



**Nine Mile Creek Watershed District
2010 Annual Report**

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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.

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Introduction

Established in 1959, the Nine Mile Creek Watershed District was the state's first urban watershed district. In 2009, the Nine Mile Creek Watershed District celebrated its 50th Anniversary. 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 2010 permitting and enforcement, and its 2011 goals and objectives. The Managers invite comments and suggestions concerning this report. Copies are available by contacting Kevin Bigalke, District Administrator, Nine Mile Creek Watershed District, 7710 Computer Avenue, Suite 135, Edina, MN 55435, (952) 835-2078.

Highlights and Accomplishments of 2010

2010 was a very busy and successful year for the Nine Mile Creek Watershed District. The District hosted the 2010 MAWD Summer Tour. During the tour, the District hosts watershed district staff and managers from across the state, highlighting the District's activities and accomplishments. A key component of the tour profiled the District's partnership efforts with its Cities. The District also hosted its annual fall tour for the residents of the Nine Mile Creek Watershed. The annual fall tour also highlighted the District's partnership efforts and projects implemented through the District's Cost-Share Grant Program.

In November 2010, the District was awarded the Watershed District Program of the Year by the Minnesota Association of Watershed Districts (MAWD). The award recognized the District's Rain Barrel Art Program. The District hosts the Rain Barrel Art Program annually. Through the program, the District sells rain barrels at a reduced rate and holds a workshop on how to use the rain barrels. The program provides paint to residents so that they can decorate their rain barrels.

The District also worked to secure a property donation to the District. The 5.3 acre property and house will become the District's office and the Nine Mile Creek Water Resource Center. The property is located in the City of Eden Prairie.

2010 highlights include:

- Awarded MAWD Program of the Year for the Rain Barrel Art Event
- Hosted the MAWD Summer Tour
- Continued the volunteer Citizen-assisted Lake Monitoring Program (CAMP), working with the Metropolitan Council

- Continued with the implementation of the Eden Prairie Lakes Water Quality Improvement Project
- Started Implementation of the Hopkins Streambank Stabilization and Habitat Restoration Project
- Continued cost-share grant program
- Worked to secure a property donation to be used as the Nine Mile Creek Water Resource Center

Assessment of the 2010 Work Plan

In its 2009 Report, the District identified several broad goals and objectives for 2010, including:

1. Implementation of Rule & Permitting Program
2. Continued Implementation of the Eden Prairie Lakes Water Quality Improvement Project
3. Implementation of the Hopkins Streambank & Habitat Restoration Project
4. Southeast Anderson Lake Water Quality Improvement Project
5. Normandale Lake Water Quality Improvement Project
6. UAA/Lake/Creek Studies
7. Citizen Assisted lake Monitoring Program (CAMP)
8. Continued support of Repair and Maintenance proposals
9. District Website Maintenance
10. Education and Outreach Program Activities
11. Continued support of the Citizen Advisory Committee (CAC)

12. Continue working with the Technical Advisory Committee (TAC)
13. MAWD Summer Tour
14. 2010 Photo Contest & 2011 Calendar Production
15. Cost-Share Grant Program

In 2010, the District completed or made substantial progress toward all of these goals and objectives, as described below.

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 new rules. In 2010, the NMCWD continued to review projects and permit applications under the rules adopted in 2008. The NMCWD reviewed and approved 61 permit applications in 2010.

2. Continued Implementation of the Eden Prairie Lakes Water Quality Improvement Project

The City of Eden Prairie petitioned the District for the Eden Prairie Lakes Water Quality Improvement Project. The purpose of the project is to address Curlyleaf 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. The Nine Mile Creek Watershed District Board of Managers ordered the project to commence in September 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 tile system designed to restore the lake level in Birch Island Lake was completed in February 2008. The restoration of the water level of Birch Island Lake was slowed due to drought conditions throughout the summer of 2009. The water levels will continue to rebound with snowmelt runoff and precipitation.

In the fall of 2008 an alum treatment was completed on Bryant Lake. Water clarity of Bryant Lake improved from 1 meter to over 6 meters in the weeks following the alum treatment. In 2010, water quality and water clarity monitoring continued to track the success of the alum treatment. Water clarity continued to show improvement compared to pre-treatment conditions.

The drawdown on Northwest Anderson Lake and Southwest Anderson Lake was started in August 2008. The drawdown was completed in November 2008. The restoration of the water levels in the lakes post-drawdown was significantly slowed due to drought conditions throughout the summer of 2009. Following a wet fall of 2009, Northwest Anderson Lake and Southwest Anderson Lake were about half full. The District and Three Rivers Park District monitored the vegetation in lakes to the extent possible in 2009 and 2010. Vegetation monitoring was done to determine the presence or absence of curly leaf pondweed. Monitoring activities in 2010 showed a dramatic reduction of Curly Leaf Pondweed in Northwest and Southwest Anderson Lakes. Water quality improved in Northwest Anderson Lake, while water quality monitoring showed a decrease in water quality in Southwest Anderson Lake. The decline of water quality in Southwest Anderson Lake is attributed to the shallow nature of the lake, the rich organic nature of the lake substrate and the lack of aquatic vegetation. It is anticipated that water quality will improve as aquatic vegetation re-establishes and water level continue to return to pre-drawdown levels. It was determined through vegetation monitoring that the areas of both lakes that were

not completely drained still had curly leaf pondweed, although at reduced abundance and density. These areas were chemically treated with Endothal-K in May 2010.

3. *Implementation of the Hopkins Streambank and Habitat Restoration Project*

In May 2006, the City of Hopkins petitioned the District for a streambank and habitat restoration project for Nine Mile Creek. The District accepted the petition and authorized the feasibility study for the project. The District is sharing the design responsibilities with the City of Hopkins. The District has entered into a cooperative agreement with the City of Hopkins defining the roles and responsibilities of each party. The District and City of Hopkins worked throughout 2007 and 2008 on the designs and feasibility of the project. In December 2008, the District Board of Managers ordered the Hopkins Streambank and Habitat Restoration Project to proceed.

In November 2009, the Hopkins Streambank and Habitat Restoration Project began. The replacement of the 5th Street Culvert was completed in 2010.

In addition to the 5th Street Culvert replacement, only one segment of Nine Mile Creek streambanks was able to be restored. This segment was from 11th Avenue to 7th Street. The rest of the streambank restoration work has been delayed due to the discovery of contaminated soils in the streambanks. The District and the City of Hopkins are evaluating possible next steps which include a full Phase II Environment Assessment and remediation. It is anticipated that the project will be able to proceed in 2011. The District and the City of Hopkins received a \$60,000 grant from the Hennepin County Environmental Remediation Fund to assist with the Phase II Environmental Assessment.

The District also received grants from Hennepin County and the Board of Water and Soil Resources to assist with the implementation of the stream and habitat restoration components of the project. The two grants totaled \$261,000.

4. *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. The first treatment was completed in May 2009. The project continued in 2010 with a second treat of Endothal-K. Water quality and vegetation monitoring continued in 2010. Monitoring activities showed reduced abundance and density of Curly Leaf Pondweed, increased diversity of native aquatic plants and improved water quality. A third treatment will occur in the spring of 2011.

5. *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. The District will continue to work on the engineers report for the Normandale Lake project in 2011.

6. Edina Creek Restoration Project and Nine Mile Creek Regional Trail

The District worked with the City of Edina and the Three Rivers Park District throughout 2010 on the Edina Creek Restoration Project and the Nine Mile Creek Regional Trail. District staff provided technical assistance regarding the District's rules regarding the construction of the Nine Mile Creek Regional Trail.

7. Use Attainability Analyses & Lake and Creek studies

In 2010, the District entered the seventh year of its Watershed Outlet Monitoring Program. In conjunction with this monitoring, the District continued to work with the MPCA to determine the appropriate standards for assessing and classifying the creek's impairment, and to identify best practices for improving the water quality in the creek and achieving "unimpaired" status. 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. 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 will begin Implementation Plan development in 2011.

The District partnered with the Metropolitan Council to establish continuous turbidity monitoring at the Metropolitan Council WOMP station. Continuous turbidity monitoring began at this station in 2008 and continued in 2010. The additional data collected resulted in the delisting of the Nine Mile Creek turbidity impairment by the MPCA.

The District completed the Wing, Rose, Holiday Lakes Use Attainability Analysis in 2010.

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

In 2010, the District continued to partner with the Metropolitan Council to support Citizen-assisted Lake Monitoring efforts on 5 lakes in the District. The lakes included in the citizen monitoring program were: Minnetoga Lake & Wing Lake in Minnetonka, and Normandale Lake, Lower Penn Lake & Bush Lake in Bloomington.

9. *Continued Support of Repair and Maintenance Project Proposals*

The District continues to make repair and maintenance funding available to municipalities on a 50/50 cost-sharing basis, allocated according to the number of square mile of each city within the District. In 2010, the District did not receive any new requests for Repair and Maintenance fund from the municipalities. The District will be evaluating its policy on how to use the Repair and Maintenance funds in 2011.

10. District Website Maintenance

In 2010, the District continued to maintain and improve its website. The District continued to use its website for meeting and special event notices and announcements. The District also made modifications to make the website more user-friendly. The District added pages that included lake water quality report, Use Attainability Analysis reports, and other resource information.

11. Education and Outreach Program Activities

Rain Barrel Art Event

The District hosted its second Rain Barrel Art Event in 2010 in the City of Hopkins. The event resulted in over 50 rain barrels being sold and decorated. The District is working with other cities in the District to expand the program in 2011. The Rain Barrel Art Program was awarded the MAWD Watershed Program of the Year in 2010.

Summer Education Series

The District hosted its fourth year of the Summer Education Series (SES). The SES is designed to provide District residents with hands-on learning opportunities about the resources of the District and learn about ways to protect and enhance the District's water and natural resources. In 2010, the SES included seminars on digital nature photography and Buckthorn: re-think, re-use, re-new.

CAC Education Seminars

In 2010, the District modified its Citizen Advisory Committee meetings to have business meetings on a quarterly basis with education seminars during the other 8 months of the year.

The education seminars hosted in 2010 included winter maintenance, cost-share/grant expo, and a raingarden workshop.

NEMO Program Participation

The District continued to be a charter member of Northland NEMO in 2010. The District partnered with Northland NEMO, the Minnehaha Creek Watershed District, and the City of Edina to host 2 NEMO workshops. The first workshop was held at the Science Museum of Minnesota. The District also partnered with Northland NEMO, Minnehaha Creek Watershed District and the City of Minnetonka on a NEMO presentation to the City of Minnetonka Planning Commission. Nine Mile Creek Watershed District also provided a NEMO presentation to the City of Bloomington Parks and Recreation Commission. Follow up NEMO workshops are planned for 2011.

Earth Day Clean Up/Adopt-A-Highway

The District hosted its annual Earth Day Clean Up Event at its Adopt-A-Highway section along Highway 62. Twenty-five (25) participated in the clean up event resulting in over 75 bags of garbage being filled.

Trainings/Workshops

The District hosted 2 Winter Road Maintenance workshops targeted at public road authorities in 2010. The Winter Road Maintenance workshops address approaches that will result in reduced chloride loading to Nine Mile Creek.

The District also hosted 2 Winter Parking Lot and Sidewalk Maintenance workshops in 2010. The workshops targeted commercial snow removal businesses, school districts, and park maintenance staff.

In June 2010, the District hosted a Project Wet Workshop with Mississippi Watershed Management Organization targeting teachers in both district. The Project Wet Workshop is aimed to provide teachers with “water” resource curriculum that they can easily use in their classroom.

Blue Thumb Program Participation

In 2010, the Nine Mile Creek Watershed District continued to be 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 Fairs

In 2010, Nine Mile Creek Watershed District staff and managers attended and participated in Environmental Fairs hosted by the Cities of Bloomington, Minnetonka, Richfield, and Eden Prairie, and Donaldson Company. The District had its display at the fairs and distributed information about the District, our water quality monitoring efforts, the new District rules, 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 2010, District staff gave presentations to interested groups and organizations. Presentations topics included the District’s efforts to improve and protect the water resources of the Nine Mile Creek Watershed, alternative landscaping options to protect water quality, information on Wing Lake, the Eden Prairie Lake

Water Quality Improvement Project and information on the District's stormdrain marking program. Presentations were given to a neighborhood groups concerned about the Eden Prairie Lakes Project in Eden Prairie and to students at Bloomington and Edina schools.

12. Continued Support of the Citizen Advisory Committee

In 2010, the District worked with its Citizen Advisory Committee (CAC) to continue implementing the CAC Workplan developed in January 2007. The CAC participated in MnDOT's Adopt-A-Highway program. The CAC hosted two (2) highway clean up events in 2010, the Earth Day Clean Up Event and a Fall Clean Up Event.

Staff also worked with the CAC to organize and host the 4th Annual Summer Education Series. See the section on the Summer Education Series for details.

District staff worked with the CAC to reorganize the meeting structure in 2010. The CAC has formal business meetings on a quarterly basis with education workshops and seminars during the other months of the year.

13. Continue Working with the Technical Advisory Committee

The District continued to work with the Technical Advisory Committee (TAC) throughout 2010 on the development of the chloride and fish IBI TMDLs. The TAC met three times in 2010 to review, comment, and provide guidance on the TMDL reports.

14. MAWD Summer Tour

In June 2010, the District hosted the 3-day MAWD Summer Tour. The tour brought watershed district staff and manager from throughout the State to the Nine Mile Creek Watershed District. The tour highlighted the District activities, programs, and projects. A key component of the tour was highlighting the District's partnership efforts with its cities.

15. 2010 Photo Contest & 2011 Calendar Production

In 2010, the District hosted a photo contest to collect photos for the production of the Nine Mile Creek Watershed District 2011 Calendar. The District received hundreds of photographs of the natural resources of the District from citizen photographers throughout the watershed. With the photographs submitted through the 2010 photo contest, the District produced the 2011 Nine Mile Creek Watershed District Calendar and Annual Communication. In addition, the District took past photo contest winners' images and developed a traveling photo exhibition. The first exhibition was at REI in Bloomington in December 2010.

16. 2010 Cost-Share Grant Program

In 2010, the District solicited applications and awarded 20 cost-share grant projects totaling \$144,879. The cost-share grant program has been highly successful, seeing grant applications increase each for the three years of the program. The District firmly believes that the Cost-Share Grant Program provides education and awareness of the District's goals and is an effective way to get projects on the ground.

Projected 2011 Work Plan

Continue Implementation of Watershed District Regulatory Program and Rules

The District will continue implementing its rules and regulatory program during 2011. The District will be evaluating the rules and determining where modifications need to be made. If it is determined that changes are necessary, the District will proceed with a rule amendment process.

Implementation Plan Review

The District will be conducting a review of the activities implemented to date and the future project and activities identified in the Implementation Plan of the District's 2007 Water Management Plan. The District will be evaluating the effectiveness and success of the project completed. The District will also determine if the future projects and activities identified in the District's plan are still relevant and still a priority.

Nine Mile Creek Water Resource Center Planning

In 2009, the District was contacted by an individual interested in donating their 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 will close on the property. The District will begin a visioning and planning process for the future use of the property as the Nine Mile Creek Water Resource Center.

Continue UAA /Lake /Creek Studies

In 2011, 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 Northwest Anderson Lake, Southwest Anderson Lake, Southeast Anderson Lake, Arrowhead Lake, and Indianhead Lake.

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

BMP Cost-Share Grant Program

The District will solicit applications for the third year of its BMP Cost-Share Grant Program in 2011. The District will also conduct an analysis of the past three years of projects to determine the success and effectiveness of the program.

Citizen Assisted Lake Monitoring Program (CAMP)

In 2011, 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, Bush Lake and Normandale Lake in Bloomington, and Lake Minnetoga and Wing Lake in Minnetonka.

Continued Support of CAC

The Nine Mile Creek Watershed District has had an active Citizen Advisory Committee (CAC). The District worked with the CAC in 2007 to develop a CAC work plan that will guide

its activities in 2011. The CAC will assist with numerous education and outreach events including the Adopt-A-Highway clean ups, the Summer Education Series, and CAC seminars and workshops.

Technical Advisory Committee

The District will continue working with the Technical Advisory Committee to begin the development of the chloride TMDL implementation plan. The District will also work with the TAC as we complete the review of the District's rules and implementation plan.

Education and Outreach Activities

In 2011, the District will be hosting its fifth Earth Day Clean Up Event. The District will again collaborate with its CAC to host the Summer Education Series. The District will also host two rain barrel art events – one in Hopkins and one in partnership with REI.

The District will participate in local community and environmental fairs. In 2011, the District will participate in the Eden Prairie Home and Garden Show and the City of Minnetonka's Native Plant Market, and CIGNA environmental fair.

The District will also seek opportunities to partner with local schools to implement storm drain marking projects and give presentations of the water resources and water quality of the Nine Mile Creek Watershed District.

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 is working with

the cities in the District to implement an education program on winter maintenance for the general public.

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 2011, the District will continue to utilize its website for public information, education and outreach. The District plans to continue to add its water quality data and fact sheets on the water resources of the District to the website. The District will also post project reports and updates.

Blue Thumb

In December 2008, the District became a Blue Thumb program partner. In 2011, the District will work with the Blue Thumb program to provide education and outreach programs to the citizens of the Nine Mile Creek Watershed District. Many of the programs described above are being used as Blue Thumb education programs.

NEMO (Non-Point source Education for Municipal Officials)

The Nine Mile Creek Watershed District is a charter sponsor for the NEMO program. In 2011, the District will continue to identify and host workshops for city officials and staff. Workshops will focus on how to address water quality and water quantity challenges during redevelopment.

Capital Project Implementation

Complete Implementation of the Eden Prairie Lakes Water Quality Improvement Project

Substantial progress on the Eden Prairie Lakes Water Quality Improvement Project was made in 2008, 2009, and 2010. In 2011, the District will complete a third Endothal-K treatment on Northwest and Southwest Anderson Lakes and continue collecting water quality and vegetation data as the lakes continue to refill following the drawdown. Elements of the project that remain to be completed are the restoration of the Cardinal Creek wetland area.

Implementation of the Hopkins Streambank & Habitat Restoration Project

In May 2006, the District accepted a petition by the City of Hopkins for a streambank and habitat restoration project for Nine Mile Creek. The District ordered the project to proceed and entered into a cooperative agreement with the City of Hopkins for the implementation of the project in 2008. Implementation of the project was started in 2010. In 2011, the District will work with the City of Hopkins to continue implementation of the project. The project has been split into two phases. Phase A includes the upstream portion of the project that included mainly streambank stabilization. Phase B includes the downstream portion of the project that incorporates significant bioengineering and re-meandering of Nine Mile Creek. The project is currently delayed due to contamination that was discovered in the project area. The District will continue to work with the City of Hopkins to develop remediation plans to address the contamination and construct the stream restoration project. It is anticipated that construction on Phase A and Phase B will begin in the fall/winter of 2011.

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. The District will continue to work with the City of Bloomington to determine the best approach to deal with the curly leaf pondweed and water quality issues in 2011.

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. The District will continue to implement the multi-year project in the spring of 2011 with the third year of curly leaf pondweed treatment with Endothal-K. The District will also continue water quality and aquatic vegetation monitoring Southeast Anderson Lake to determine the effectiveness of the project.

Edina Creek Restoration Project

The District will begin field survey work to determine the condition of Nine Mile Creek through Edina. This information will be used to design the creek stabilization and restoration components of this project.

Permitting Activity

Summary of Permits and Variances 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 2010, the District reviewed and granted 41 grading and land alteration permits. The District issued permits in the following cities: Bloomington – 16; Edina – 10; Eden Prairie – 4; Hopkins – 1; Minnetonka – 5; DNR Work in Waters Permits - 5. The District granted two variances in 2010.

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

In 1997, the MNDR issued a general permit allowing the District to regulate certain aspects of work in public waters, which streamlines and expedites the permitting process for applicants who undertake certain specified activities. In 2010, the District reviewed and approved five (5) Minnesota Department of Natural Resources' Work in Protected Waters 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 2010, no enforcement actions were necessary.

Summary of 2010 Water Quality Monitoring Program

The 2010 Nine Mile Creek Watershed District water quality monitoring program included monitoring Nine Mile Creek and five lakes (Bush Lake, Normandale Lake, Southeast Anderson Lake, Southwest Anderson Lake, and Northwest Anderson Lake).

Nine Mile Creek Monitoring

Water quality and biological data collected from Nine Mile Creek in 2010 indicate the stream's water quality remained stable and most values were within the range of historical values. Some water quality improvement was evidenced by record low turbidity levels on the North Fork (ECU-2A) on March 18, on the Main Stem (ECU-7A) and South Fork (ECU-3A and ECU-5A) on August 3, and on the Main Stem (ECU-7B) June 1. Other values outside of the historical range include (1) record high oxygen levels on the North Fork (ECU-2A) and the Main Stem (ECU-7C) in March, (2) record high temperature on the South Fork (ECU-3A) in August, and a record high pH value on the North Fork (ECU-2) in May. The high temperature and pH values met MPCA criteria and, hence, were not problematic.

2010 Nine Mile Creek water quality generally met MPCA criteria. Overall, 88 percent of 2010 values were within MPCA criteria. Main Stem locations met MPCA criteria most frequently (97 to 100 percent) followed by South Fork (88 percent). The North Fork locations met MPCA criteria least frequently, ranging from 84 percent at the downstream location to 75 percent at the upstream location.

The specific conductance criterion was exceeded more frequently than other MPCA criteria in 2010. North Fork locations noted the highest exceedance rate with 71 percent followed by South Fork with 38 percent. The Main Stem exceedance rate was lowest with 4 percent. Upstream North Fork location 1A, monitored for the first time in 2010, exceeded the MPCA specific conductance criterion on all 2010 sample occasions while the two downstream

locations exceeded the criterion on about half of sample occasions. Additional investigation to determine the source of the high specific conductance values at Station 1A and the impact of these high values on downstream locations is recommended.

Other MPCA criteria were generally met. Temperature and pH criteria were met 100 percent of the time. The turbidity criterion was met 98 percent of the time. The dissolved oxygen criterion was met 92 percent of the time.

Fish collected from Nine Mile Creek in 2010 were assessed to determine whether the stream met the MPCA biological standard. In Minnesota, biological impairment for fish in the Minnesota River Basin 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. North Fork location ECU-2 and South Fork location ECU-5A observed IBI scores of 26 in 2010. Because the IBI scores of 26 were less than the state standard of 30, both locations were impaired for fish in 2010 (Figure 1). All other locations had IBI scores greater than 30 and were not impaired for fish in 2010 (Figure 1).

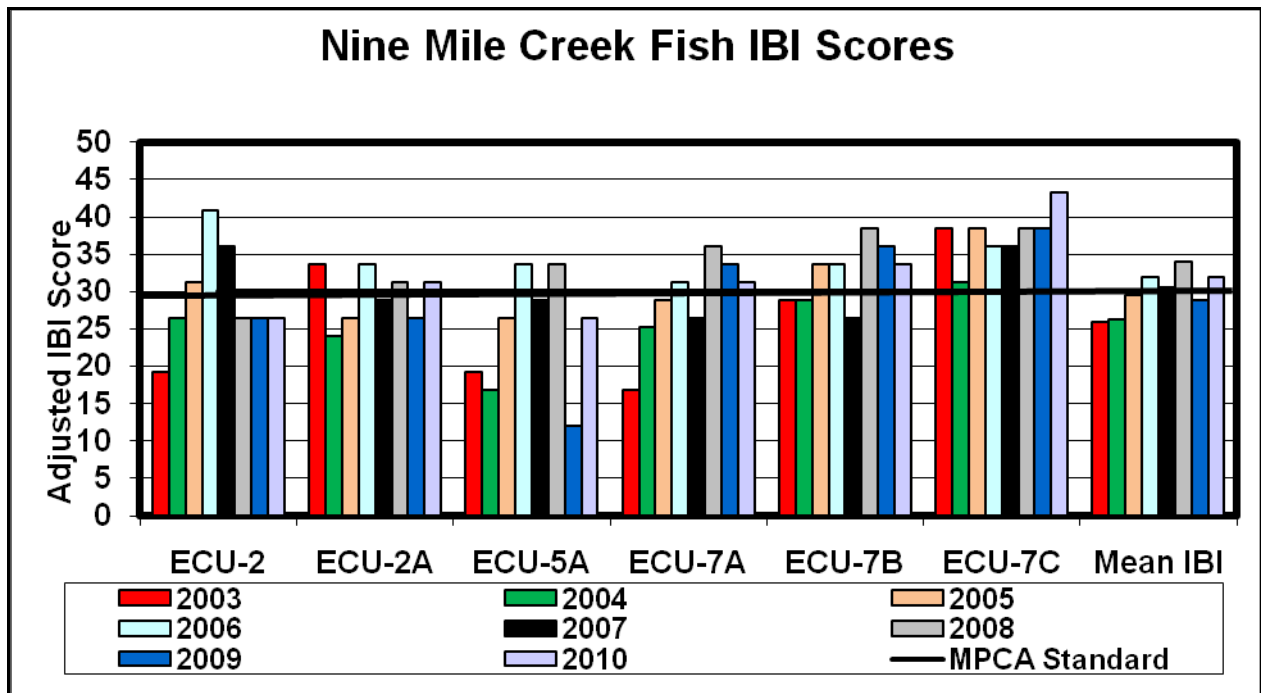


Figure 1. 2003-2010 Nine Mile Creek Fish IBI Scores

Hilsenhoff’s Biotic Index (HBI) and the Invertebrate Community Index (ICI) were used to assess invertebrates collected from Nine Mile Creek in 2010 to determine whether changes in stream oxygen levels and/or stream water quality have occurred. 2010 HBI and ICI values were generally similar to past values, indicating stream oxygen levels and water quality have remained stable.

The data indicate that despite urbanization impacts, water quality data collected from Nine Mile Creek during 1968 through 2010 have remained relatively stable over time, although fluctuations have been observed. Urbanization impacts upon the stream result in an average fish and macro-invertebrate community tolerant of adverse conditions. Monitoring will continue at the annual monitoring stations to maintain this long-term record of water quality and biota in Nine Mile Creek.

Lake Monitoring

Water quality data from Southwest Anderson Lake, Northwest Anderson Lake, and Southeast Anderson Lake were summarized in separate reports:

- 2010 Northwest Anderson Lake Aquatic Plant Management
- 2010 Southwest Anderson Lake Aquatic Plant Management
- 2010 Southeast Anderson Lake Aquatic Plant Management

Data summaries from Bush Lake and Normandale Lake follow.

Bush Lake

Historically, Bush Lake has observed good water quality and 2010 was no exception. In 2010, summer average total phosphorus, chlorophyll *a*, and Secchi disc values were within the good water quality category also called mesotrophic trophic status, technical terms which mean good water quality. Average 2010 summer water quality measurements for total phosphorus, chlorophyll *a*, and Secchi disc were 16 µg/L, 7 µg/L, and 2.8 meters, respectively. The 2010 values indicate a slight improvement in water quality had occurred since 2006 when summer average total phosphorus, chlorophyll *a*, and Secchi disc values were 20 µg/L, 10 µg/L, and 2.3 meters, respectively. 2010 values were within the range of historical values indicating Bush Lake continues to observe water quality that is both stable and good.

Normandale Lake

The water quality in Normandale was worse in 2010 than the condition observed in 2007 or 2009 and is similar to the conditions observed in 1990 and 2002. Samples were collected from 4 locations in 2010. Summer average total phosphorus, chlorophyll *a*, and Secchi disc values from these locations ranged from eutrophic (poor water quality) to hypereutrophic (very poor water quality). Summer average water quality measurements generally improved from west to east:

- TP summer average was highest at the West site and decreased from west to east.

- SD summer average was lowest at the West site and increased from west to east.

Based on the water quality monitoring data and macrophyte surveys it appears that the excess phosphorus released by curlyleaf pondweed die-back and entering the system via Nine Mile Creek is actively being removed from the water column by extensive coontail, watermeal, duckweed, and filamentous algal growths as the water flows through the lake basin from west to east.

While the 2010 summer average Secchi disc transparency of Normandale Lake meets the MPCA's clarity standard for shallow lakes in this area of the State (≥ 1.0 meters), the summer average total phosphorus concentrations exceeded the standard (≤ 60 $\mu\text{g/L}$) at all four sampling locations and the summer average chlorophyll *a* concentrations exceeded the standard (≤ 20 $\mu\text{g/L}$) at three of the four sampling locations. However the criteria for being listed on the MPCA's Impaired Water list utilize the most recent ten year average data. Based on the information for the east sampling location (historic sampling location) Normandale Lake would not be listed as impaired. The ten year averages are: Total phosphorus – 54 $\mu\text{g/L}$, Chlorophyll *a* – 9 $\mu\text{g/L}$, Secchi disc – 1.9 meters.

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, Minnetonka, and Richfield have approved local water plans. The cities of Edina and Eden Prairie are operating under their current approved local water management plans and are in the process of updating their local water management plan.

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 2009. The District selected Cavanaugh and Associates as its accountant, Barr Engineering as its engineer and Smith Partners, PLLP as its legal counsel in October 2009. New proposals for engineering, legal, and other professional services will be solicited in September 2011.

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 2010, the District produced the 2011 Nine Mile Creek Calendar and 2010 Annual Report. Copies of the written communications are included in the Appendix.

The District also had numerous newspaper article written about various District projects and activities throughout 2010.

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 2010 Audited Financial Report may be found in the appendix to this Annual Report.

2011 Annual Budget

The District adopted its 2011 Annual Budget in September 2010. The 2011 Budget may be found in the appendix to this Annual Report.

Appendix

- 1. 2010 Annual Financial Audit**
- 2. 2011 Approved Annual Budget**
- 3. Copy of 2010 Annual Communication**
- 4. 2010 News Articles Regarding District Activities**