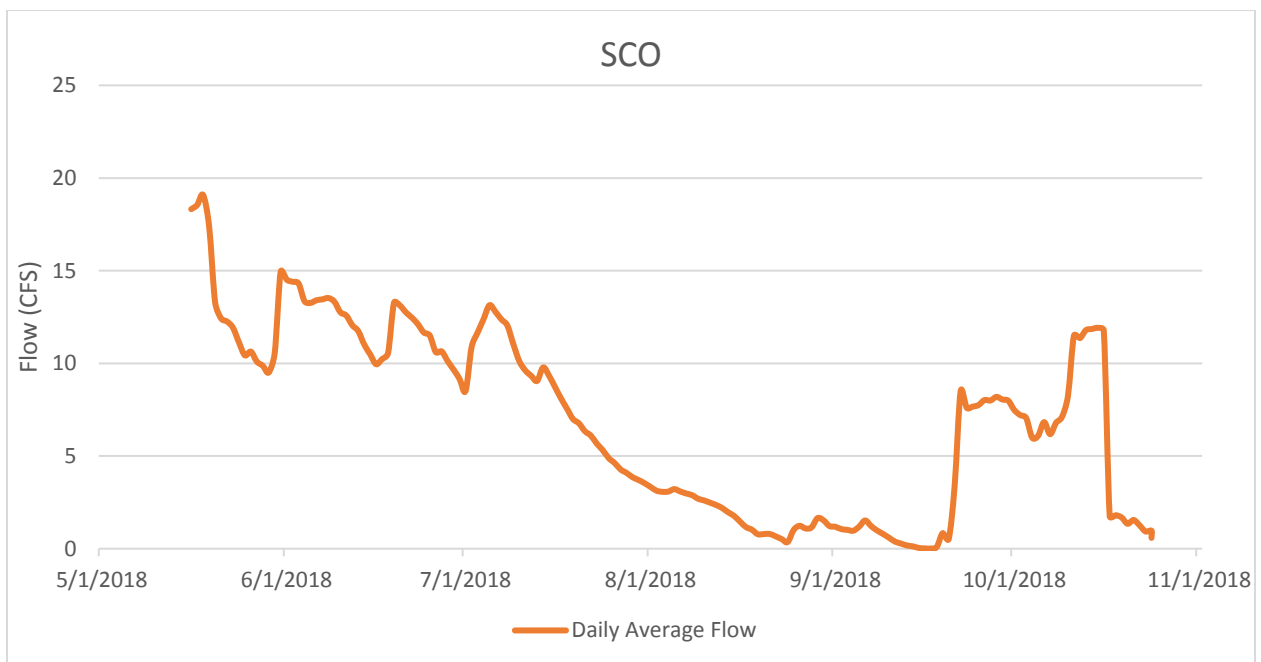
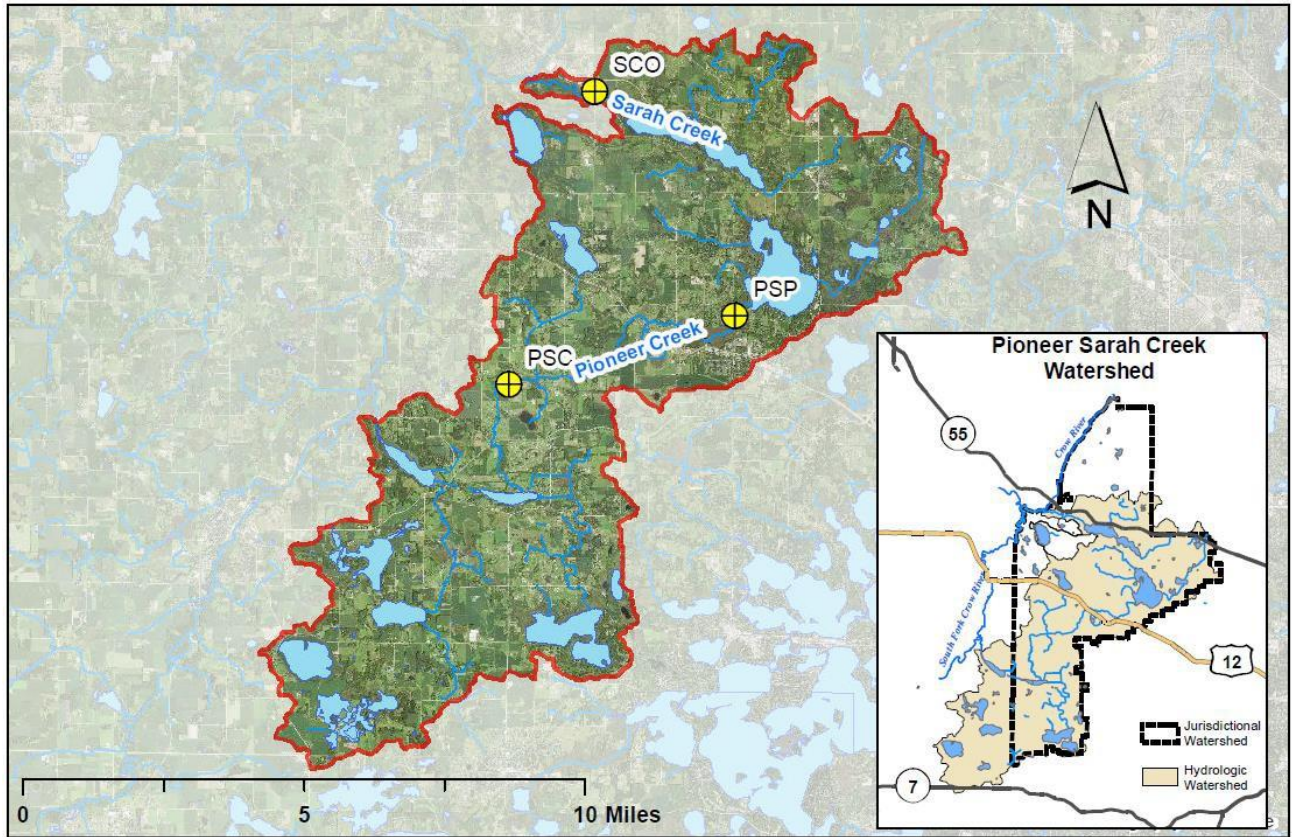
Met Council Grading System for Lake Water Quality

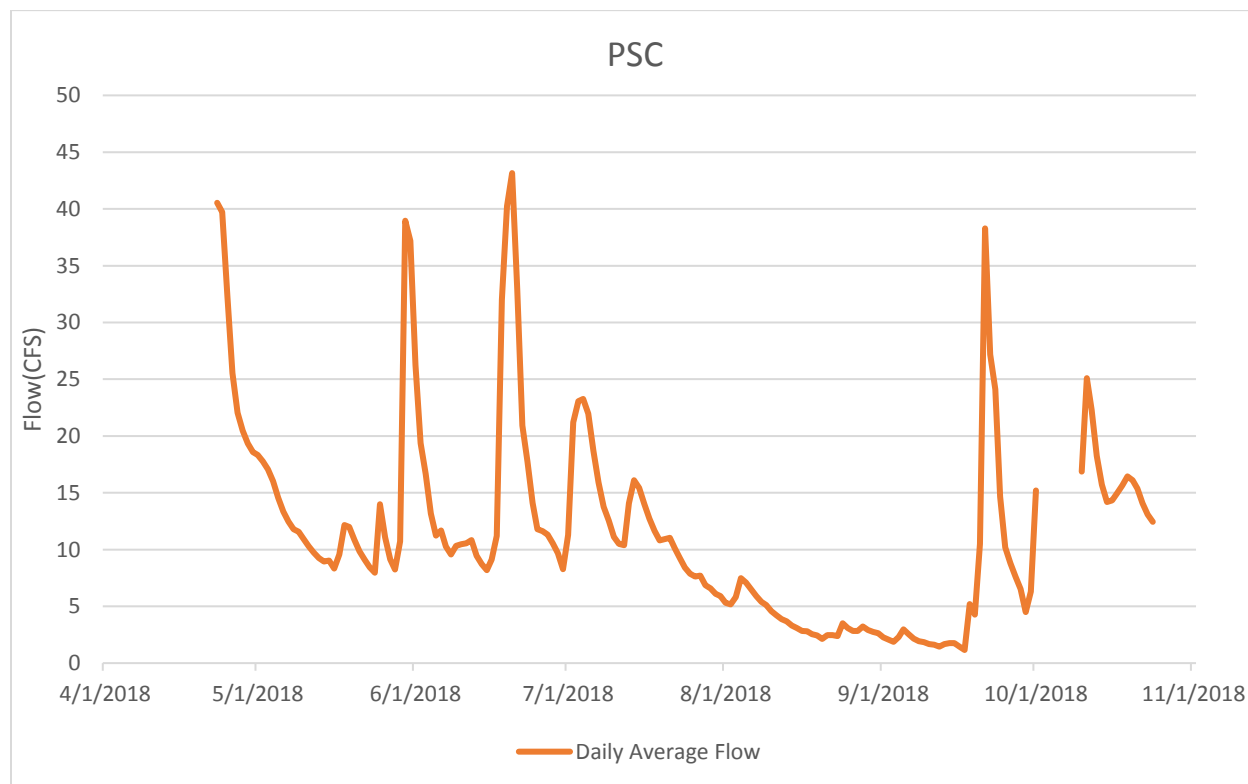
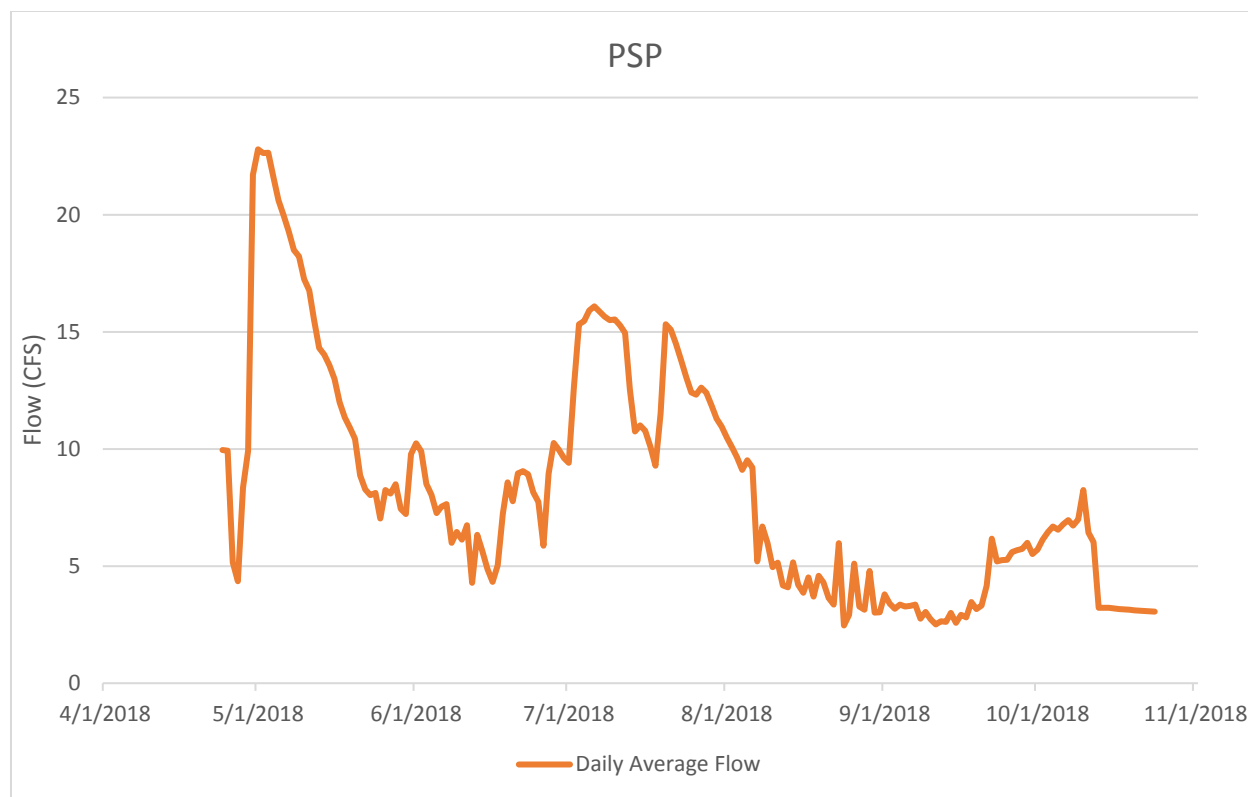


Division of Water Resources

December 2018

Pioneer/Sarah Creek Stream monitoring - 2018





*Missing data in October is due to power loss

Hennepin County

Wetland Health Evaluation Program

2018



The Wetland Health Evaluation Program (WHEP) is a citizen volunteer wetland monitoring program that is focused on educating the public on wetland ecology and quality issues; as well as, providing local governments with wetland planning information.

WHEP is currently active in Dakota and Hennepin counties, with a number of cities sponsoring local monitoring teams. The MPCA was instrumental in developing the WHEP sampling invertebrate and Citizen Plant Wetland Assessment Guide, which were adapted from the depressional wetland Indices of Biological Integrity (IBI).

In 2018, 129 volunteers donated more than 1400 hours of their time to monitor area wetlands. According to the Independent Sector, the value of volunteer time in Minnesota is \$24.69 per hour. Our volunteers contributed more than \$34,566.00 to monitor, protect and advocate for our wetlands in Hennepin County.

For the past two decades, WHEP has provided a great opportunity for Hennepin County residents to connect with the wetlands in their communities and become advocates for their sustainability. Watershed management organizations and cities contract with Hennepin County to administer volunteer water quality monitoring programs. WHEP is designed to collect data and provide hands-on environmental education experiences for volunteers. The volunteers use protocols approved by the Minnesota Pollution Control Agency to gather a variety of organisms. Their presence or absence can indicate a possible change in water quality. This biological data is often used to assess the long-term health of water and is complimentary to chemical analysis and other data used to determine water quality.

The data collected is primarily used by watershed management organizations and cities. Some organizations use the data to communicate to residents about the health of their local water resource. Some organizations have used the data to identify or track impacts of restoration efforts. They may also use the data as a historic catalog of specific organisms that have been collected and identified. For example, the county's program has data going back 17 years on Minnehaha Creek. In many cases, organizations use the data to fulfill the education requirement for storm water management plans.



Pioneer/Sarah Watershed Management Commission			
		Invertebrate Score	Vegetation Score
PS-1 Loretto Treatment Pond	The State of MN owns this property. It has several types of ecologically significant habitat in and surrounding it. This site has a large watershed and is downstream from the new Loretto wastewater treatment facility. The data will help us to compare to what we would expect to see discharged from the treatment ponds and what we do see.	5 Poor	13 Poor
PS-2 Selstad Wetland	This site is part of a large watershed that feeds into Lake Independence. We are monitoring what is flowing off the land into the lake. The data will be used in watershed planning to target goal project areas and in our continued monitoring of the larger lakes in the watershed.	5 Poor	11 Poor
PS-3 Dance Hall Creek Wetland	This site is at the end of Dance Hall Creek just before it flows into the lake. The Sub-watershed is being closely monitored after the assessment was completed. We will begin implementing projects and data will be used to give a baseline and later for comparison to show TMDL progress and potential sources of nutrients in the lake.	9 Poor	15 Poor

DATA KEY

These metrics were developed by staff from the Minnesota Pollution Control Agency and are used in all wetland assessments as part of the Wetland Health Evaluation Program.

INVERTEBRATES**# Kinds of Leeches**

The # of Leeches present in the sample; number is higher in healthier wetlands.

Kinds of Odonata

This measures the number of dragonflies and damselflies in a sample. This number is higher in healthier wetlands.

ETSD

This metric adds the number of mayfly larvae (Ephemeroptera), caddisfly larvae (Trichoptera), dragonfly presence (D), and fingernail clam presence (Sphaeriidae). This collection is sensitive to pollution.

Kinds of Snails

This measures the number of Snails TYPES in the wetland. The higher the number the better quality wetland.

Total Invertebrate Taxa

The total number of invertebrate taxa is the strongest indicators of health in a wetland. This is an overall inventory of invertebrates, the higher the number the better diversity.

VEGETATION**Vascular Genera**

This measures the richness or number of different kinds of vascular plants.

Nonvascular Genera

This measures the richness or number of different kinds of nonvascular plants such as mosses, liverworts and lichens.

Grasslike Genera

This measures the richness of a specific type of vascular plants including grasses, sedges and related genera.

Carex Cover

This measures the extent of coverage by member of the genus Carex or sedges. Abundance increases in healthier wetlands.

Utricularia Presence

Bladderwort is a group of carnivorous plants that feed on macroinvertebrates. Its presence suggests a good condition.

Aquatic Guild

This metric measures the richness of the aquatic plants which tends to decrease as human disturbance increases.

Persistent Litter

This measures the abundance of certain plants whose leaves and stems decompose very slowly. The greater abundance means more nutrients are tied up in undecomposed plants. This will increase with increased disturbance.

2017-2019 Operating Budgets

	2017 Budget	2018 Budget	2019 Budget
Revenues			
	\$	\$	\$
Member Dues	105,700.00	100,000.00	100,000.00
Project Review Fees	5,000.00	5,000.00	4,000.00
CIP Income	28,000.00	28,000.00	28,000.00
WRAPP Income	0.00		
WCA Escrow Earned	0.00		
WCA Adm Fees	500.00	500.00	500.00
Interest and Dividend Income	41.00	270.00	1,570.00
Total Revenues	139,241.00	133,770.00	134,070.00
Expenses			
Engineering/Consulting	23,000.00	23,600.00	24,190.00
Administrative Expense	36,000.00	36,000.00	36,000.00
Adm-Project Reviews	1,000.00	1,000.00	750.00
Adm-CIP Mgmt	0.00	0.00	3,000.00
WCA - Admin/Legal Expenses	500.00	500.00	300.00
Adm - Tech Support	750.00	750.00	550.00
Legal Expense	500.00	500.00	500.00
Audit Expense	4,080.00	4,150.00	4,500.00
Insurance	3,370.00	3,500.00	3,500.00
Website	2,240.00	2,240.00	1,800.00
Adm - General Programs	500.00	500.00	500.00
TAC Meetings	4,000.00	4,000.00	3,000.00
Lakes Monitoring - TRPD	3,703.00	5,180.00	8,100.00
Lakes Monitoring - CAMP	576.00	550.00	760.00
Stream Monitoring	10,802.00	7,600.00	7,120.00
Education	6,120.00	6,120.00	4,500.00
Education-Events	500.00	500.00	500.00
Invertebrate Monitoring	1,500.00	1,000.00	500.00
Grant Writing	1,100.00	1,000.00	1,000.00
Plan Amendment	1,000.00	900.00	1,000.00
Third Gen - Admin	0.00		
Special Projects	5,000.00	6,000.00	4,000.00
WRAPP	0.00		
Capital Improvement Project	33,000.00	28,180.00	28,000.00
Greenfield Central Park			
Total Expenses	139,241.00	133,770.00	134,070.00
Net Income	\$ 0.00	\$ 0.00	\$ 0.00

2017-2019 Member Assessments

2017	2016 Market Value PSC Basin	Increase in MV over Prev Year	2017 Op Budget		Increase over Prev Year	
			%age	Amount	%age	Amount
Greenfield	394,071,759	5.00%	29.12%	38,929.51	3.85%	1,442.20
Independence	510,583,968	1.09%	37.73%	50,439.50	-0.01%	(5.77)
Loretto	54,109,610	5.41%	4.00%	5,345.37	4.26%	218.42
Maple Plain	105,529,093	7.65%	7.80%	10,424.99	6.47%	633.95
Medina	152,170,132	2.63%	11.24%	15,032.56	1.51%	223.89
Minnetrista	136,940,498	1.84%	10.12%	13,528.06	0.72%	97.32
TOTALS	1,353,405,060	3.12%	100.00%	133,700.00	1.99%	2,610.00

2018	2017 Market Value PSC Basin	Increase in MV over Prev Year	2018 Op Budget		Increase over Prev Year	
			%age	Amount	%age	Amount
Greenfield	418,807,770	6.28%	29.25%	37,440.16	-3.83%	(1,489.34)
Independence	537,355,542	5.24%	37.53%	48,037.98	-4.76%	(2,401.52)
Loretto	55,695,940	2.93%	3.89%	4,979.05	-6.85%	(366.32)
Maple Plain	109,218,243	3.50%	7.63%	9,763.78	-6.34%	(661.21)
Medina	158,506,367	4.16%	11.07%	14,170.00	-5.74%	(862.57)
Minnetrista	152,231,289	11.17%	10.63%	13,609.02	0.60%	80.96
TOTALS	1,431,815,151	5.79%	100.00%	128,000.00	-4.26%	(5,700.00)

2019	2018 Market Value PSC Basin	Increase in MV over Prev Year	2019 Op Budget		Increase over Prev Year	
			%age	Amount	%age	Amount
Greenfield	368,183,516	-12.09%	25.49%	32,625.08	-12.86%	(4,815.08)
Independence	558,624,135	3.96%	38.67%	49,500.20	3.04%	1,462.22
Loretto	61,598,085	10.60%	4.26%	5,458.26	9.62%	479.21
Maple Plain	118,116,948	8.15%	8.18%	10,466.45	7.20%	702.67
Medina	167,463,487	5.65%	11.59%	14,839.09	4.72%	669.10
Minnetrista	170,530,950	12.02%	11.81%	15,110.91	11.04%	1,501.88
TOTALS	1,444,517,121	0.89%	100.00%	128,000.00	0.00%	0.00

