



**Nine Mile Creek Watershed District
2014 Annual Report**

Prepared and submitted by:
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2014 Nine Mile Creek Board of Managers/Officers

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Resident of Eden Prairie

Steve Kloiber, Vice-President
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Term Expires: 9/29/16
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Maressia Twele, Treasurer
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Term Expires: 9/29/2015
Resident of Minnetonka

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Term Expires: 9/29/2017
Resident of Bloomington

Louise Segreto - Manager
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Term Expires: 09/29/16
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Committee Members**

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Randy Anhorn	Hennepin County Environmental Services	Hennepin County Environmental Management Division 417 North 5 th Street Minneapolis, MN 55401
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Lee Gustafson	City of Minnetonka City Engineer	14600 Minnetonka Blvd. Minnetonka, MN 55343 952-939-8239
Liz Stout	City of Minnetonka Water Resources Coordinator	14600 Minnetonka Blvd. Minnetonka, MN 55343 952-939-8233
Mike Eastling	City of Richfield City Engineer	6700 Portland Avenue So. Richfield, MN 55423 612-861-9700

Kristin Asher	City of Richfield City Engineer	6700 Portland Avenue So. Richfield, MN 55423 612-861-9760
Judy Sventek	Metropolitan Council	Metropolitan Council Mears Park Center 230 East 5 th Street St. Paul, MN 55101
Kate Drewry	MN Department of Natural Resources Area Hydrologist	1200 Warner Road St. Paul, MN 55155
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Nick Teideken	MN Department of Transportation	Metro District Water Resources Engineer 1500 W. County Rd B-2 Roseville, MN 55113
Brad Wozney	Board of Water & Soil Resources	520 Lafayette Road St. Paul, MN 55155

Employees and Consultants

The Nine Mile Creek Watershed District (District) employs two full-time employees. The District hired a full-time administrator in 2005. The administrator oversees daily operations of the District and represents the District on numerous state-wide committees. In 2009, the District hired a full-time education/outreach coordinator to develop and implement the District's education/outreach programs. The District retains the services of an engineering consultant, a legal advisor, and an accountant to assist with District activities. The District contracts with another accounting firm to perform its annual financial audit.

District Administrator:

Kevin Bigalke
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Introduction

Established in 1959, the Nine Mile Creek Watershed District was the state's first urban watershed district. Despite its name, Nine Mile Creek's main branch actually travels 15.5 miles from its headwaters to its confluence with the Minnesota River. The Creek's name came from the fact that it is nine (9) miles from Fort Snelling following an early cart path that is now Old Shakopee Road. The Creek winds through the southwestern suburbs of the Twin Cities, with a 50 square mile watershed consisting of a largely developed urban landscape, and encompassing portions of Bloomington, Edina, Minnetonka, Eden Prairie, Hopkins, and Richfield. Appointed by the Hennepin County Commissioners, each of the District's five Managers serve three-year terms.

Consistent with its statutory and regulatory obligations under Minn. Stat. § 103D.351 and Minnesota Rules § 8410.0150, the Board of Managers has prepared this Annual Report of the Nine Mile Creek Watershed District's financial status, its yearly activities and projects, its 2014 permitting and enforcement program, and its 2015 goals and objectives. The Managers invite comments and suggestions concerning this report. The 2014 Annual Report is available on the Nine Mile Creek Watershed District website – www.ninemilecreek.org. Copies are also available by contacting Kevin Bigalke, District Administrator, Nine Mile Creek Watershed District, Watershed Discovery Point, 12800 Gerard Drive, Eden Prairie, MN 55346, (952) 835-2078.

Highlights and Accomplishments of 2014

2014 highlights include:

- Implementation of the District's Regulatory Program and Rules
- Implementation Plan Review
- Design and Construction of the new Nine Mile Creek office
- Continue UAA/Lake/Creek Studies
- Centennial Lake Storm Water Volume Reduction Project
- Capital Project Implementation
- Implementation of Education & Outreach Programming
- Completed a Performance Review and Assistance Program (PRAP) review with BWSR

2014 was a busy and exciting year for the Nine Mile Creek Watershed District (District). After several years of planning, the District broke ground on its new office facilities and began construction. The new facility was completed in October 2014 and the District moved into its new office in November.

The District continued to implement its education and outreach programs, with ongoing focus on chloride reduction efforts as well as citizen engagement through the District's Citizen Advisory Committee, the cost-share grant program and summer education series. In addition to these established education programs, the District began planning new education and outreach opportunities at the new District office location.

The District also completed a Performance Review and Assistance Program (PRAP) review with the Board of Water and Soil Resources (BWSR). The District received high marks in the PRAP review.

Assessment of the 2014 Work Plan

In its 2013 Report, the District identified several broad goals and objectives for 2014, including:

1. Implementation of District Regulatory Program and Rules
2. Implementation of Plan Review
3. Nine Mile Creek Water Resource Center Planning
4. Continue UAA/Lake/Creek Studies
5. Cost Share Grant Program
6. Citizen Assisted Lake Monitoring Programs (CAMP)
7. Citizen Advisory Committee
8. Technical Advisory Committee
9. Education and Outreach Activities
10. Capital Project Implementation

In 2014, the District completed or made substantial progress toward all of these goals and objectives, as described below. In addition to the project and activities identified above, the Nine Mile Creek Watershed District completed a PRAP review through the Board of Water and Soil Resources.

1. Implementation of Watershed District Rules & Permit Program

In March 2008, the Nine Mile Creek Watershed adopted new District rules. The rules have been well received and the District has not had any significant issues implementing the rules. In 2014, the NMCWD continued to review projects and permit applications under the rules adopted in 2008. The NMCWD reviewed and approved 118 permit applications in 2014.

2. **Implementation Plan Review**

In 2014, the District continued a review of the implementation plan of its Water Management Plan. Staff identified programs that could be combined and a few new programs or projects that should be included in the implementation plan. The District will amend the implementation plan in 2015.

3. **Nine Mile Creek Office Facility Planning & Construction**

The District Board and staff continued to identify potential programs and other uses for the donated property. The District finalized the architectural design with consultant LHB. The District broke ground on the new office facility in May. Construction of the new facility was completed in October 2014. The District moved into the new facility in November 2014.

The District hired a marketing and branding consultant to assist with the development of a name for the new facility.

4. **Use Attainability Analyses & Lake and Creek studies**

In 2014, the District entered the eleventh year of its Watershed Outlet Monitoring Program. Since 2004, the Nine Mile Creek has been on the Minnesota Pollution Control Agency's "Impaired Water" lists for turbidity, chloride and fish community Index of Biotic Integrity (IBI). In response to this listing, the District undertook an enhanced monitoring program, which includes additional water quality monitoring at three Watershed Outlet Monitoring Program (WOMP) stations on the creek, and ecological health monitoring of the Creek (see Figure 1 on page 40). The District began working with the MPCA in 2007 to get

funding for TMDL studies for chlorides and fish IBI. The District initiated the TMDL studies for chlorides and fish IBI in 2008 and continued to develop the TMDL Reports for these impairments in 2009. In 2010, the Chloride TMDL Report was approved by the MPCA and the Environmental Protection Agency. The District continued the development of an Implementation Plan and continued its implementation and education efforts to reduce chlorides in 2014. The District is working with the Minnesota Pollution Control Agency on the possible reclassification or delisting of the fish IBI impairment.

The District continued to partner with the Metropolitan Council to monitor continuous turbidity at the Metropolitan Council WOMP station. Continuous turbidity monitoring began at this station in 2008 and continued in 2014.

5. **2014 Cost Share Grant Program**

In 2014, the District solicited applications and awarded 20 cost share grants totaling \$149,777.06. The Cost Share Grant Program has been highly successful, with 2014 seeing a large number of grants awarded. The Cost Share Program has continued to see a good mix of application types, including residential, townhome and condominium association, and nonprofit, city and business projects. Rain gardens and shoreline restorations continue to be popular project types. The District firmly believes that the Cost Share Grant Program provides awareness of the District's goals and is an effective way to get storm water best management, shoreline restoration, and habitat restoration projects on the ground.

6. **Citizen-Assisted Lake Monitoring Program (CAMP)**

The District again partnered with the Metropolitan Council in 2014 to support the Citizen-Assisted Lake Monitoring Program on six lakes in the District. We have a dedicated group of volunteers that takes a strong interest in the health of our local water bodies and continues to collect water quality data on several of our lakes. The lakes included in the citizen monitoring program were: Lake Minnetoga & Wing Lake in Minnetonka, Lower Penn Lake & Bush Lake in Bloomington, Lake Cornelia in Edina, and Lake Smetana in Eden Prairie.

7. **Citizen Advisory Committee**

In 2014 the CAC assisted staff on developing new education and outreach opportunities as well as ways to improve our current programs. Staff worked with the CAC to organize and host the 7th Annual Summer Education Series. See the section on the Summer Education Series for details. In addition to the education and outreach programming, the CAC also helped with selecting photos submitted through the 2014 photo contest for the 2015 Nine Mile Creek Photo Calendar and Annual Communication.

8. **Technical Advisory Committee**

In 2014, the District's Technical Advisory Committee did not meet.

9. **Education and Outreach Program Activities**

Electronic Newsletter

The District continued emailing a quarterly newsletter in 2014, in an effort to keep citizens and other watershed constituents better informed about District projects and events,

along with highlighting the natural resources of the District and providing clean water tips. The number of people subscribed to the newsletter rose to over 250 in 2014. The average open rate for the newsletter was over 40%, which is well above the industry average of 18.1%.

Summer Education Series

The District hosted its eighth year of the Summer Education Series (SES). The SES is designed to encourage adults and children to get outside to explore and experience the natural resources in the District, in addition to providing District residents with hands-on learning opportunities about the resources of the District, and about ways to protect and enhance the District's water and natural resources. In 2014, the SES included canoeing, two family fishing events, and a native seed collection event.

NEMO (Nonpoint Education for Municipal Officials)

The District continued to be a charter member of Northland NEMO in 2014. In 2014, NEMO, NMCWD, and other local partners offered an extensive suite of workshops for elected and appointed city officials and other community leaders. The four workshops offered in 2014 included: NEMO 101 (offered twice), NEMO on the Water, and Lessons Across the Landscape. Workshops focused on the links between land use and water quality, how to address water quality in project planning, and water quantity challenges during redevelopment. Approximately 200 people participated across the four programs.

Trainings/Workshops

The District hosted one Winter Road Maintenance workshops targeted at public road authorities in 2014. We provided training for MNDOT, Hennepin County, and city plow drivers. The Winter Road Maintenance workshops address approaches that will result in reduced chloride loading to Nine Mile Creek. The District also hosted one Winter Parking Lot and Sidewalk

Maintenance workshop. The workshops targeted commercial snow removal businesses, school districts, and park maintenance staff. In addition, the District presented its workshop titled *Winter Maintenance on School Grounds* at the Twin Cities Chapter conference of the Minnesota Educational Facility Management Professionals. The workshop was developed through an innovative partnership between the Nine Mile Creek Watershed District, Bloomington Public Schools and SFM, a workers compensation insurance company.

Project WET

The District led a Project WET (Water Education for Teachers) workshop in February of 2014. Project WET is a hands-on, interactive curriculum that trains classroom and other educators in lessons that are focused on water. For the 2014 workshop, we had eighteen teachers attend.

Shallow Lakes Forum

In 2014 the NMCWD, in conjunction with several local partners, planned and implemented a Shallow Lakes Forum targeted at a residential audience. Forum topics included shallow lake ecology, rules and regulations, monitoring, management, and community engagement. The forum proved to be a great success, with close to 100 people attending. The forum will be held again in 2015.

Blue Thumb Program Participation

In 2014, the Nine Mile Creek Watershed District continued to be a partner of the Blue Thumb Program developed by the Rice Creek Watershed District. To be a partner, the District committed to 30 hours of public education and outreach activities pertaining to Blue Thumb Program goals. The District contributed over 40 hours toward the Blue Thumb Program through the District's education and outreach programs.

Environmental/Community Fairs

In 2014, the Nine Mile Creek Watershed District staff and managers attended and participated in several Environmental Fairs hosted by cities, the Three Rivers Park District, and private companies. The District had its display at the fairs and distributed information about the District, our water quality monitoring efforts, and the District's cost share grant program. The fairs provided an opportunity for the District to meet with residents of the District and discuss their concerns about the water quality and overall health of the Watershed.

Presentations to other organizations

As part of its education and outreach program in 2014, District staff gave presentations to interested groups and organizations. Presentation topics included the District's efforts to improve and protect the water resources of the Nine Mile Creek Watershed and alternative landscaping options to protect water quality. Presentations were also given to students at an Edina elementary school, which included hands on water quality monitoring at Nine Mile Creek.

2014 Photo Contest, Annual Communication and 2015 Photo Calendar

In 2014, the Nine Mile Creek Watershed District held its seventh photo contest to collect photos for the 2015 Nine Mile Creek Photo Calendar. The 2015 Calendar served as the District's 2014 Annual Communication. Calendars were distributed throughout the District and made available at the city halls of each of the six cities in the District, public libraries, and were also mailed to residents upon request. 2,500 calendars were printed and distributed.

Logo and New Facility Marketing

The District hired a marketing and graphic design firm in 2014 to design a new logo for the NMCWD, along with selecting a name for the District's new office and interpretive facility

and developing a marketing and communication plan to guide the launch and branding of the District's new office. Stakeholder involvement was a key component in the process of designing a new logo and selecting a name for the new facility. Focus groups and other multiple forms of feedback were used to engage the public in the decision making process. The new logo and building name will be announced in 2015.

10. **Capital Project Implementation**

Continued Implementation of the Eden Prairie Lakes Water Quality Improvement Project

The City of Eden Prairie petitioned the District in August 2005 for the Eden Prairie Lakes Water Quality Improvement Project. The purpose of the project is to address Curly leaf Pondweed and internal phosphorus loading in Northwest and Southwest Anderson Lakes; to improve water quality and restore the water level in Birch Island Lake; and to address phosphorus loading in Bryant Lake. The District Board of Managers ordered the project at a public hearing on December 13, 2006 and the project commenced in 2007.

Implementation of the project was officially started in December 2007. Most of the Eden Prairie Lakes Water Quality Improvement Project was implemented in 2008. The project included a tile system to restore the water level of Birch Island Lake, and alum treatment on Bryant Lake, and a drawdown of Northwest and Southwest Anderson Lakes to treat Curly Leaf Pondweed.

The District and Three Rivers Park District monitored the vegetation in lakes in 2014. Vegetation monitoring was done to determine the presence or absence of curly leaf pondweed.

Monitoring activities in 2013 and 2014 continued to show a dramatic reduction of Curly Leaf Pondweed in Northwest and Southwest Anderson Lakes. Along with the reduction of Curly Leaf Pondweed was an increase in the abundance of native aquatic plants. Monitoring results showed the presence of 34 native aquatic plant species in Northwest Anderson Lake. The District also continued to monitor the water quality in Northwest Anderson Lake and Southwest Anderson Lake.

Implementation of the Hopkins Streambank and Habitat Restoration Project

In 2013, the District completed Phase B of the Hopkins Stream bank and Habitat Restoration Project that the City of Hopkins petitioned the District in 2006. The project included the stabilization of segments of Nine Mile Creek and the construction of a new channel adding sinuosity and increased habitat to Nine Mile Creek. The project also included the construction of the Nine Mile Creek Regional Trail in partnership with Three Rivers Park District. In 2014, the District monitored the project for potential repairs, water quality and habitat improvement, and plant survival.

Southeast Anderson Lake Water Quality Improvement Project

In March 2008, the City of Bloomington petitioned the District for a water quality improvement project on Southeast Anderson Lake. The project is to address curly leaf pondweed and internal phosphorus loading. In 2008, the project was designed and ordered to proceed. The project design was to treat curly leaf pondweed with Endothal-K for 4-5 successive years. Treatments were continued in May 2009, 2010, 2011, and 2012. The project continued in 2013 with a sixth year of treatment of Endothal-K. Water quality and vegetation

monitoring continued in 2013. Monitoring activities in 2013 showed a continued decrease in the abundance and density of Curly Leaf Pondweed, as well as increased diversity of native aquatic plants and improved water quality. In 2014, it was determined that additional treatment was not necessary. The District continued to monitor the vegetation and water quality of Southeast Anderson Lake.

Normandale Lake Water Quality Improvement Project

The District accepted a petition from the City of Bloomington to develop a water quality improvement project to address curly leaf pondweed and internal phosphorus loading in Normandale Lake and to identify watershed best management practices to reduce nutrient loading into the lake. The District started the feasibility/engineers report in 2009 and submitted options for the project to the U.S. Army Corps of Engineers for their preliminary review. Water quality monitoring in 2009 revealed an improvement in water quality. The District delayed implementation of the project to conduct additional water quality monitoring in 2010 and 2011. The District continued to work on the engineers report for the Normandale Lake project in 2014.

Edina Creek Restoration Project

The District continued to work throughout 2014 on the Edina Creek Restoration Project Engineer's Report. The District continued field assessments of the condition of Nine Mile Creek through Edina. The District began working on the Engineer's Report for the project in 2014.

11. Centennial Lakes Storm Water Volume Reduction Project Study

In May, 2013, the City of Edina requested the assistance of the Nine Mile Creek Watershed District to evaluate a potential storm water volume reduction project in the City's Centennial Lakes Promenade area. The NMCWD and the City of Edina entered into a partnership to complete a study to determine the feasibility of incorporating storm water volume reduction into the City's Promenade project. The NMCWD and the City of Edina used NMCWD's engineering consultant, Barr Engineering, to conduct a feasibility study to determine the potential for storm water volume reduction in the Promenade and Centennial Lakes area. The study was completed in October, 2013 and evaluated various volume reduction strategies, the potential volume reduction of each strategy, and the potential cost of each practice. The NMCWD and the City of Edina agreed the potential for significant storm water volume reduction was feasible and the two parties entered into a cooperative agreement to begin design work on the project. In 2014, the District and the City of Edina continued to partner on the design of this potential project. Due to additional soils information, it was determined by the District and the City of Edina that it was not advisable to implement the project. The City of Edina and the District terminated the cooperative agreement and the project in 2014.

Projected 2015 Work Plan

Continue Implementation of Watershed District Regulatory Program and Rules

The District will continue implementing its rules and regulatory program in 2015. The District will be reviewing its rules in 2015 to determine if amendments or changes to the rules are needed.

Implementation Plan Review and Amendment

The District will finalize its review of the activities implemented to date and the future projects and activities identified in the Implementation Plan of the District's 2007 Water Management Plan. The District will evaluate the effectiveness and success of the projects completed. The District will determine if the future projects and activities identified in the District's Implementation Plan are still relevant and still a priority. An amendment to the Implementation Plan will be initiated to include future projects not anticipated in 2007, to consolidate similar programs identified in the 2007 Implementation Plan and to expand the cost-share grant program. The District will also begin the planning process for its 4th generation Water Management Plan which needs to be completed and adopted by March, 2017.

Nine Mile Creek Office and Facilities Planning

In 2009, the District was contacted by an individual interested in donating her home and 5.3 acre property adjacent to the Cardinal Creek Conservation Area and wetland complex to the District for use as the District office and Nine Mile Creek Water Resource Center. The District received approval for the project in 2010 from the City of Eden Prairie. In early 2011, the District closed on the property. The District conducted a visioning and planning process for the future use of the property as the Nine Mile Creek Water Resource Center in 2011 and 2012. In 2012, the District hired LHB as the architect for the renovations needed to convert the home into the District's office and Nine Mile Creek Water Resource Center. The District also hired Jim Rowe, an education program consultant, to develop an Interpretive Framework for the education, outreach, and interpretive opportunities at the new facility. In 2014, the new building was completed.

In 2015, the District will complete the landscaping and storm water management features on the property. The District will also continue to develop education and outreach programming for the new facility.

Continue UAA /Lake /Creek Studies

In 2015, the District will continue to monitor Nine Mile Creek with the WOMP stations. The District will continue use of the continuous turbidity monitoring transducers at each of its WOMP stations. The District will also continue its lake monitoring program, collecting data on Birch Island Lake, Bryant Lake, Lake Cornelia, and Lake Edina.

The District will also continue its stream monitoring program collecting water quality data and ecological data.

Cost Share Grant Program

The District will solicit applications for the eighth year of its Cost Share Grant Program in 2015. The District makes over \$100,000 available to residents, businesses, and local governments in the District for this grant program.

Citizen Assisted Lake Monitoring Program (CAMP)

In 2015, the District will continue to support citizen monitoring through the Metropolitan Council's Citizen Assisted Lake Monitoring Program (CAMP). Trained volunteer monitoring teams will collect water quality samples from Lower Penn Lake and Bush Lake in Bloomington, Lake Minnetoga and Wing Lake in Minnetonka, and Lake Cornelia in Edina.

Continued Support of CAC

The Nine Mile Creek Watershed District has had an active Citizen Advisory Committee (CAC). There are five new members on the CAC for 2015. The CAC will assist with numerous education and outreach events including the Summer Education Series, seminars, and workshops. In addition, the CAC will assist in reviewing residential Cost Share Grant applications and will provide funding recommendations to the Board for the 2015 grant cycle.

Technical Advisory Committee

In 2015, the District will continue working with the Technical Advisory Committee to consider potential amendments to the District rules, consider the adoption of Atlas 14, and to begin planning for its 4th Generation Water Management Plan.

Education and Outreach Activities

In 2015, the District will continue to partner with organizations to participate in local community and environmental fairs and provide outreach activities at local events. In 2015, the District will participate in the Bloomington Home Improvement Fair, the City of Minnetonka's Native Plant Market, and many other events. The District will once again partner with the Alliance for Sustainability in an effort to build on the momentum from 2013 and 2014 and the work that was accomplished in connecting faith-based organizations with District resources. In addition, the District will continue to seek opportunities to partner with local schools to give presentations about the water resources and water quality in the Nine Mile Creek Watershed District.

The District will again collaborate with its CAC to host the Summer Education Series. The 2015 Summer Education Series will include a pollinator presentation and a family fishing event.

The District will be hosting Winter Maintenance workshops targeted at snow plow drivers and private parking lot snow removal companies aimed at reducing the amount of road salt applied in the District. This is to address the chloride TMDL. The District will work with the cities in the District to implement an education program on winter maintenance for the general public. The District will continue to implement a chloride reduction workshop targeting School Districts in 2015.

The electronic newsletter will be sent out quarterly, along with other occasional updates from the District. There will be a concentrated effort to grow the number of subscribers to the mailing list and to provide information that is useful and of interest to those reading the newsletter.

The District will continue to incorporate more educational aspects into the Basic Water Management Projects. These efforts will include public information meetings, informational flyer or brochures and signage of new project sites describing project goals and activities.

District Website

In 2015, the District will continue to utilize its website for public information, education and outreach. The District plans to add its water quality data to the website. The District will also post project reports, updates, and project photos on the District website. The District will redesign its website in 2015 in an effort to keep up with changing technology, add features, and to provide better information that is easier to access.

NEMO (Nonpoint Education for Municipal Officials)

The Nine Mile Creek Watershed District is a charter sponsor for the NEMO program. In 2015, the District will offer an extensive suite of workshops for elected and appointed city officials and other community leaders. The workshops being offered in 2015 include: NEMO Workshop on the Water, NEMO workshop at the Green Infrastructure for Clean Water Summit, and Chloride and Winter Road Management for Local Leaders. Workshops will focus on the links between land use and water quality, how to address water quality in project planning, the link between surface, ground, storm, and drinking water, and chloride pollution.

Capital Project Implementation

Continued Implementation of the Eden Prairie Lakes Water Quality Improvement Project

. In 2015, the District will continue to monitor the plant community and water quality of Northwest and Southwest Anderson Lakes.

Normandale Lake Water Quality Improvement Project

The District accepted a petition from the City of Bloomington to develop a water quality improvement project to address curly leaf pondweed and internal phosphorus loading in Normandale Lake and to identify watershed best management practices to reduce nutrient loading into the lake. In 2009, water quality monitoring results indicated an improvement in water quality. In 2015, the District will be working with the City of Bloomington to determine

the best approach to deal with the curly leaf pondweed and water quality issues, develop a communication strategy for the project and meet with State and Federal agencies on the project.

Southeast Anderson Lake Project

The District accepted a petition from the City of Bloomington for a water quality project on Southeast Anderson Lake in March 2008. In 2015, the District will continue to assess the plant community of Southeast Anderson Lake to determine the effectiveness of the project.

Edina Creek Restoration Project

In 2015, the District will finalize the Engineer's Report for the Edina Nine Mile Creek Restoration Project. The District will meet with City of Edina staff to present the proposed project. District staff will also host a series of neighborhood information meetings to present the proposed project to residents that live adjacent to Nine Mile Creek in proposed work areas. The District plans to order the project through and public hearing, bid the project, and begin implementation of the project in the winter of 2015.

Permitting Activity

Summary of Permits Issued

In 2008, the Nine Mile Creek Watershed District adopted and began implementing new rules. The Board of Managers, with the assistance from the District Engineer and District Administrator, reviews permit applications and imposes various conditions for approval as appropriate. In 2014, the District reviewed and granted 117 permits for sediment & erosion control, storm water management, wetland management, and shoreline projects. The District

issued permits in the following cities: Bloomington – 36; Edina – 56; Eden Prairie – 11; Hopkins – 8; Minnetonka – 5; Richfield - 1.

The District subjects projects to a preliminary review so that it can issue permits simultaneously, or shortly after, municipal permits.

Enforcement Activity

The District's engineer regularly inspects permitted work to ensure compliance with permit conditions. If violations are found, the District attorney typically will notify permittees and seek voluntary abatement or correction before resorting to formal legal action. In 2014, no enforcement actions were necessary.

Summary of 2014 Water Quality Monitoring Programs

The 2014 Nine Mile Creek Watershed District (NMCWD) water quality monitoring programs included monitoring six lakes (Arrowhead Lake, Bush Lake, Indianhead Lake, Normandale Lake, Northwest Anderson Lake, and Southeast Anderson Lake) and Nine Mile Creek. In addition, NMCWD participated in the monitoring of Centennial Lakes, which was a cooperative project with the City of Edina.

Nine Mile Lake Monitoring

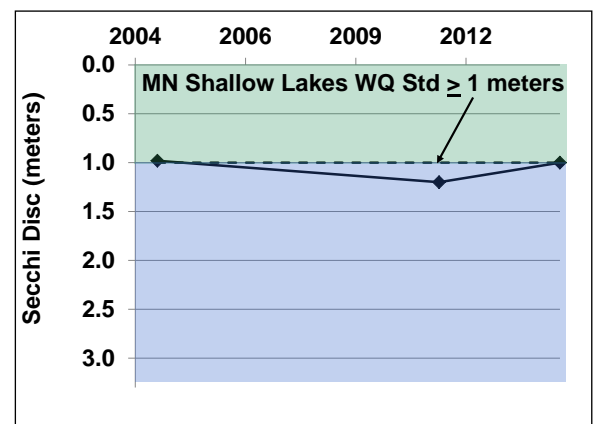
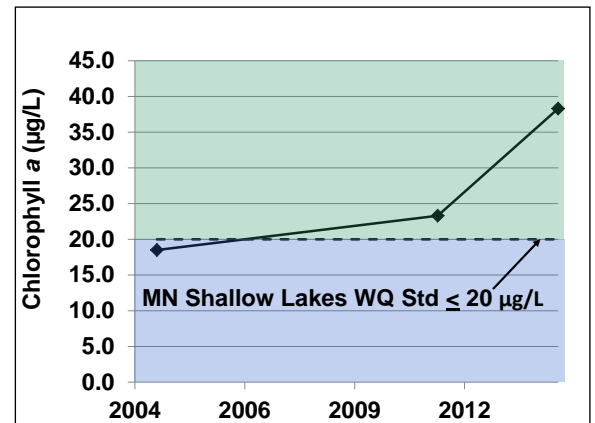
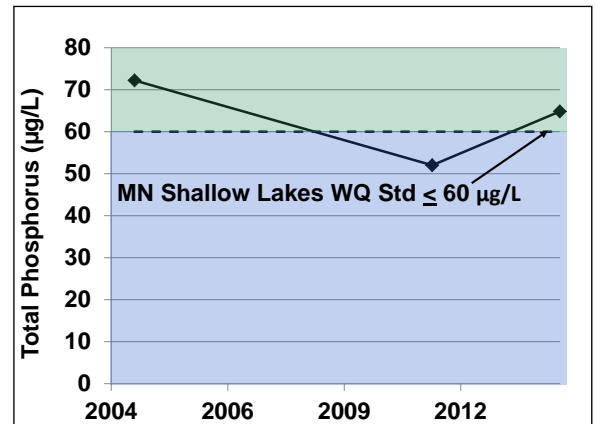
The 2014 NMCWD lake water quality monitoring program included monitoring six lakes (Arrowhead Lake, Bush Lake, Indianhead Lake, Normandale Lake, Northwest Anderson Lake, and Southeast Anderson Lake). Each lake was monitored on six occasions for selected parameters including: total phosphorus, total dissolved phosphorus, soluble reactive phosphorus (ortho phosphorus), pH, chlorophyll *a*, chloride, dissolved oxygen, temperature, specific conductance, turbidity, and oxidation reduction potential (ORP), phytoplankton, and zooplankton. Aquatic

plant (macrophyte) surveys were performed during June and August. Results of the 2014 lake monitoring program follow.

Arrowhead Lake

Arrowhead Lake is a small lake with a surface area of approximately 22 acres, a maximum depth of approximately 7 feet, and a mean depth of 4.6 feet at normal water surface elevation of 873.9 M.S.L. At this elevation the lake volume is approximately 96 acre-feet. The estimated natural overflow elevation is 882.5 M.S.L. The lake is shallow enough for aquatic plants to grow over the entire lake bed. In addition, it is also a polymictic lake (mixing many times per year). The lake is fertile and generally experiences poor water quality.

In 2014, the lake's water quality was poor. The lake's average summer total phosphorus and chlorophyll *a* concentrations were 65 µg/L and 38 µg/L, respectively. The lake's average summer Secchi disc transparency was 1.0 meters. The average summer total phosphorus and chlorophyll *a* concentrations failed to meet the Minnesota State Water Quality Standards for shallow lakes in the North Central Hardwood Forest Ecoregion



Arrowhead Lake average summer total phosphorus (top), Chlorophyll *a* (middle) and Secchi Disc (bottom) values during 2004-2014

published in Minnesota Rules 7050 (Minn. R. Ch. 7050.0222 Subp 4) which are $\leq 60 \mu\text{g/L}$ and $\leq 20 \mu\text{g/L}$, respectively. The average summer Secchi disc transparency met the standard, which is ≥ 1 meter. Because a lake is impaired if it fails to meet the total phosphorus standard and either the chlorophyll *a* or Secchi disc standard, Arrowhead Lake was impaired in 2014.

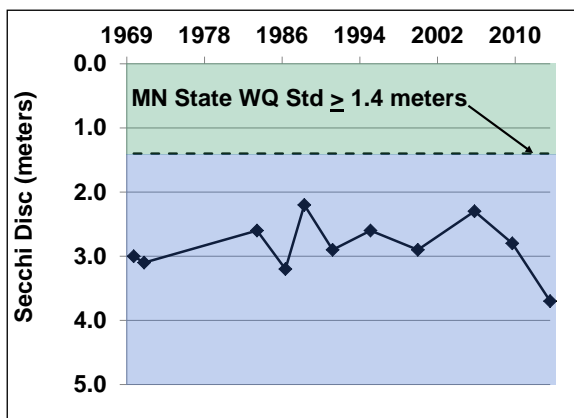
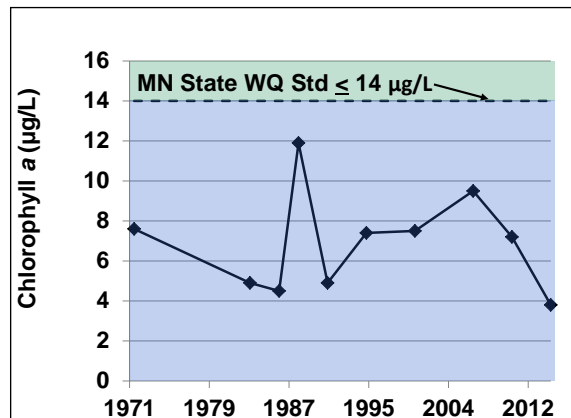
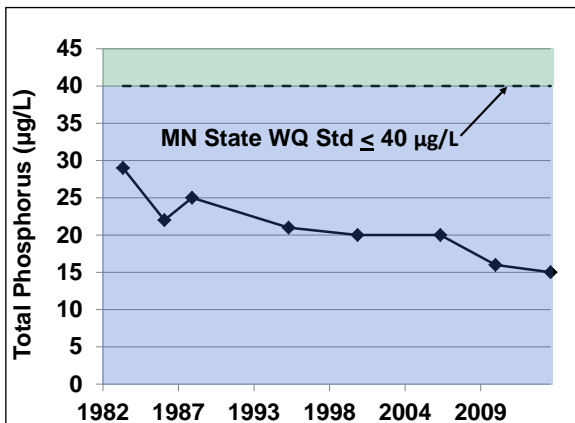
In 2014, water levels were high during the June and August plant surveys due to above average precipitation. A total of 14 aquatic plant species including a healthy mixture of submerged, floating leaf, and emergent species were observed. The plant community included three invasive species – Eurasian watermilfoil, curly-leaf pondweed, and purple loosestrife. Purple loosestrife was found in 1 location and no changes in distribution were observed between June and August. Both Eurasian watermilfoil and curly-leaf pondweed were found throughout the lake in June, ranging from light to heavy densities. Because curly-leaf pondweed dies off in late June and begins a new growing season in fall, curly-leaf pondweed was not present in August. Eurasian watermilfoil was present at light density in the southwest basin in August and not observed in the rest of the lake. Herbicide treatment with diquat occurred on June 25 and July 25 and likely caused the reduction in Eurasian watermilfoil between the June and August surveys.

Dense algal mats were present in the lake in June. Treatment of the lake with copper sulfate on June 25 and July 25 reduced algal presence in the lake and algal mats (submerged and floating) were less dense in August than June.

Bush Lake

Bush Lake is a mesotrophic lake (good water quality) with a surface area of 188 acres, a maximum depth of 35 feet, and an estimated mean depth of 9.8 feet. The lake has a littoral zone (shallow area where plants grow) of 114 acres which is about 66 percent of the lake's surface area. Bush Lake was a landlocked lake until a pumped outlet to the Anderson Lakes was constructed in 2000. The pump is programmed to turn on when the lake reaches a level of 833.5 M.S.L and continue pumping until the lake reaches a level of 833 M.S.L.

In 2014, the lake's water quality was good. Average summer epilimnetic (surface) total phosphorus and chlorophyll *a* concentrations were 15 and 4 µg/L, respectively. The lake's average summer Secchi Disc transparency was 3.7 meters. All three parameters met the Minnesota State Water Quality Standards published in Minnesota Rules 7050 for lakes within the North Central Hardwood Forest Ecoregion which are as follows: (1) Average summer total



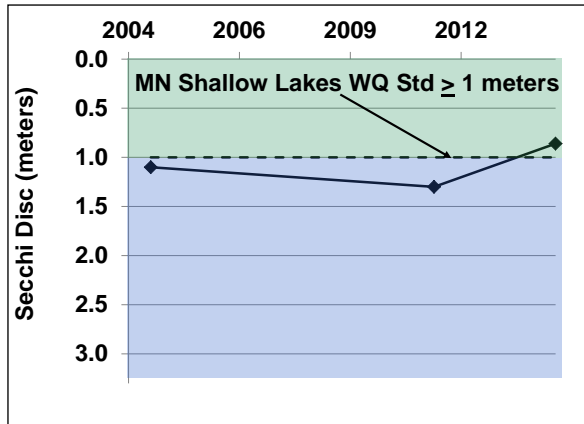
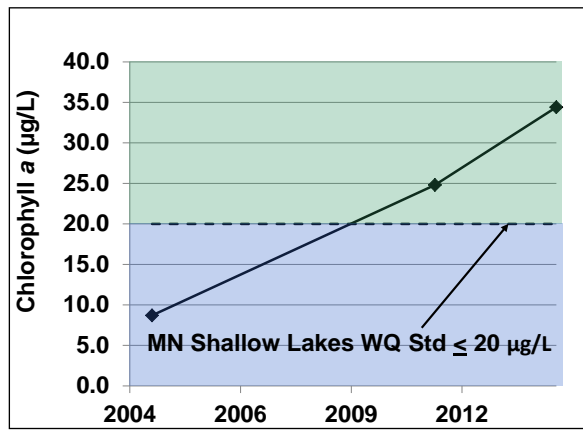
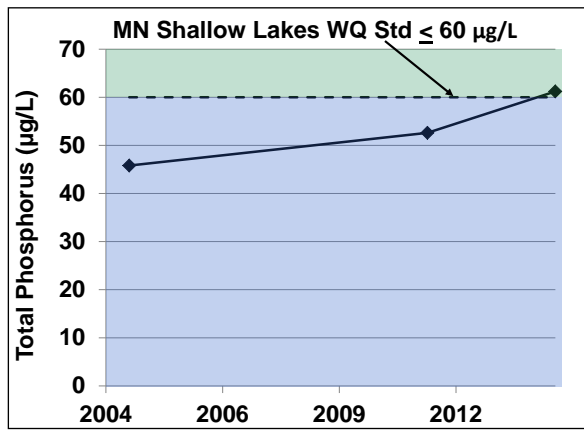
Bush Lake average summer total phosphorus (left), Chlorophyll *a* (right), and Secchi Disc (bottom) values during 1970-2014

phosphorus concentration not to exceed 40 µg/L; (2) Average summer chlorophyll *a* concentration not to exceed 14 µg/L and (3) Average summer Secchi disc transparency of at least 1.4 meters or 4.6 feet (Minn. R. Ch. 7050.0222 Subp. 4).

In 2014, water levels were high during the June and August plant surveys due to above average precipitation. A total of 30 aquatic plant species including a healthy mixture of submerged, floating leaf, and emergent species were observed. The plant community included two invasive species – Eurasian watermilfoil and curly-leaf pondweed. Both Eurasian watermilfoil and curly-leaf pondweed were found throughout the lake in June, ranging from light to heavy densities. Because curly-leaf pondweed dies off in late June and begins a new growing season in fall, curly-leaf pondweed was not present in August. Eurasian watermilfoil was present throughout the lake in August, ranging from light to heavy densities.

Indianhead Lake

Indianhead Lake is a small lake with a surface area of approximately 14 acres, a maximum depth of approximately 6.5 feet, and a mean depth of 4.3 feet at normal water surface elevation of 863.2 M.S.L. At this elevation the lake volume is approximately 61.3 acre-feet. The estimated natural overflow elevation is 882.5 M.S.L. The lake is shallow enough for aquatic plants to grow over the entire lake bed. The lake is also a polymictic lake (mixing many times per year). The lake is fertile and generally experiences poor water quality.



Indianhead Lake Average Summer Total Phosphorus (left), Chlorophyll *a* (right), and Secchi Disc (bottom) values during 2004-2014

In 2014, the lake's water quality was poor. The lake's average summer total phosphorus and chlorophyll *a* concentrations were 61 µg/L and 34 µg/L, respectively. The lake's average summer Secchi disc transparency was 0.9 meters. All three parameters failed to meet the Minnesota State Water Quality Standards for shallow lakes in the North Central Hardwood Forest Ecoregion published in Minnesota Rules 7050 (Minn. R. Ch. 7050.0222 Subp 4).

In 2014, water levels were high during the June and August plant surveys due to above average precipitation. Aqua Shade, a dye used to reduce plant growth by blocking out specific light rays critical for photosynthesis, had been added to Indianhead Lake prior to the June plant survey and continued to be present during the August plant survey. Despite the addition of Aqua Shade, aquatic plants were found throughout the lake, although densities were lower near the lake's center. A total of 8 aquatic plant species including three submerged and five emergent species were observed. The plant community included two invasive species – yellow

iris and curly-leaf pondweed. Patches of yellow iris were scattered along much of the shoreline. No changes in yellow iris distribution were observed between June and August. Curly-leaf pondweed was found throughout the lake in June, ranging from light to moderate densities. Because curly-leaf pondweed dies off in late June and begins a new growing season in fall, curly-leaf pondweed was not present in August. On June 22 and July 25, the lake was treated with diquat and copper sulfate to reduce the abundance of nitella, a type of algae that looks like a submerged aquatic plant. The treatments reduced nitella abundance in about 75 percent of the lake. Nitella abundance in the impacted area ranged from moderate to heavy in June compared with light to moderate in August.

Normandale Lake

Normandale Lake is a man-made lake created as a part of a flood control project to increase storage in a natural marsh area. Lake creation involved construction of a dam across Nine Mile Creek to the west of Normandale Boulevard. The North Fork and South Fork of Nine Mile Creek flow into the lake and the lake discharges into the main stem of Nine Mile Creek. The lake has a water surface of approximately 112 acres, a maximum depth of approximately 10 feet, and a mean depth of 4.2 feet at normal water surface elevation of 808.0 M.S.L. At this elevation the lake volume is approximately 465 acre-feet. The lake is shallow enough for aquatic plants to grow over the entire lake bed. The water level in the lake is controlled mainly by weather conditions (snowmelt, rainfall, and evaporation) and by the elevation of the outlet structure located at the east side of Normandale Lake.

In 2014, the lake's average summer total phosphorus and chlorophyll *a* concentrations were 65 µg/L and 4 µg/L, respectively. The lake's average summer Secchi disc transparency was 1.6 meters. In 2014, the average summer

total phosphorus concentration failed to meet the Minnesota State Water Quality Standards for shallow lakes in the North Central Hardwood Forest Ecoregion (Minn. R. Ch. 7050.0222 Subp 4). The lake's average summer chlorophyll *a* concentration and Secchi disc transparency both met the

Minnesota State Water Quality Standards for shallow lakes in the North Central Hardwood Forest Ecoregion (Minn. R. Ch. 7050.0222 Subp 4). The low chlorophyll *a* concentration and corresponding good Secchi disc water transparency indicate

low quantities of planktonic algae were present in

Normandale Lake during 2014. While low quantities of

planktonic algae (microscopic floating algae) were present,

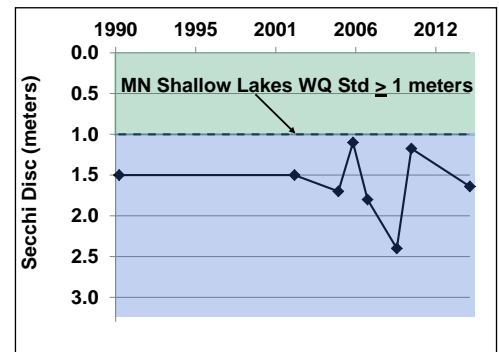
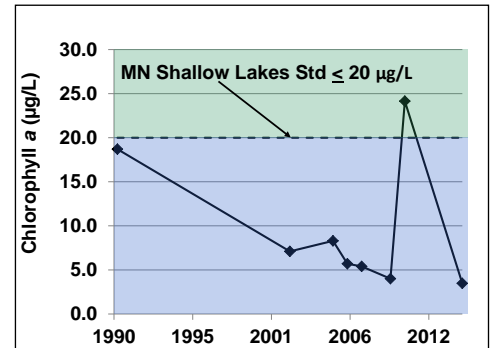
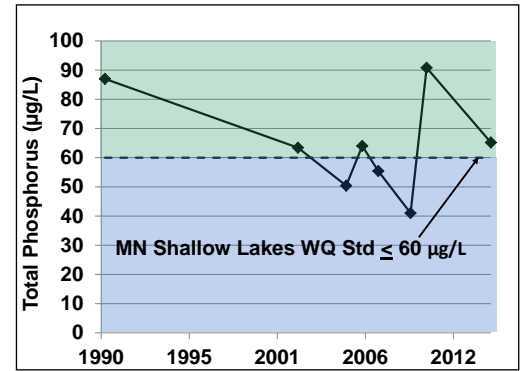
dense algal mats were observed floating on the lake's surface

during the June and August plant surveys. The surface algal mats impact planktonic algae in two

ways: (1) Absorb phosphorus, making it unavailable for planktonic algae and (2) limit light

available in the water column for growth of planktonic algae. In addition to algal mats, two free-

floating plants, watermeal and greater duckweed, were present throughout the lake. The shade



Normandale Lake Average Summer Total Phosphorus (Top), Chlorophyll *a* (middle), and Secchi Disc (bottom) values during 1990-2014

from the algal mats, watermeal, and greater duckweed limited the growth of planktonic algae by shading them out and all three types of plants competed with planktonic algae for nutrients. Hence, the algal mats, watermeal, and greater duckweed impacted planktonic algae, resulting in low chlorophyll *a* concentrations relative to phosphorus concentrations in 2014.

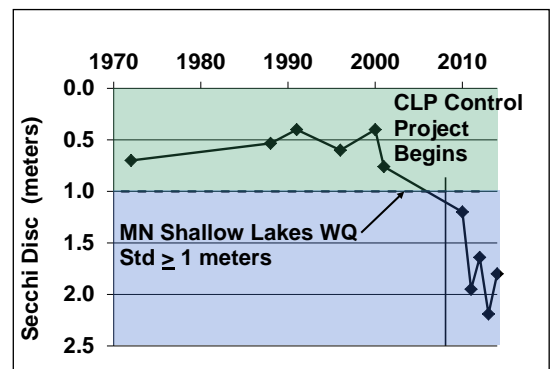
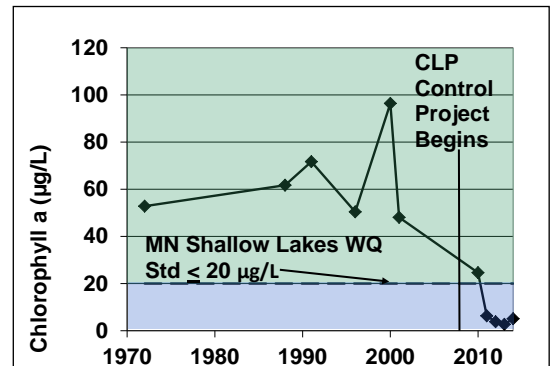
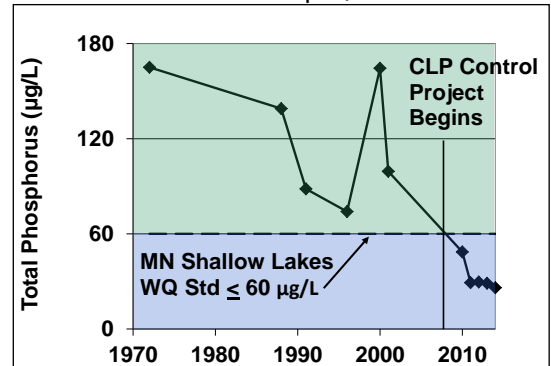
In 2014, water levels were high during the June and August plant surveys due to above average precipitation. A total of 14 aquatic plant species including a healthy mixture of submerged, floating leaf, and emergent species were observed. The plant community included two invasive species – purple loosestrife and curly-leaf pondweed. Purple loosestrife was not observed during the June survey, but was scattered throughout the lake’s shoreline and islands in August. Curly-leaf pondweed was dense throughout the lake in June and was present throughout the lake in August, although less dense.

Northwest Anderson Lake

Northwest Anderson Lake has a surface area of 185 acres and a maximum depth of 10 feet. Water quality improvement projects were completed on Northwest Anderson Lake during 2008 through 2012 to reduce internal phosphorus loading. A partial drawdown of the lake was completed during the fall of 2008 to expose the lake bed to a winter freeze and freeze out curly-leaf pondweed (CLP). The drawdown successfully controlled CLP except for the lake’s eastern bay that was not drained. Herbicide treatments during 2010 through 2013 controlled CLP in the lake’s eastern bay. The 2014 data were evaluated to further assess water quality changes resulting from the management efforts.

In 2014, the lake's water quality was excellent. The lake's average summer total phosphorus and chlorophyll *a* concentrations were 26 and 5 µg/L, respectively. The lake's average summer Secchi disc transparency was 1.8 meters. All three parameters met the Minnesota State Water Quality Standards for shallow lakes in the North Central Hardwood Forest Ecoregion published in Minnesota Rules 7050 (Minn. R. Ch. 7050.0222 Subp 4).

The District water quality improvement projects have substantially improved the lake's water quality. For the period prior to the start of the lake's water quality improvement projects (1972-2001), the average total phosphorus and chlorophyll concentrations were 122 and 64 µg/L and the average Secchi disc transparency was 0.6 meters. For the period after the start of the water quality improvement projects (2010-2014), the average total phosphorus and chlorophyll concentrations were 32 and 9 µg/L and the average Secchi disc transparency was 1.8 meters. All water quality measurements after the start of the water quality improvement projects have met the Minnesota State Water Quality Standards for shallow lakes in the North Central Hardwood Forest Ecoregion published in Minnesota Rules 7050 (Minn. R. Ch. 7050.0222 Subp 4).



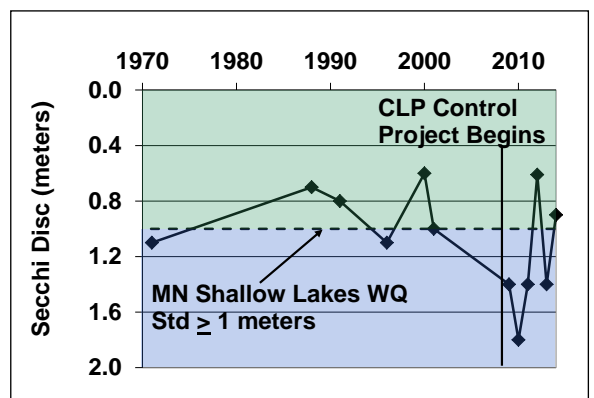
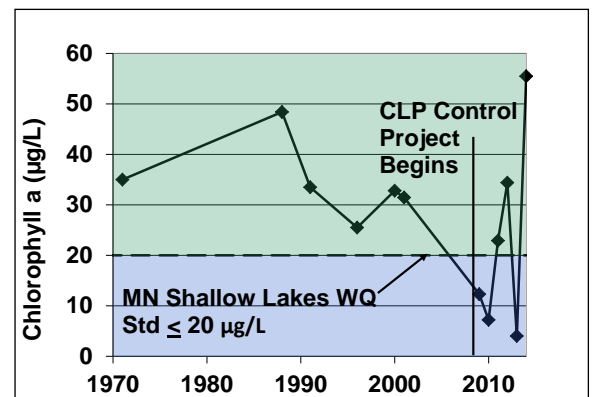
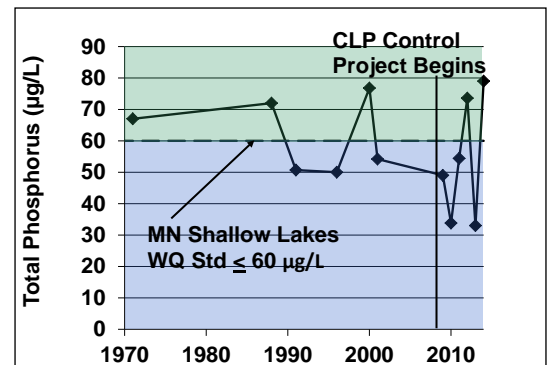
**Northwest Anderson Lake
Average Summer Total
Phosphorus (top), Chlorophyll *a*
(middle), and Secchi Disc
(bottom) values during 1972-2014**

The improved water quality is due to (1) reduced phosphorus loading because of reduced presence of curly-leaf pondweed and (2) increased phosphorus absorption by *Chara*, which increased in abundance after the drawdown and continues to be the dominant plant in the lake.

Southeast Anderson Lake

Southeast Anderson Lake has a surface area of 81 acres and a maximum depth of 9 feet. Herbicide treatment of curly-leaf pondweed (CLP) occurred in Southeast Anderson Lake during 2009 through 2014 to improve water quality and allow native species to compete and improve the health of the plant community. The 2014 data were assessed to determine results of the management effort.

In 2014, the lake's water quality was poor. The lake's average summer total phosphorus and chlorophyll *a* concentrations were 79 and 56 µg/L, respectively. The lake's average summer Secchi disc transparency was 0.9 meters. The three parameters did not meet the Minnesota State Water Quality Standards for shallow lakes in the North Central Hardwood Forest Ecoregion published in Minnesota Rules 7050 (Minn. R. Ch. 7050.0222 Subp 4).



Southeast Anderson Lake Average Summer Total Phosphorus (top), Chlorophyll *a* (middle), and Secchi Disc (bottom) Values during 1971-2014

The District water quality improvement project has reduced curly-leaf pondweed (CLP) from a frequency of 53 percent in June of 2008 to 0 percent (not observed) in 2014. CLP control has resulted in improved water quality during normal climatic conditions. However, internal phosphorus loading from sediment during dry climatic conditions and excessive watershed phosphorus loading under wet climatic conditions have resulted in poor water quality, despite phosphorus reductions from CLP control. A comparison of pre-treatment water quality (1971-2001) with post-treatment water quality (2009-2014) indicates reduced phosphorus loading from CLP improved lake water quality during 2009, 2010, 2011, and 2013 such that the lake met State water quality standards for shallow lakes. Poor water quality was observed during 2012, a dry climatic year, due to the lake's high internal phosphorus load from sediment, reduced dilution of the load due to low water levels, and increased residence time. Poor water quality was observed in 2014 due to excessive phosphorus loading from the lake's watershed during extremely wet climatic conditions. The lake's water level increased by 4.82 feet between May 30 and June 27 due to excessive precipitation. The increased nutrient loading from excessive precipitation caused the lake's phosphorus and chlorophyll concentrations to nearly quadruple and the lake's Secchi disc transparency to decrease by nearly two thirds between mid-June and mid-July. The water quality degradation from excessive watershed phosphorus loading resulted in poor water quality for the rest of the 2014 growing season.

Control of CLP in Southeast Anderson Lake has not only improved water quality under normal climatic conditions, but has also improved the native plant community. The number of native plant species increased from 11 in June of 2008 to 21 in July of 2014. The frequency of native plants increased from 82 percent in June of 2008 to 89 percent in July of 2014.

The Engineer's Report for Southeast Anderson Lake recommended an alum treatment after control of curly-leaf pondweed had been attained. From modeling completed for the Southeast Anderson Lake UAA, it is estimated that an alum treatment would reduce the internal phosphorus load from sediments such that the total annual phosphorus loading to the lake would be reduced by up to 17 percent. This reduction in internal phosphorus load from sediments would result in significant long-term declines in summer average total phosphorus values in Southeast Anderson Lake and improved water quality. Water quality data from 2012, a dry climatic year, indicates that control of phosphorus loading from sediments is necessary to attain the Minnesota State Water Quality Standards for shallow lakes under dry climatic conditions. Now that control of curly-leaf pondweed has been attained, an alum treatment is recommended for Southeast Anderson Lake.

Nine Mile Creek

Because the primary use of Nine Mile Creek is ecological – a place for fish and aquatic life to live – the focus of the Nine Mile Creek monitoring program is evaluation of the stream's fish and aquatic life community as well as the ecosystem components essential for the survival of fish and aquatic life. The 2014 Nine Mile Creek monitoring program included:

- Annual monitoring of the fish community during summer
- Annual macroinvertebrate monitoring during October
- Annual habitat monitoring during summer (i.e., stream substrate type, depth of fine sediment, percent embeddedness, and length of eroded streambank)

- March through October monthly measurements of specific conductance, dissolved oxygen, pH, temperature, turbidity, and flow.

Monitoring locations are shown in Figure 1.

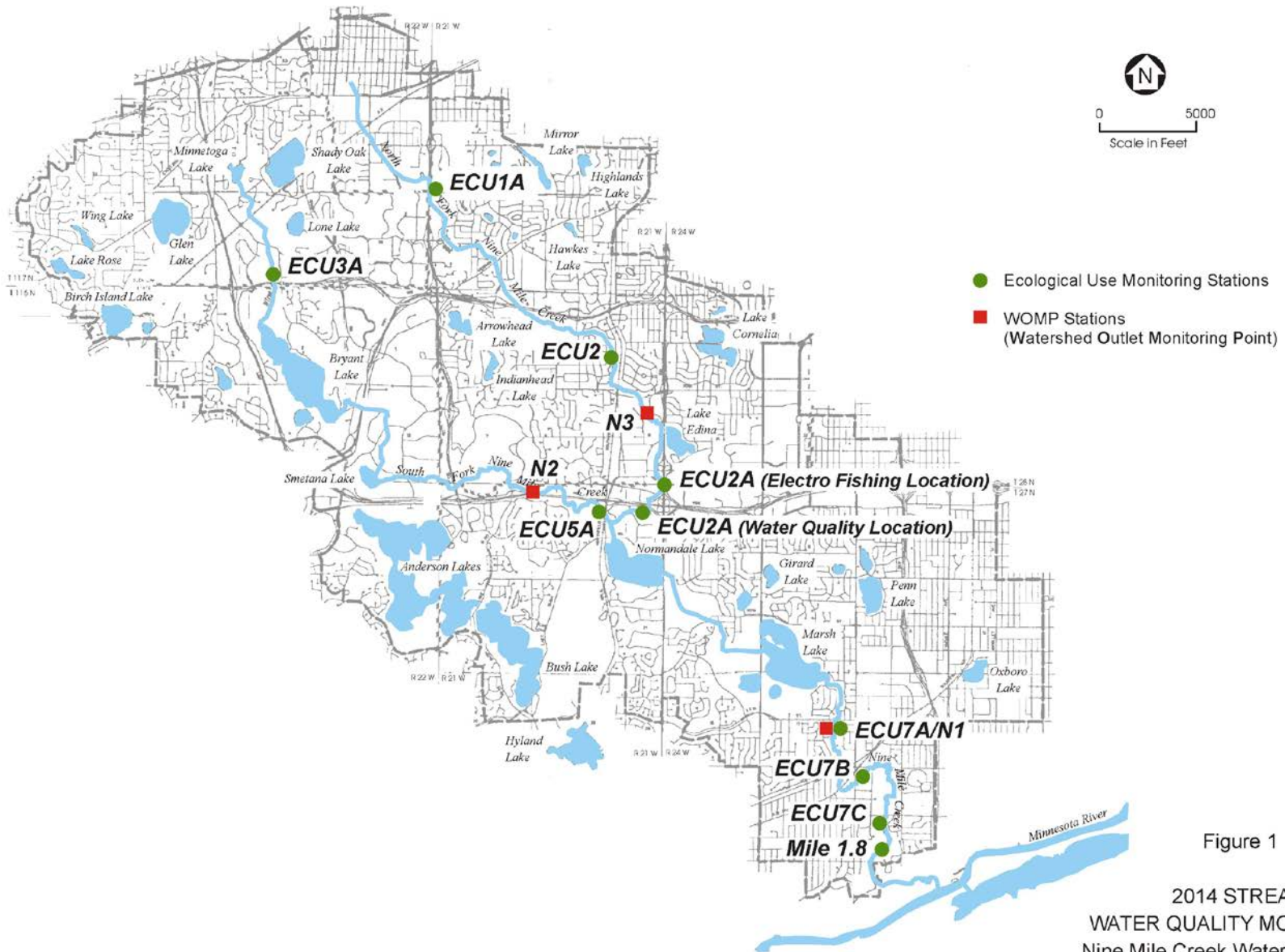


Figure 1

2014 STREAM
WATER QUALITY MONITORING
Nine Mile Creek Watershed District

Data collected during 2014 were evaluated to determine whether:

- Specific conductance, dissolved oxygen, pH, temperature, and turbidity levels met Minnesota Pollution Control Agency (MPCA) standards and were consistent with historical values,
- 2014 fish and aquatic life communities were consistent with the stream's ecological use determined from assessments completed in 1997 and 2003,
- The 2014 fish community met the MPCA Fish IBI standard for Nine Mile Creek,
- 2014 macroinvertebrate communities, assessed by biological indices, were consistent with historical data.

Evaluation results follow.

2014 Nine Mile Creek specific conductance, dissolved oxygen, pH, temperature, and turbidity levels generally met MPCA criteria. Overall, 89 percent of 2014 values were within MPCA criteria. The South Fork met MPCA criteria most frequently (95 percent) followed by the Main Stem (91 percent) and North Fork (84 percent).

In 2014, the specific conductance criterion was met less frequently than other MPCA criteria. All temperature and pH measurements, 99 percent of turbidity measurements, 93 percent of dissolved oxygen measurements, and 66 percent of specific conductance measurements met MPCA criteria. As in previous years, the North Fork locations met the MPCA standard for specific conductance less



The North Fork of Nine Mile Creek, pictured above, met the MPCA standard for specific conductance less frequently than the South Fork and Main Stem in 2014.

frequently than other locations. Thirty eight percent of North Fork measurements met the MPCA specific conductance standard in 2014 compared with 79 percent of Main Stem and 92 percent of South Fork measurements. North Fork locations also met the turbidity standard less frequently than other locations. All Main Stem and South Fork turbidity measurements met the MPCA standard compared with 97 percent of North Fork measurements. The Main Stem and South Fork met the dissolved oxygen standard less frequently than the North Fork. In 2014, all North Fork dissolved oxygen measurements met the MPCA standard compared with 88 percent of Main Stem and South Fork measurements.

Water quality data collected from Nine Mile Creek in 2014 indicate the stream's water quality generally remained stable and most values (99 percent) were within the range of historical values.

The 2014 fish data indicate Nine Mile Creek is currently supporting the ecological use determined from assessments completed during 1997 and 2003. Ecological use is a term used to describe the fish community that the stream has the capacity to support per the stream's flow, water quality, and habitat characteristics. The data further indicate the current fish community is generally similar to or better than the stream's average long-term fish community. An exception occurred at ECU-7A/N1, located downstream from Marsh Lake, where the current fish community is poorer than the stream's long term fish community. The fish community at ECU-



An improved fish community was observed in the lower Main Stem, pictured above, during 2011 through 2014.

7A/N1 fluctuates widely from year to year. The 2014 fish community at this location was similar to the fish community observed during 7 of the last 10 years (tolerant forage fish), which is also the stream's expected fish community per the stream's flow, water quality, and habitat characteristics. However, over the past 40 years, the average fish community at this location has been better than expected (intolerant forage fish), and hence, better than the 2014 fish community. The data indicate the stream has generally remained stable and confirm that the ecological use designations for Nine Mile Creek are appropriate.

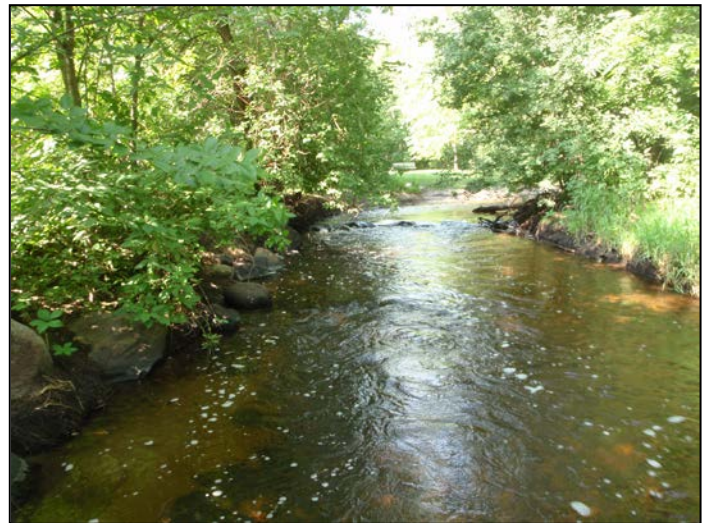
A positive change detected by the 2011 through 2014 fish data is improvement in the quality of the lower Main Stem fish community. Historically, this reach has generally observed either a tolerant or intolerant forage fish community. A warmwater sport fish community was observed at this location during 2011 through 2014. The 2014 community included a large number of sunfish and largemouth bass, a couple of northern pike, and a walleye.

Fish collected from Nine Mile Creek in 2014 were assessed to determine whether the stream met the MPCA biological standard for fish. In Minnesota, biological impairment for fish in streams located within the Minnesota River Basin, including Nine Mile Creek, is defined as failing to meet the Minnesota River Assessment Project (MRAP) Index of Biotic Integrity (IBI) impairment threshold score of 30 or greater out of a possible score of 60. Only streams with a watershed area of at least 5 square miles are obligated to meet the IBI impairment threshold.

In 2014 four of the six Nine Mile Creek monitoring locations with a watershed area of at least five square miles met the MPCA biological standard for fish (Figure 2). Locations not meeting the MPCA biological standard for fish in 2014 include downstream South Fork location ECU-5A

and the middle Main Stem location ECU-7B, the same locations that failed to meet the standard in 2013. Both locations observed a higher rate of flow at the time of 2013 and 2014 fish sampling than had been observed when fish samples were collected in previous years. All Nine Mile Creek locations met the MPCA biological standard for fish during 2006 and 2012, but some locations failed to meet the standard during the other monitoring years (Figure 2). During the 12 years of monitoring:

- The most downstream Main Stem location, ECU-7C always met the standard,
- Main Stem locations, ECU-7B and ECU-7A, and the most downstream North Fork location, ECU-2A, met the standard 58 percent of the time,
- North Fork location ECU-2 met the standard 50 percent of the time,
- The most downstream South Fork location, ECU-5A, met the standard 33 percent of the time (Figure 2).



Downstream South Fork location, ECU-5A, pictured above left, and middle Main Stem Location, ECU-7B, pictured above right, failed to meet the Fish IBI standard in both 2013 and 2014.

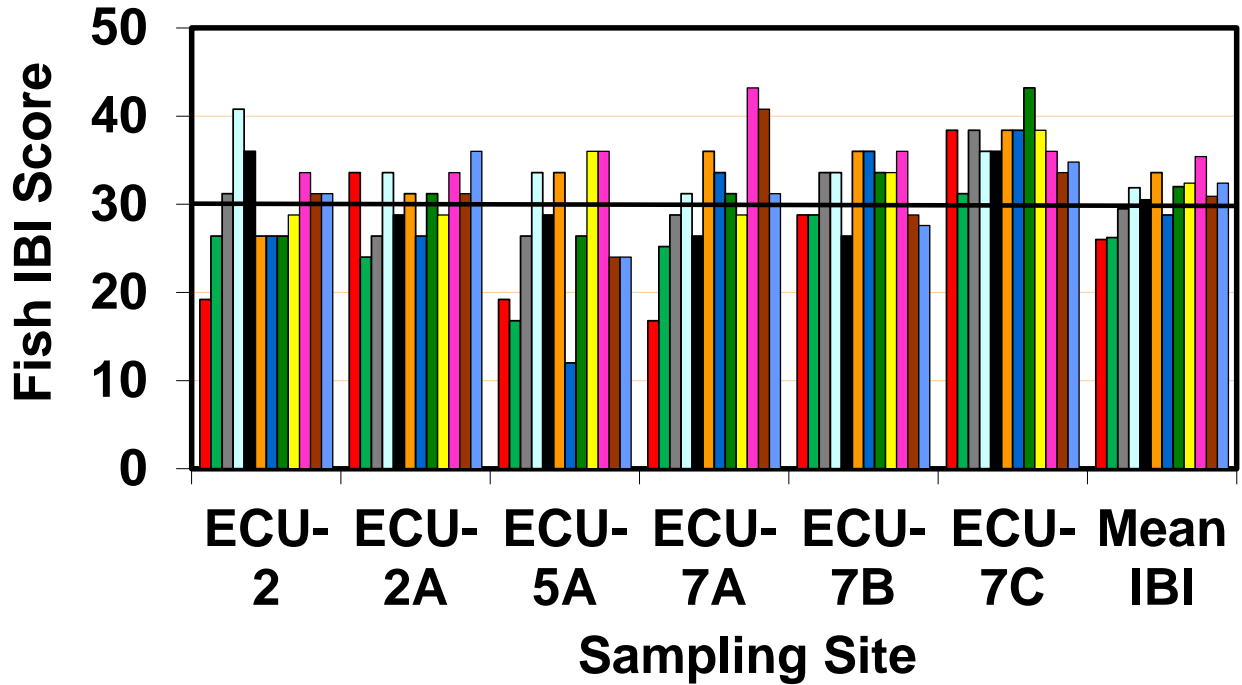
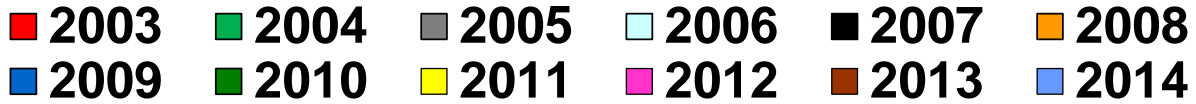


Figure 2 2003-2014 Nine Mile Creek Fish IBI Scores

With the exception of North Fork locations ECU-2 and ECU-2A, 2014 HBI and Invertebrate Community Index (ICI) values were similar to past values, indicating stream water quality, including oxygen levels, have generally remained stable. A rapid decline in caddisflies at ECU-2 and ECU-2A in 2013 (Figure 3) caused these North Fork invertebrate communities to worsen, resulting in the poorest biological index (i.e., Hilsenhoff Biotic Index and Invertebrate Community Index) values since monitoring began. In 2014, caddisflies remained absent from the downstream North Fork location, ECU-2A, and low numbers continued at the upstream North Fork location, ECU-2 (Figure 3). 2014 biological index values at these locations were relatively similar to 2013 values – lowest values since monitoring began. While the cause of the 2013

decline in caddisflies is unknown, candidate causes include higher chloride levels indicated by higher average specific conductance values in 2013, low flow conditions in late summer, sedimentation from streambank erosion at ECU-2 and from construction activity adjacent to ECU-2A, or predation by the fish community. Sedimentation is the most likely cause of the 2013 reduction in caddisflies since they are particularly sensitive to sedimentation impacts.

Caddisflies at ECU-2 and ECU-2A, 1975-2014

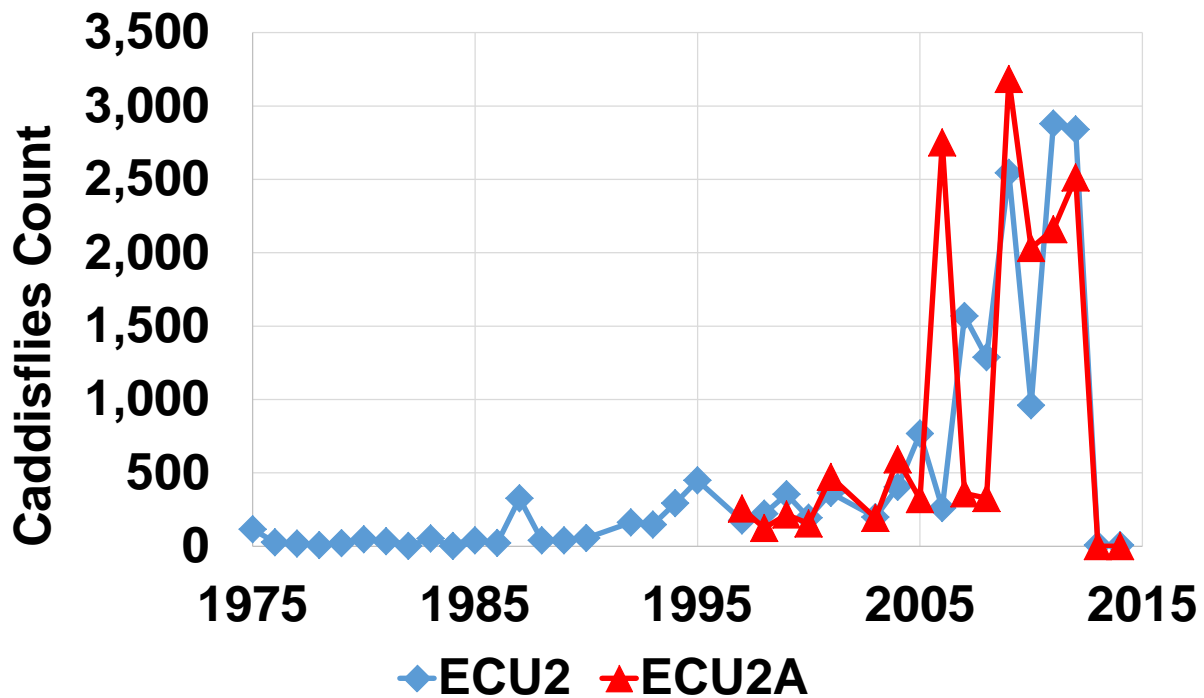


Figure 3 Number of Caddisflies at North Fork Locations ECU-2 and ECU-2A During 1975-2014

The continuation of reduced numbers of caddisflies at both North Fork locations in 2014 was likely due to continued sedimentation impacts. 2014 was a very wet year, particularly June which was the rainiest June on record statewide. The increased runoff from rainfall and associated higher water levels in the stream resulted in increased streambank erosion at both

North Fork locations in 2014. Measurements documented the length of bare soil within 5 meters of the water's edge along the 150 meter sampling transect for each station during 2013 and 2014. The total length of streambank erosion along the ECU-2 left bank increased from 6.5 meters (21 feet) in 2013 to 8.7 meters (28 feet) in 2014. The total length of bank erosion along the ECU-2 right bank increased from 4.3 meters (14 feet) in 2013 to 10.7 meters (32 feet) in 2014. The total length of streambank erosion along the ECU-2A left bank increased from 4.9 meters (16 feet) in 2013 to 6.8 meters (22 feet) in 2014. The total length of streambank erosion along the ECU-2A right bank increased slightly from 6.6 meters (21 feet) in 2013 to 6.8 meters (22 feet) in 2014. The data indicate both locations observed increased sedimentation from increased streambank erosion in 2014. To reduce streambank erosion and associated sedimentation impacts on the biota, especially the caddisflies, it is recommended that the District evaluate the feasibility of management measures to stabilize the streambank and reduce bank erosion at North Fork locations ECU-2 and ECU-2A.

The data indicate that despite urbanization impacts, water quality data collected from Nine Mile Creek during 1968 through 2014 have generally remained relatively stable over time, although fluctuations have been observed such as the improved fish community at the lower Main Stem during 2011 through 2014 and the reduced number of caddisflies at North Fork locations in 2013 and 2014. Monitoring will continue at the annual monitoring stations to maintain this long-term record of water quality and biota in Nine Mile Creek and to assess the biological community to determine changes in stream habitat or water quality that warrant further investigation or management measures.

Status of Local Plan Adoption and Implementation

The District monitors the plans of watershed districts and water management organizations that affect the District's cities and that have been approved by the Board of Soil and Water Resources. The District also reviews and approves the Comprehensive Surface Water Management Plans of each of the cities in the District. Currently, the cities of Bloomington, Eden Prairie, Edina, Minnetonka, and Richfield have approved local water plans.

Biennial Solicitation of Interest Proposals

Under M.S.A. 103B.227, subd. 5, the District must issue a biennial solicitation for legal, technical, and other professional services. The District issued a formal solicitation for accounting, engineering, and legal services in September 2013. The District selected Cavanaugh and Associates as its accountant, Barr Engineering as its engineer and Smith Partners, PLLP as its legal counsel in October 2013. The District selected HLB Tautges Redpath to conduct the District's annual financial audit. New proposals for engineering, legal, and other professional services will be solicited in September 2015.

Fund Balances for Specific Program Elements.

The District's fund balances and financial status are included in the District's annual audit. The annual audit is included as an appendix to this report.

Status of any Locally Adopted Wetland Banking Program

Because of the inherent limitations of a fully urbanized watershed, the District has not developed a wetland-banking program. Instead, it uses the state wetland bank administered by the Minnesota Board of Water and Soil Resources.

Annual Written Communication to the Public

As required by Minn. R. 8410.0100, subp.4, the District prepared and disseminated its annual communication to the public that identified the Board members, the current CAC members, contact and public meeting information, and information concerning its role in watershed planning. In 2014, the District produced the 2015 Nine Mile Creek Calendar & 2014 Annual Communication. Copies of the Calendar/ Annual Communications are included in the Appendix.

Annual Audited Financial Report and Audit Report

The District's audited annual financial report was prepared by HLB Tautges Redpath, Ltd., a certified public accounting firm. As required by Minn. R. 8410.0150, subp. 2, the Audited Financial Report includes classification and reporting of revenues and expenditures, a balance sheet, an analysis of changes in final balances, and all additional statements necessary for full financial disclosure. The 2014 Audited Financial Report may be found in the appendix to this Annual Report.

2015 Annual Budget

The District adopted its 2015 Annual Budget in September 2014. The 2015 Budget may be found in the appendix to this Annual Report.

Performance Review and Assistance Program Report

In 2014, the Board of Water and Soil Resources conducted a Performance Review and Assistance Program evaluation of the District. The PRAP Report may be found in the appendix.

Appendix

- 1. 2014 Annual Financial Audit**
- 2. 2015 Approved Annual Budget**
- 3. Copy of 2014 Annual Communication & 2015 Calendar**
- 4. Performance Review and Assistance Program Report**