



Improving Quality of Water, Quality of Life

2006 MCWD Annual Report and Storm Water Pollution Prevention Program Summary

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2006 Minnehaha Creek Watershed District
Annual Report and Storm Water Pollution Prevention Program Summary

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**2006 Annual Report and
Storm Water Pollution Prevention Program Summary
Minnehaha Creek Watershed District**

1 Introduction

This report has been prepared to satisfy the annual reporting requirements of the National Pollutant Discharge Elimination System, Phase II rules, emanating from the Clean Water Act legislation of 1972. It also is intended to satisfy the annual reporting requirements set forth in Minnesota Statutes Chapter 103D.351, which requires watershed districts to file an annual report with the Board of Soil and Water Resources.

1.1 National Pollutant Discharge Elimination System – Phase II Annual Report

Prior to 1990, NPDES did not directly address non-point sources of pollutants. The focus of implementing the federal requirements was point-source discharges of wastewater and industrial process water. In 1990, US EPA promulgated rules to include regulation of non-point source discharges from large municipal separate storm sewer systems (MS4s). The Phase I rules required storm water systems permits in large cities like Duluth, St. Paul and Minneapolis. In 2002, the Phase II rules expanded federal regulation to include small MS4s, after a US EPA study concluded continued degradation of the nation's waters.

In early 2003, MCWD submitted an application as a regulated MS4 under the Phase II rules, along with a Storm Water Pollution Prevention Program (SWPPP). MCWD is regulated as a MS4 under the Phase II rules because the District is the drainage authority for eight public drainage systems. These drainage systems are county and judicial ditches generally established in the early 1900's. Authority for these public drainage systems was transferred to Minnehaha Creek Watershed District by resolutions from the commissioners of Hennepin and Carver Counties.

A number of other Phase II MS4s storm sewers and conveyances discharge into the county and judicial ditch systems. MCWD developed policy in 2006 for either retaining authority, or transferring responsibility for the ditches to the municipalities they serve based upon current use and historic changes of use of the drained areas. For example, Hennepin County Ditch No. 29 has been redirected and converted into a storm sewer system, now operated by the City of Minneapolis, to drain areas northwest of Lake Calhoun as they developed. See Figure No. 1 for the general locations of the eight public drainage systems.

The Phase II requirements call for an annual summary report on progress toward implementing the provisions of the SWPPP, including any proposed revisions. The first (2003) annual report was submitted in March 2004. This report satisfies the 2006 annual report requirements and has been submitted before the June 30th deadline of 2007.

1.2 Minnesota Statutes Chapter 103D.351 Annual Report

The Minnesota Statutes require watershed districts to prepare and file an annual report with the Board of Soil and Water Resources. This annual report is a summary of MCWD financial activity (See Section 7), projects and plans for the coming year (See Section 4 for 2006 activities and planned activity in 2007) and satisfies the requirements of Minnesota Statutes Chapter 103D.351.

2 Summary of Storm Water Pollution Prevention Program and Planned Best Management Practices

The MCWD SWPPP is encompassed in the Notice of Intent and the Phase II MS4 permit application submitted by MCWD in 2003. These documents are included as Appendix 1. An excerpted summary of the SWPPP follows:

“The Minnehaha Creek Watershed District SWPPP is encompassed by the following Minnehaha Creek Watershed District documents:

- *Water Resources Management Plan, January 1997*
- *Operations and Maintenance Manual, November 2000*
- *Ditch Records and Policy Considerations, January 2003*
- *MCWD Rules, published in 1974 and as amended from time to time*

The Water Resources Management Plan establishes District goals and policies related to management of runoff and protection of water quality, erosion and sedimentation control, floodplain management, management of dredging projects, management of projects in protected waters, Best Management Practices, recreation and fish and wildlife, enhancement of public participation, information and education, public ditch systems, groundwater, and wetlands. It provides an assessment of problems and an implementation program.

The Operations and Maintenance Manual establishes inspection and maintenance procedures for District facilities and ditches.

The Ditch Records and Policy Considerations report includes maps and descriptions of the ditches under District authority.

The District Rules establish requirements for permits for erosion control (Rule B), storm water management (Rule N), wetland protection (Rule D), shoreline alteration (Rule F), and others. Applicable BMPs are summarized in the sheets attached to the General Storm Water Permit Application for Small Municipal Separate Storm Sewer Systems (MS4s).”

In 2006, MCWD completed a major revision of its 1997 Water Resources Management Plan, which is part of the SWPPP. The major revision is in a final draft form and currently under review by the Minnesota Board of Soils and Water Resources for final approval. The new plan focuses on achieving specific goals in 17 different policy areas and integrates the required programs and projects needed to achieve those goals into the plan. When approved by the Minnesota Board of Soil and Water Resources in the spring of 2007, the new plan will become the guiding document for the SWPPP and for water management beginning in 2007 and carrying on until the year 2016.

Also in 2006, MCWD enhanced its program begun in 2005 to protect and preserve key conservation areas and potential corridors that have important and significant water quality/quantity and ecological attributes. The enhanced Land Conservation Program is discussed more in Section 4.

3 Summary of 2006 Goals

The goals established by MCWD are described in the 2003 SWPPP contained in Appendix 1. For convenience, Table No. 1 is a one-page summary of the SWPPP goals and progress.

4 Actions Taken in 2006 and Best Management Practices Implementation Progress

4.1 Public Education and Outreach – Minimum Control Measure No. 1

MCWD published three editions of the WaterPro Newsletter in 2006, which is distributed to roughly 1200 recipients and posted on the MCWD website at <http://www.minnehahacreek.org>. The WaterPro Newsletter focused on Low Impact Development (LID) as an alternative to other storm water treatment techniques, natural resource based comprehensive planning, and information on the 2006 revision of the MCWD Water Resources Management Plan. The District also issued eleven press releases for publication concerning District activities that are also posted on the website.

Seven informational columns were published in the Sun Sailor papers in 2006. An email list of 300 interested citizens was also used to distribute information in 32 separate communications.

In March 2006, MCWD sponsored a LID workshop attended by 250 people (see website for detailed information).

The website was updated generally on a weekly basis to include current meeting information, meeting minutes, hydrologic data, rule revision activity, project progress reports and general news items. Five new major content area pages were created in 2006.

MCWD developed a strategic plan for communications in 2003, aimed at image recognition and public education concerning water resources management. The Board of Managers approved the strategic communications plan on October 16, 2003. Implementation of the plan continued in 2006. Activities included publishing a new Lake Minnetonka map. The new map features historical narratives about the lake and over 26,000 were printed in 2006. An additional printing is expected in 2007.

The strategic communications plan is available for review at the MCWD office.

In 2006, MCWD accomplished the following additional activities:

- 4.1.1 Sponsored 2 regulatory workshops for realtors involved with buying and selling residential lakeshore property.
- 4.1.2 Purchased an electronic informational kiosk currently being used at Minneapolis Park and Recreation Centers.
- 4.1.3 MCWD staff presented 22 times to diverse groups on land use/water quality, LID and natural resource based planning. In total, 775 people attended these presentations.
- 4.1.4 Installed interpretive signage at Minnehaha Creek Headwaters Park.
- 4.1.5 MCWD staff attended and participated in several grass roots educational events at various locations throughout the watershed.

4.2 Public Participation and Involvement – Minimum Control Measure No.2

MCWD established the Cynthia Krieg Watershed Stewardship Grant Program in 1999. The grant program is designed to help fund small projects that promote environmental stewardship, in the memory of Cynthia Krieg, who formerly worked for the District in the area of communications and public education. In 2006, 17 grant applications were processed, ten of which were funded. A total of \$99,000 was awarded and final reports on four of these have been received by the MCWD. An additional 13 applications were received in 2006 for 2007 funding. A total of \$110,976 has been approved for 8 of the 13 applications that will receive funding in 2007. Summaries of all funded projects in the Cynthia Krieg Watershed Stewardship Grant Program are located on the MCWD website.

The MCWD Citizens Advisory Committee was active and held nine meetings in 2006. The MCWD asked the Citizens Advisory Committee to participate in project development, budget review and other functions, but a major and primary 2006 task was advising the Board on potential policy, projects, programs and visioning connected with development of the 2006 final draft MCWD Water Resources Management Plan.

The MCWD held 37 other public meetings and public hearings in 2006, including publicly noticed regular Board Meetings and Board Workshops. One of these was a joint public meeting of the Boards of MCWD and the Lake Minnetonka Conservation

District. The meetings were noticed to the public in advance. Agendas and minutes of the public meetings were published on the MCWD web page.

MCWD was active in a national program called NEMO (Non-point source Education for Municipal Officials) again in 2006. The District held workshops conducted cooperatively with MPCA, to educate public officials, developers and municipal staff on construction site erosion control techniques. As part of the program, MCWD completed 22 NEMO presentations in the District.

4.3 Illicit Discharge Detection and Elimination – Minimum Control Measure No. 3

MCWD is the regulated NPDES, Phase II MS4 for eight public drainage systems (county and/or judicial ditches) that exist in the watershed. During 2003, the available records from Hennepin and Carver Counties were compiled and converted into electronic form. This was the first step in developing policy and management strategies for the public drainage systems. A report was prepared in January 2003, including a GIS database of the ditch records and policy discussion recommendations (Figure No. 1 shows the location of the ditches).

4.3.1 Monitoring

MCWD has monitored lake water quality, stream flow and quality, precipitation and other hydrologic parameters beginning in 1968. In 1997, the monitoring program was coordinated with other agencies collecting monitoring data within the District. The ongoing program was expanded in 2002 and again in 2003 to include more monitoring locations and additional automatic monitoring equipment. The District staff publishes an electronic data report each year, including water quality grades for major lakes and streams. The report contains a calculation of annual runoff, flow, pollutant loads and precipitation. The report is made available each year on the MCWD web page.

The 2006 data collection program consisted of the following:

- 4.3.1.1 Stream flow measurement, YSI probe measurements for dissolved oxygen (DO), temperature, pH, and conductivity, and water quality samples for the analysis of nitrogen (N), total phosphorus (TP), soluble reactive phosphorus (SRP), and total suspended solids (TSS) taken by MCWD staff on weekly basis during the open water months (March through October) at 10 locations on Minnehaha Creek and 33 locations on upper watershed streams.
- 4.3.1.2 Continuous water level data collection at 4 locations on Minnehaha Creek and at 5 locations on upper watershed streams.
- 4.3.1.3 Tipping bucket precipitation gauging stations at 8 locations in and near the District.

- 4.3.1.4 Three Citizen Precipitation Recorders who record daily precipitation data at locations in and near the watershed and submit it to the MCWD.
 - 4.3.1.5 Lake water quality sampling at 29 District lakes by MCWD and its partners, including 26 bays of Lake Minnetonka.
 - 4.3.1.6 Water quality samples from 11 upper watershed lakes were collected twice a month. YSI probe measurements for DO, Temp, pH, conductivity were taken at each meter depth. Water samples from 1 meter below the water surface were analyzed for TP as well as SRP (Soluble Reactive Phosphorus), Chlorophyll-*a* and TN. Water samples from 1 meter above the bottom of the lake were analyzed for TP as well as SRP. Secchi depth measurements were also taken at each monitoring site.
 - 4.3.1.7 Twenty six sites on Lake Minnetonka were sampled twice monthly for full analysis at 1 meter below the water surface as well as 1 meter above the bottom for TP, SRP, TDP (Total Dissolved Phosphorus), TN, TDN (Total Dissolved Nitrogen), NO₃/NO₂, and NH₄. The sites were also sampled for Chlorophyll-*a* at 1 meter below the water surface at each site.
 - 4.3.1.8 Samples for Phytoplankton as well as Zooplankton analysis were collected monthly for each of the 11 upper watershed lakes and the three Lake Minnetonka Bays (Halstads, Jennings, and Stubbs).
 - 4.3.1.9 Fourteen additional limited access lakes were monitored monthly for Secchi disc depth, TP, and Chlorophyll-*a*.
- 4.3.2 Monitoring equipment purchased/used for first time in 2006
- 4.3.2.1 A total of 8 telemetry-remote data access systems were purchased to automate the water level measurement at several locations in the watershed. Telemetry instruments were equipped with cell phones to access the data logger from remote location (MCWD office) and were installed at 3 locations along Minnehaha Creek late in the sampling season of 2006 for trial purposes to prepare for the 2007 sampling season. The telemetry-remote data will provide continuous transmission to a designated MCWD computer every 4 hours.
 - 4.3.2.2 A portable weather station was purchased by the District to gather on-site weather parameters for the Lake Minnetonka Modeling Research Study project, a study to better evaluate inter-basin flow between bays.
 - 4.3.2.3 A total of 8 In Situ Level Troll 500 systems with 50 foot cables were purchased in 2006 to replace outdated In Situ MiniTrolls. The pressure transducers are used to continuously record surface water levels at 15 minute intervals. Seven of the pressure transducers were used at three locations along Minnehaha Creek and four were used at various locations in the upper watershed. Monitoring took place during open water season (May through September).

4.3.3 Special studies in 2006

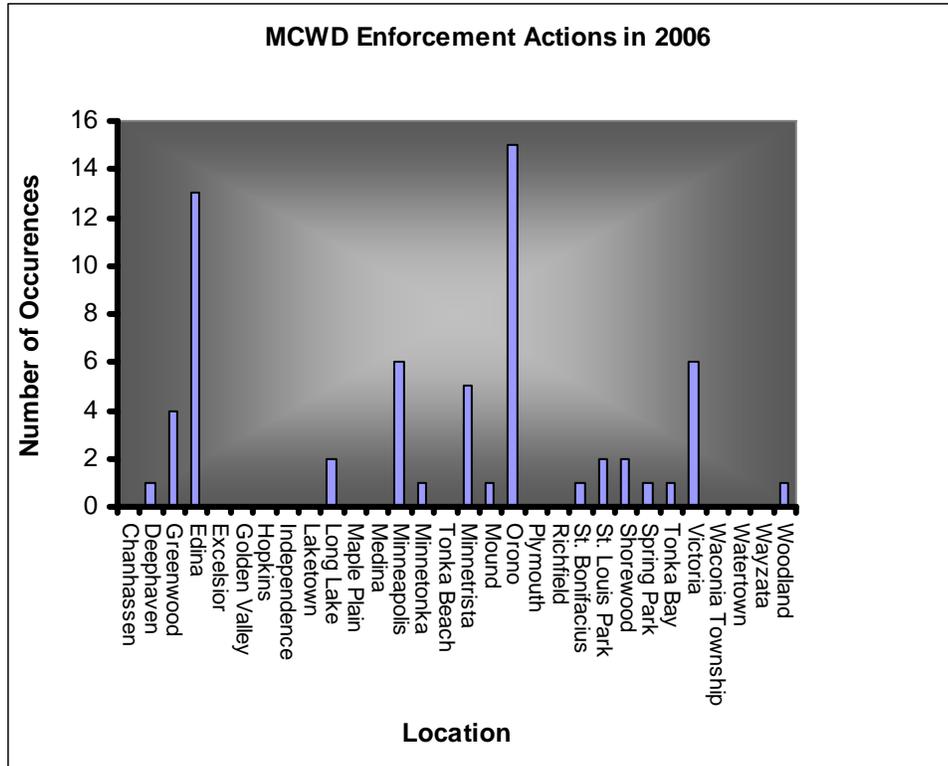
- 4.3.3.1 An optical brightener study was completed for a second year at 12 storm sewer outfalls discharging to Minnehaha Creek and Lake Hiawatha to determine if there were any illicit and unknown connections between sanitary sewer and storm sewer lines. The results of the study concluded that there was no determinable connection.
- 4.3.3.2 Biweekly water quality samples were also collected for *E. coli* analysis in June, July, and October, and weekly in August and September. These samples were taken at ten sites along Minnehaha Creek, three sites on Painter Creek, and one site on Six Mile Creek. *E. coli* concentrations exceeded the MPCA's standard (1,260 colony-forming units (CFU) per 100 ml) eight times this year on Minnehaha Creek. The Painter Creek locations reported six samples in violation (two of the violations were from a temporary site to provide data for suspected leaching of residential septic systems), and Six Mile Creek was within the MPCA's standard.

4.4 Construction Site Storm Water Runoff Control – Minimum Control Measure No. 4

Construction site erosion has been considered a major issue in rapidly developing areas and highway projects. The MCWD has seen substantial permit activity for the past several years, indicating the scope of this issue.

Five hundred and twelve permit applications were processed in 2006, which is slightly less than 2005 (578) and down 24% from the 2004 all-time high (675). MCWD publishes a pamphlet informing the public of the need to acquire permits for certain project activity. The pamphlet is entitled "A Guide to Building or Landscaping near Water Resources – Mandatory Minnehaha Creek Watershed Permits".

Of the total permit applications processed in 2006; approximately 69% required a temporary erosion control plan approval. More than 1000 compliance inspections were completed by MCWD staff.



2006 was the second year of the partnership between the MPCA and MCWD under the Joint Power Agreement (JPA). Under this agreement the MPCA designates inspection responsibilities to MCWD for the National Pollutant Discharge Elimination System (NPDES) permitted projects within MCWD boundaries. MCWD staff reports back to the MPCA with inspection results and enforcement issues. In return the MPCA provides grant moneys to MCWD to support additional staff to perform inspections using the MPCA inspection protocol. The JPA program was set to end in November of 2006 but the MPCA provided a program extension for an additional year; the new end date is November 2007.

In the second year MCWD has made substantial progress in achieving goals identified in the original JPA work plan and 2005 annual report. As outlined in the 2005 Annual Report, turnover and shortage of Minnehaha Creek Watershed District (MCWD) staff adversely affected the implementation of the JPA program. In January 2006, efforts were made to minimize turnover within MCWD's permitting department. More experienced staff and continuity have provided the foundation for advancements in the program.

The total number of inspections performed for the 2006 monitoring year was 1017. NPDES inspections were tracked and recorded. The percentage of inspections performed under the Joint Powers Agreement is indicative of the NPDES programs inability to regulate construction sites smaller than 1 acre. The data is further skewed due to the lack of subdivision registrations for lots under 1 acre within a larger

development. If each of these lots were regularly inspected and logged in under the corresponding NPDES development permit, the NPDES inspection demand would double.

The storm water permit violations observed most often on non-compliant sites were:

- 4.4.1 Inadequate maintenance of BMPs.
- 4.4.2 Absence of detailed inspection information on-site.
- 4.4.3 SWPPP absent or out-of-date.
- 4.4.4 Improper or inadequate soil stabilization.

Progress has been made within the MCWD to meet and address all of the long term goals of the JPA partnership. The MCWD-MPCA partnership is an example of efficient cooperation between agencies to accomplish common goals.

MCWD goals for the 2007 inspection year include:

- 4.4.5 Close out all permit files for completed projects.
- 4.4.6 Track more accurate compliance information.
- 4.4.7 Generate a database with a larger range of information.
- 4.4.8 Provide meaningful education to residents and contractors within the district.
- 4.4.9 Provide more detailed information for determining actual costs.

The District dedicates one full-time compliance officer to coordinate an enforcement program aimed at controlling construction site erosion. In addition, two full-time equivalents and two interns are employed in enforcement. Over 1,300 site visits were performed during the year, averaging approximately two inspections per project, and averaging about three inspections per temporary erosion control plan processed.

Some compliance inspections revealed erosion issues that could not be resolved on a voluntary basis with the permit applicant. A special committee of the Managers processed these situations. The committee met on five occasions and determined further compliance actions required such as site stabilization, stop work orders, surety bonds for performance and other requirements to bring sites into compliance with the MCWD rules. The committee processed a total of 51 compliance actions (after-the-fact permits) and 60 stop-work orders in 2006.

4.5 Post-Construction Storm Water Management – Minimum Control Measure No. 5

The MCWD rules have required long-term storm water management on new land development sites since 1974. Rule N requires long term controls on storm water volume, runoff rates and water quality impacts to downstream receiving waters.

As a result of the extensive planning process undertaken by MCWD in 2006, the District has begun an examination of existing rules and their effectiveness in achieving the goals established in the final draft 2006 MCWD Water Resources Management Plan. The rule evaluation process is expected to continue through 2007.

4.6 Pollution Prevention and Good Housekeeping – Minimum Control Measure No. 6

Part of pollution prevention is maintaining control facilities and projects so they continue to function as intended. MCWD developed an Operations and Maintenance Manual in November 2000. The manual covers every project completed by MCWD and describes operation and maintenance activities in general throughout the District. The plan is a guide for recommended inspections, maintenance, record keeping and monitoring for approximately 20 projects, monitoring stations and other programs. It includes record drawings of constructed projects; photographs; and copies of maintenance agreements, easements and surveys. The plan calls for 700 to 800 hours of inspection, maintenance and reporting activity each year, including:

- 4.6.1 Records of inspections performed including; name, date, observations and results.
- 4.6.2 Records of repairs performed including costs.
- 4.6.3 An annual inspections report, and
- 4.6.4 Annual plan updates.

The 2006 annual operations and maintenance inspections report is a summary of activities and is attached as Appendix 2.

4.7 Other BMPs

An NPDES Phase II MS4 report has been prepared annually by MCWD since 2003. All records pertaining to the NPDES Phase II permit, including annual reports and correspondence, will be kept at the MCWD office for a minimum of three years beyond expiration of the permit.

4.8 Other Related Activities

4.8.1 Wetland Function and Value Assessment

MCWD completed a District-wide assessment of the functions and values of wetlands in 2003. The assessment data is being used to identify high value wetlands and management criteria needed to protect wetlands as a public water resource. The assessment database has been made available to every city in the District for local water management planning. It is also available for review at the MCWD office.

4.8.2 Rule Making

There were no rule changes in 2006. However, organizational activities were completed in 2006 to establish both a citizen's advisory committee and a separate technical advisory committee to assist the MCWD in expected future rule revisions.

4.8.3 Water Quantity and Quality Monitoring

MCWD has conducted routine annual hydrologic monitoring of lakes and streams since 1968. Actual pollutant loads and water budgets are calculated each year along with distribution of results to the public on the MCWD web page. This database is the primary means of determining and assessing water management issues in the District.

4.8.4 Communications

MCWD prepared multiple press releases to local/regional newspapers, and wrote regular articles in local newspapers in 2006. (Details are given in Section 4)

4.8.5 Staffing

MCWD employed 10 full time staff and 3.5 FTE interns during 2006. The District also completed a 10-year operations model to predict staffing needs and skill sets required to implement the 2006 final draft WRMP over the next ten years. See Table 2 for a list of MCWD staff and other contacts.

4.8.6 Staff Training

MCWD staff attended the following training events in 2006:

- 4.8.6.1 14th National Non-point Monitoring Workshop
- 4.8.6.2 Nutrient Sources, Transport and Fate Symposium
- 4.8.6.3 Minnesota Waters 2006 Lakes and Rivers Conference
- 4.8.6.4 2006 Annual Water resources Conference
- 4.8.6.5 International Perspective on Environmental and Water Resources
- 4.8.6.6 National NEMO Network Training
 - 4.8.6.7 Integrating Environmental Education into the Framework of Faith Communities
 - 4.8.6.8 Urban Land Institute's Conservation Design Forum
 - 4.8.6.9 Minnesota DNR Growing Greener Conferences
 - 4.8.6.10 LID Conference
 - 4.8.6.11 U of MN Erosion and Sediment Control Installers Certification
 - 4.8.6.12 Wetland Delineator Training

- 4.8.6.13 Wetland Credit Banking
- 4.8.6.14 Certified Professionals Erosion Control Specialist training
- 4.8.6.15 BMP Design
- 4.8.6.16 Infiltration Basin Design
- 4.8.6.17 Storm water Pond Design
- 4.8.6.18 MAWD Annual Conference
- 4.8.6.19 Mn/DOT Erosion Control Training
- 4.8.6.20 Project WET
- 4.8.6.21 Pond Habitat Environmental Education

4.8.7 Projects Underway or Completed in 2006

- Gleason Lake Water Quality Improvement Project
- Gideon Glen Water Quality Improvement Project – Wetland Restoration
- Jennings Bay (Painters Creek) Water Quality Improvement Project
- Small Site Restoration on Minnehaha Creek
- Methodist Hospital Creek Restoration
- Stubbs Bay Water Quality Improvement Project
- Land Conservation Program
- Gray’s Bay Dam Reconstruction
- Maintenance Program
- Mound Downtown Redevelopment
- Long Lake Downtown Redevelopment

4.8.8 Studies Underway or Completed and 2006

- Minnehaha Creek Gorge Evaluation
- FEMA Floodplain Mapping
- Lake Minnetonka Shoreline Study
- USACE Feasibility Study: Study underway (looking at feasibility of Federal interest in projects within MCWD) with expected completion in 2007.
- Lake Sediment Diatom / Paleo-Limnologic Study. Eight lakes with known impairments or planned water quality improvement projects are being evaluated to determine the pre-settlement phosphorus levels.
- Alum Effectiveness Index. MCWD is working to develop an effectiveness index for use in predicting the potential benefit and longevity of lake alum treatments to reduce internal loading of phosphorus.
- Southdale Watershed Boundary. Recently it was determined that Southdale drains to Minnehaha Creek and therefore should be included within the MWCD boundary. Boundary changes may be pursued in the next few years.

- The USACE modeling to refine dam operating policy for ecological objectives.

4.8.9 Planning Activities Underway or Completed in 2006

- Updated Water Resources Management Plan: On-going policy formation, goal identification and planning (final draft completed September 2006).
- Lake Nutrient TMDLs. MCWD is preparing TMDLs for eight lakes under an MPCA grant.
- Pilot NPDES Inspection Program: MCWD is conducting erosion control inspections on behalf of MPCA, under an MPCA grant.

4.8.10 Land Conservation Program

In 2006, the District's Land Conservation Program was secured by a long-term financing agreement with Hennepin County for \$20 million. The program focuses on protection of green infrastructure and high-quality natural areas to conserve the water resources within MCWD. A District-wide inventory of key conservation areas was completed and is part of the final draft 2006 Water Resources Management Plan.

In 2006, 4 land transactions were closed conserving 107 acres and 8,566 lineal feet of lakeshore or stream frontage. The expected net easement costs are approximately \$1.4 million. The program encompasses the former Riparian Buffers Program, which included 5 projects in 2006. These 5 projects resulted in 37 restored buffer acres at a cost of \$59,320. An additional restoration project of 30 acres in Minnetrista was begun.

The program enlists the advisory expertise from Carver County SWCD, Carver County Planning and USDA/NRCS Hennepin County.

5 Progress Toward Achieving Goals

The goals set forth in the MCWD NPDES, Phase II permit (Appendix 1), and progress toward those goals are set forth in summary form in Table No. 1. Progress in 2006 is discussed in more detail in Section 4.

6 Recommended Changes to the SWPPP for 2006

6.1 Water Resources Management Plan

The Water Resources Management Plan dated January 1997 has been under revision during 2005 and 2006, with a final draft sent to the Board of Water and Soil Resources and anticipated approval in early 2007. The scope for the plan update

reflects a substantial revision and focuses on several important elements summarized below:

- The plan uses the H&H hydrologic and nutrient export models to demonstrate the direct relationship between land uses and increased pollutant export into receiving waters.
- Using PLOAD, the plan demonstrates the efficiency of outcome-based regulation on a major sub-watershed basis to prevent degradation.
- A framework of performance based plan elements, organized by major sub-watershed to achieve established and desired goals.
- Plan is updated to meet the requirement of Minnesota Rules Section 8410, and MS 103.
- A Capital Improvements Plan that addresses benefits and costs on a project life-cycle including operation, maintenance, the time value of money, cash flow and organizational demands.
- Goals that are supported by the MCWD Board, MCWD staff and the public, focused on pollutant export reduction and that are measurable and realistic.
- Extensive public participation in goal development including plan review, a Citizens Advisory Committee and a Technical Advisory Committee.
- A stand-alone plan for each of eleven sub-watersheds and a Summary Plan for the entire District that is available on the MCWD website.

When approved by BWSR in early 2007, the plan will become the single most important and influential component of water management in Minnehaha Creek Watershed District and should be incorporated into the SWPPP.

6.2 Operations and Maintenance Manual, November 2000

The maintenance projects and programs identified in the MCWD Operations and Maintenance Manual are up-to-date through 2000. However, additional projects completed after 2000 are not included in the manual. An updated manual should be incorporated into the SWPPP in the future. The annual Operations and Maintenance report is attached as Appendix 2.

6.3 Public Drainage System Policy

The District developed management policies and a long-term action plan for the public drainage systems, as recommended in the report entitled Ditch and Policy Considerations, January 2003. The policies and action plan are included in the 2006 final draft WRMP.

6.4 Rule Revisions

No MCWD Rule revisions or changes were made in 2006.

7 MCWD Financial Summary

The 2005 MCWD budget is in summary form in Figure No. 2. A detailed budget is available for public review by contacting the MCWD office.

8 Additional Information

For additional information about MCWD, a list of contacts is included as Table No. 3. Acronyms, abbreviations and definitions are included in Table No. 4.

2006 Annual Report

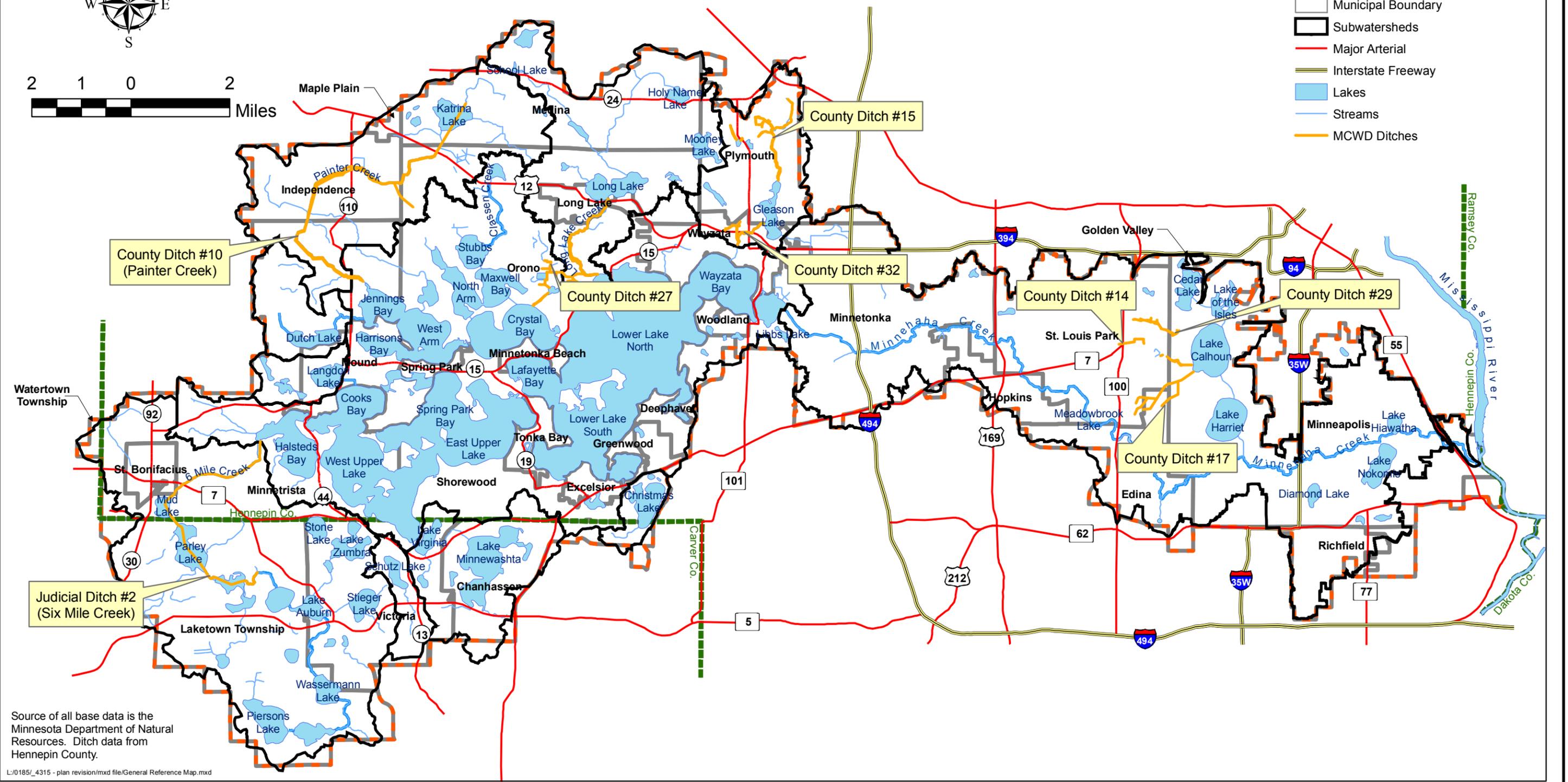
Figures

Figure No. 1 – MCWD Boundary and Public Drainage System Location Map

Figure No. 2 – Financial Summary



- Legend**
- Watershed District Legal Boundary
 - County Boundary
 - Municipal Boundary
 - Subwatersheds
 - Major Arterial
 - Interstate Freeway
 - Lakes
 - Streams
 - MCWD Ditches



Source of all base data is the Minnesota Department of Natural Resources. Ditch data from Hennepin County.

L:/0185/_4315 - plan revision/mxd file/General Reference Map.mxd

MINNEHAHA CREEK WATERSHED DISTRICT

County and Judicial Ditches Under the Jurisdiction of the Minnehaha Creek Watershed District



JAN 2006

Figure 1

Figure No. 2 Financial Summary

The Minnehaha Creek Watershed District is funded by an ad valorem tax based on property values. The operating budget and tax levies are approved after public notice and

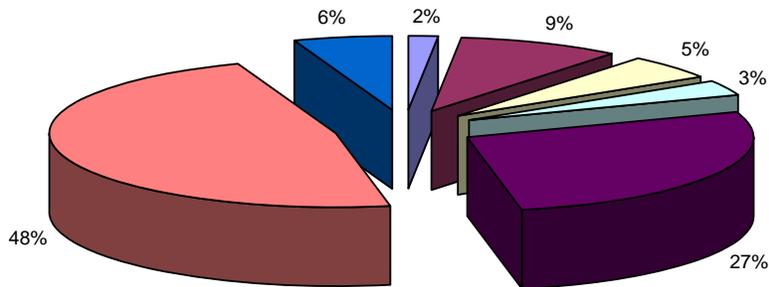
Planned 2006 Revenue

2006 Tax Levy – Hennepin and Carver **\$4,497,586**

2006 Budget

Administration	\$114,987
Personnel - Projects/Programs	\$676,851
Operations - Projects/Programs	\$383,911
Planning	\$225,837
Land Conservation Program	\$1,990,400
Projects and Programs	\$3,437,300
Communications/Public Education	\$411,564
Total 2006 Budget	\$7,240,850

2006 MCWD Budget Allocations



■	Administration
■	Personnel - Projects/Programs
■	Operations - Projects/Programs
■	Planning
■	Land Conservation Program
■	Projects and Programs
■	Communications/Public Education

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Tables

Table No. 1 – Summary of SWPPP Goals and Progress

Table No. 2 – List of Contacts

Table No. 3 – List of Acronyms, Abbreviations and Definitions

Table No. 1 Summary of SWPPP Goals and Progress

<u>Minimum Control Measure No.</u>	<u>Minimum Control Measure Description</u>	<u>BMP Description</u>	<u>Goal</u>	<u>Progress 2006</u>	<u>Person or Department Responsibility</u>
1	Public Education and Outreach	Publish MCWD WaterPro Newsletter	Continue/Increase Distribution		Julie Westerlund, Communication
		Maintain MCWD Web Site	Continue/Increase Web Site Visitors		Julie Westerlund, Communication
		Hold Water Events	Update on a Regular Basis		Julie Westerlund, Communication
2	Public Participation and Involvement	Cynthia Krieg Watershed Stewardship Grants	Continue Funding		Julie Westerlund, Communication
		Citizens Advisory Committee	Consistent Membership		Julie Westerlund, Communication
		Technical Advisory Committee	Regular Meetings		Renaë Clark, Projects Coordinator/ Technician
		Public Meetings	Use on Large Projects		
		Hold Twice per Month		Eric Evenson, Administrator	
3	Illicit Discharge Detection and Elimination	Storm Drain Stenciling	Increase Storm Drains Stenciled		Udai Singh, Water Quality Specialist Mike Wyatt, Planner Mike Wyatt, Planner Mike Wyatt, Planner
		Map of Public Drainage Systems	Informational Pamphlet Distribution		
		Hydrologic Data Monitoring Program	Complete Using GIS		
		Stream Assessment	Continue		
		Review SWPPP and Local Water Plans	Complete Minnehaha Creek		
		Develop Rule to Disallow Non-Storm Water Discharges	Schedule Bank Failure Repair Projects		
			Review Available Plans Within 60 Days		
		Rule Development 2004			
		Rule Adoption 2005			
4	Construction Site Storm Water Runoff Control	Permit Requirement Guidance Document	Use by Municipalities		Julie Westerlund, Communication
		Temporary Erosion Control Permits	Number of Permits Issued		James Wisker, Technician
		Compliance of Temporary Erosion Control Permits	Number of Compliance Actions		Charlie Wojtysiak, Technician
5	Post-Construction Storm Water Management	Permit Requirement Guidance Document	Use by Municipalities		Julie Westerlund, Communication
		Storm Water Management Permits	Number of Permits Issued		James Wisker, Technician
		Maintenance Agreements	Number of Agreements Recorded		James Wisker, Technician
		Rule N Revision	Revise Rule N and Implement in 2003		James Wisker, Technician
		Rule Evaluation	Performance-based management		
		Compliance Enforcement	Number of Compliance Actions		Charlie Wojtysiak, Technician
6	Pollution Prevention and Good Housekeeping	Land Use Roundtables	Consistent and Increasing Attendance		Julie Westerlund, Communication
		Implement Operations and Maintenance Plan	Complete Routine Inspections, Repairs and Annual O&M Report		Renaë Clark, Project Manager
		Operations and Maintenance Plan Revisions	Include Staff Training Component		Renaë Clark Project Manager
			Include NPDES Inspections Component		Renaë Clark, Project Manager
			Update Annually		Renaë Clark, Project Manager
Other		Annual Report	Complete Annually		Renaë Clark, Project Manager
		Records Retention	NPDES Records Retained and Available		Renaë Clark, Project Manager

Completed before 2007
 Planned for 2007
 No Longer Planned

Table No. 2 List of Contacts

MCWD Board of Managers

	<u>County</u>	<u>Office Held</u>
Jim Calkins	Hennepin	President
Pamela Blixt	Hennepin	Vice President
Lee Keeley	Hennepin	Secretary
Dick Miller	Hennepin	Treasurer
Ethel Smith	Hennepin	Manager
Jeff Casale	Hennepin	Manager
Lance Fisher	Carver	Manager

MCWD Employed Staff

	<u>Title</u>	<u>email</u>
Eric Evenson	Administrator	eevenson@minnehahacreek.org
Renaë Clark	Projects Coordinator/ Technician	rclark@minnehahacreek.org
Mike Wyatt	Planner	mwyatt@minnehahacreek.org
James Wisker	Permitting Officer	jwisker@minnehahacreek.org
Charley Wojtysiak	Compliance Officer/ District Technician	cwojtysiak@minnehahacreek.org
Michael Pressman	Land Conservation Specialist	mpressman@minnehaha.org
Ellen Heine	Land Conservation Technician	eheine@minnehahacreek.org
Julie Westerlund	Communications and Education Manager	jwesterlund@minnehahacreek.org
Udai Singh	Water Quality Specialist/NPDES Contact	usingh@minnehahacreek.org
Marci Wallingford	Office Administrator	marciw@minnehahacreek.org
Angela Hammers	District Technician 1	ahammers@minnehahacreek.org

MCWD Office

Minnehaha Creek Watershed District
 18202 Minnetonka Blvd.
 Deephaven, MN 55391

Ph: 952-471-0590 Fax: 952-471-0682
 email: admin@minnehahacreek.org
www.minnehahacreek.org

District Engineer

Mike Panzer, PE, PG
 Wenck Associates, Inc.
 1800 Pioneer Creek Center
 Maple Plain, Minnesota 55359
 763-479-4207
mike.panzer@wenck.com

MCWD Counsel

Louis Smith
 Chuck Holtman
 Smith parker, LLP
 123 North 3rd Street, Suite 808
 Minneapolis, Minnesota 55401
 612-344-1400
smith@smithpartners.com
holtman@smithpartners.com

Table No. 3 Acronyms, Abbreviations and Definitions

annual report	yearly report required under NPDES Rules or Minnesota Statutes Chapter 103D.351
ASCE	American Society of Civil Engineers
BMP(s)	Best Management Practices)
Board of Managers	seven managers appointed to the MCWD Board under Minnesota Statutes Chapter 103D.311
BWSR	Minnesota Board of Soil and Water Resources
CAC	Citizens Advisory Committee
county ditch	drainage system established under Minnesota Statutes Chapter 103E, located in a single county
Ditch Records	available documents describing the location, construction, easements and benefited properties associated with a public drainage system
ditches)	drainage systems) established under Minnesota Statutes Chapter 103E
GIS	geographic information system
HHPLS	Hydrologic, Hydraulic and Pollutant Load Study
judicial ditch	drainage system established under Minnesota Statutes Chapter 103E, located in more than one county
MAWD	Minnesota Association of Watershed Districts
MCWD	Minnehaha Creek Watershed District
MPCA	Minnesota Pollution Control Agency
MS4s	Municipal Separate Storm Sewer Systems
NEMO	Non-point Source Pollution Education for Municipal Official
NPDES	National Pollutant Discharge Elimination System
Phase II MS4s	MS4s regulated by NPDES Phase II Rules
public drainage system	drainage system established under Minnesota Statutes Chapter 103E
Rule B	MCWD Rule for Erosion Control
Rule D	MCWD Rule for Wetland Protection
Rule F	MCWD Rule for Shoreline and Stream bank Improvement
Rule N	MCWD Rule for Storm water Management for Land Development Projects
SWPPP	Storm Water Pollution Prevention Program
TAC	Technical Advisory Committee
US EPA	United States Environmental Protection Agency
Watershed District	special district established under Minnesota Statutes Chapter 103D
XPSWMM	proprietary version of the US EPA Storm and Waste Water Management Model

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Appendices

Appendix 1 – MCWD SWPPP Notice of Intent and NPDES Phase II Storm Water Management Program

Appendix 2 – MCWD 2006 Operation and Maintenance Report

**Notice of Intent
Minnehaha Creek Watershed District
NPDES Phase II Stormwater Management Program**

A. Owner

Owner: Minnehaha Creek Watershed District
Address: 18202 Minnetonka Boulevard
 Deephaven, MN 55391
County: Hennepin County

B. Contact Person

Eric Evenson, Administrator
Minnehaha Creek Watershed District
18202 Minnetonka Boulevard
Deephaven, MN 55391
(952) 471-0590

Signature: _____

C. Background

The Minnehaha Creek Watershed District (MCWD) is the public ditch authority for eight public ditches. These ditches are regulated as a small MS4 under the NPDES Phase II Stormwater program. A number of other small MS4s, not under the control of the MCWD, drain into the MCWD ditch system. The Minnehaha Creek Watershed District's *Stormwater Pollution Prevention Plan* (SWPPP) is encompassed in the District's *Water Resources Management Plan and Operations and Maintenance Manual*.

**D. Stormwater Pollution Prevention Program (SWPPP)
Summary**

The following is a summary of the BMPs determined applicable for each of the six minimum control measures required under the Phase II permit.

a. Minimum Control Measure 1: Public Education and Outreach

- i. BMPs
 - To address minimum control measure 1:
 - WaterPro newsletter
 - Web site

- Water events

To address minimum control measure 2:

- Provide grants to groups proposing projects and initiatives to protect water quality and promote public awareness of non-point source pollution abatement

To address minimum control measure 3:

- Stormdrain stenciling program

To address minimum control measures 4 and 5:

- Informational pamphlet on District permit requirements

To address minimum control measure 6:

- Land use roundtables with cities

ii. Summary Table

- The attached Table 1 summarizes each educational and outreach BMP and discusses the targeted audience, educational goals, activities used, implementation plans, and performance measures.

iii. Coordination with other local groups:

- MCWD programs make use of non-profit organizations, school districts, cities, and other local groups by providing funding for their educational and public involvement efforts where appropriate, by sharing educational resources, and by working together on educational and demonstration projects when opportunities arise.

iv. Measurable goals:

- Use of grant money
- Number of stormsewer drains stenciled
- Newsletter publication
- Frequency of web-site updates
- Number of pamphlets distributed
- Number of people attending roundtables held
- Number of people attending water event

v. Timeline:

- Continue existing programs as summarized above

vi. Responsible Person: Joanie Ellis

b. Minimum Control Measure 2: Public Participation and Involvement

- i. BMPs:
 - Citizen Advisory Committee
 - Use Technical Advisory Committees on large projects
 - Public meetings held twice monthly to solicit comments on permits and other MCWD activities
- ii. Measurable goals:
 - Active citizen participation in Citizen Advisory Committee
 - Use of Technical Committees
 - Public meetings held as planned
- iii. Timeline
 - Continue these current activities
- iv. Responsible Person: Joanie Ellis

c. Minimum Control Measure 3: Illicit Discharge Detection and Elimination

- i. BMPs:
 - Map of ditch system in report *Ditch Records and Policy Considerations*
 - Monitoring program will detect illegal discharges and assess discharges from wetlands and riparian areas into open ditches
 - Stream assessment project – erosion control
 - Review of city SWPPP and Local water management plans that drain into the District’s ditch systems
 - Develop rule to disallow non-stormwater discharges into the MCWD ditch system
- ii. Measurable goals:
 - Incorporate ditch maps into GIS system
 - Continue monitoring of open ditches
 - Complete stream assessment project and erosion control and streambank stabilization measures
 - Complete reviews of SWPPP and Water Management plans of MS4s that drain into the MCWD system
 - Develop rule disallowing non-stormwater discharges by December 2004
- iii. Timeline:
 - Continue existing monitoring, stream assessment, and plan review programs

- Develop rule disallowing non-stormwater discharges by December 2004

iv. Responsible Person: Jim Hafner

d. Minimum Control Measure 4: Construction Site Stormwater Runoff Control

i. BMPs:

- Require erosion control permits for sites disturbing greater than 5,000 square feet or 50 cubic yards of soil.
- Compliance enforcement

ii. Measurable goals:

- Number of permits issued,
- Number of compliance issues addressed

iii. Timeline:

- Continue enforcement of existing erosion control permit requirements.
- Continue compliance enforcement program

iv. Responsible Person: Mike Wyatt, Renae Schubert

e. Minimum Control Measure 5: Post-Construction Stormwater Management

i. BMPs:

- Require permanent BMPs for stormwater management for new development and redevelopment of commercial, industrial, multi-unit residential, and road construction of any size and for single family housing subdivisions of greater than 2 acres.
- Require maintenance agreements to be filed of record in the county recorder's office to provide for long term maintenance and preservation of BMPs.
- Revise current rule to require permanent BMPs for stormwater management for single family housing subdivisions of greater than 1 acre.
- Compliance enforcement.

ii. Measurable goals:

- Number of permits issued.
- Number of violations identified.
- Number of maintenance agreements recorded.
- Rule N revised and implemented.

- iii. Timeline:
 - Continue enforcement of existing stormwater management permit requirements including the requirement for long-term maintenance agreements.
 - Continue compliance enforcement program.
 - Revise Rule N - Stormwater Management by December 2003.
- iv. Responsible Person: Mike Wyatt, Renae Schubert

f. Minimum Control Measure 6: Pollution Prevention and Good Housekeeping

- i. BMPs:
 - Implement Operations and Maintenance Plan including annual inspections as scheduled.
 - Revise existing O & M Plan to include a training component for MCWD Staff.
 - Revise existing O & M Plan to include the procedural requirements of the NPDES permit.
 - Maintain records of inspection results.
- ii. Measurable goals:
 - Completion of inspections.
 - Completion of training.
 - Revision of existing O & M Plan.
 - Maintenance of records.
- iii. Timeline:
 - Training and inspections begin spring 2003.
 - Plan revision Dec 2004.
- iv. Responsible Person: Jim Hafner

E. Record Retention and Availability

Records relating to this permit application will be kept on file for at least three years following the expiration of the permit. Records will be made available to the public during regular business hours.

F. Annual Report

An annual report summarizing actions taken in the implementation of the SWPPP will be submitted to the Agency by March 10 of each year of the permit term. A public meeting will be held to discuss the annual report prior to submittal to the

Agency. The meeting will be noticed in local newspapers at least 30 days in advance. The report will be submitted to:

MS4 Storm Water Program
MPCA
520 Lafayette Road North
St. Paul, MN 55155-4194

The annual report will assess and summarize compliance with permit terms, appropriateness of BMPs, progress toward meeting the stated goals, any changes to the BMPs or the SWPPP, and actions planned for the next year.

Operations and Maintenance / Project Coordination and Management 2006 Annual Report

I. Summary

Regional ponds were inspected in June 2006, observations were made and recorded. There were fall inspections of all the pond outlets and minor maintenance was done where needed. Pond buffer and shoreline vegetation maintenance was performed on several of the regional facilities and at the Headwaters Park in accordance with maintenance contracts. 2007 maintenance needs are described below. A map of the previous District projects is attached.

This program area is coordinating and managing four capital projects, Gleason Lake, Gideon Glen, Headwaters and Jennings Bay Improvement Project, Phase 1. Gideon Glen and the Headwaters Project are currently being closed out. Implementation of Gleason Lake and Jennings bay will carry over to 2007. Project purpose, status and actions for 2007 are identified. Project critical paths and implementation plans for the 2007 and 2008 projects identified in the Plan are currently being developed.

II. 2006 Maintenance and Inspections

All ponds listed below were inspected in June 2006. Observations were recorded with data sheets and pictures per the Operations and Maintenance manual. Observations were made of the inlet/outlets, shoreline and surrounding areas. Some pond volumes were surveyed last year and many ponds are scheduled to be surveyed in 2007.

2006 Regional Pond Inspections

Pond	Maintenance Needed/ Observations	Maintenance Performed
Nokomis - Knoll, Gateway, Amelia	<ul style="list-style-type: none"> • Outlet covered 25% - 50% with debris • Vegetation in fair condition • Loon spotted in Amelia 	<ul style="list-style-type: none"> • Outlets cleaned with rake • Midwest Eco. Performed veg. maintenance mowing and herbicide per contract • Educational buffer signage installed
SW Calhoun	<ul style="list-style-type: none"> • Structures and surrounding area in good condition • Tall annual invasives, Ragweed and Sweet Clover • Abundance of rough fish (huge schools of baby bull heads, and Carp.) 	<ul style="list-style-type: none"> • Mowing and herbicide treatment per maintenance contract

Cedar Meadows	<ul style="list-style-type: none"> • Gullies in NW and SW corners • Upland buffer reseeded in early June, poor germination rate • Erosion problem from 12" CMP off France Ave. 	<ul style="list-style-type: none"> • Gullies due to road runoff / catch basin design • Henn. Co. will coordinate with District to address gullies • May re seed upland due to poor germination • Discussed duck weed harvest with Park Board. District did not express interest
Twin Lakes	<ul style="list-style-type: none"> • Weir partially clogged with sediment and veg • Upland seeded in spring • Visible sediment delta near inlet 	<ul style="list-style-type: none"> • Weir cleaned with rake spring and fall • Veg. monitored and managed (herbicide and mowing) per management contract
Glenbrook	<ul style="list-style-type: none"> • Large sand delta in small bay end of Park St. E. from pipe • Inlet from east (243 Glenbrook Rd. N) 30' delta @ mouth, bank erosion • Surveyed 2006, dredging needed 	
Lakeside	<ul style="list-style-type: none"> • Large tree fallen into Lake by green house • Trash on channel overflow • Milfoil • Upland veg good condition • Surveyed 2006, dredging needed 	
Deer Hill	<ul style="list-style-type: none"> • Bird house in middle is falling over • Inlet pipes under road need more cover • Beaver dam at inlet and outlet this fall • Weirs look good 	<ul style="list-style-type: none"> • Beaver dams removed in fall
Co. Rd. 6	<ul style="list-style-type: none"> • Two dead trees • Some sediment from under co. Rd. 6 (due to construction project) • Minor erosion around weir 	
Gleason Lake North	<ul style="list-style-type: none"> • Surveyed 2006 • Modeled performance of pond per survey data shows no decrease in efficiency 	<ul style="list-style-type: none"> • Sediment delta cleaned winter 2007
Long Lake North	<ul style="list-style-type: none"> • Sight bank erosion • Thistle, sparse veg. • Some debris at inlet and outlet 	<ul style="list-style-type: none"> • Outlet cleaned with rake • Upland mowed and herbicide treatment per management contract
Long Lake South	<ul style="list-style-type: none"> • Veg. sparse, slight bank erosion • Inlet 20% clogged with debris 	<ul style="list-style-type: none"> • Upland mowed and herbicide treatment per management contract • Inlet cleaned spring and fall with rake

Independence Wetland

There is a management contract through 2008. Mowing and herbicide treatments occurred in the spring, summer and fall. A burn was done on November 17th.

Headwaters Shoreline Restoration

Vegetation is in good condition. 2006 was the last year of the original maintenance contract. Sweet Clover was a problem in the surrounding area which could jeopardize the condition of the restoration project. Staff is working with the City of Minnetonka regarding management of surrounding area.

Dam Operations

The dam was opened April 5 this year with a starting Lake elevation higher than normal due to the large October 2005 rain event. Water levels in May were over 930'. No reports of structural flood damage on the Lake or down stream. Some minor back yard and road flooding was observed. Water was discharged through September 12th. The final Lake level reading of the season was 928.29' on November 1. There was a relatively low volume of correspondence from the public regarding water levels upstream and down stream and most correspondence was in the high water period of May. Oil in the gear boxes for the gates was changed this summer.

Canoe Landings

All canoe landings were inspected in 2005. No major disrepair was reported. Inspections are planned for this winter or early spring 2007.

Weirs

In the spring and fall staff inspected the weirs at Painter Marsh and Lake Katrina in addition to the weirs at the regional ponds. Painter Marsh weir had high water in spring but was visible in the fall and look to be functioning as designed. Katrina weir was clear of debris and appeared to be functioning as designed. Weirs at the regional ponds also appeared to be functioning as designed. There could be leakage at the Twin Lakes weir; we will inspect again in the spring.

Minnehaha Creek Stormwater Outfalls

In 2005 12 outfalls on the creek were stabilized with rip rap and some reconstructed. Later that year the District contracted to have the sites live staked with vegetation on some of the rock redirected. The revegetation work was done and has been inspected. There will be a final inspection to determine success rate of the live stakes.

The St. Albans Mill Road site previously had a pipe discharge from a pond causing erosion down to the Creek. As part of this project the District installed a drop structure, extended the pipe and installed rip rap. Following construction a problem with the pre – existing pipe was discovered which now causes large wash outs around the new drop structure during rain events. The property owners had not given the District an easement to do the project. Staff had gotten a positive response to a suggested cooperative effort which would give the District an easement for access and cost share to fix the problem. In recent months the property owner (association)

has been non responsive. Live staking at this site has been removed from the vegetation contract and there is no further follow planned.

III. 2007 Maintenance

Regional Ponds

- Pond surveys completed in 2006 for Lakeside and Glenbrook pond indicate maintenance is required.
- A sediment delta at the inlet for Gleason North pond will be cleaned
- Staff will evaluate the need to continue the Vegetation Management Project for Long Lake, Calhoun, Cedar Meadows and Twin Lakes
- Gullies and buffer vegetation at Cedar Meadows will be repaired in spring 2007
- Nokomis vegetation management contract continues through 2007
- Staff will recommend surveys of Long Lake, Twin Lakes Cedar Meadows and SW Calhoun in 2007 per the maintenance policy

Independence Wetland

Contract with MN Native Landscapes for vegetation maintenance through 2008.

Headwaters

Staff will be evaluating options for continued monitoring and maintenance of the site.

Dam

The operations plan will continue as designed by the MN DNR. Staff is currently working the USACE to determine if there is a preferred alternative to the operating plan which provides for a more sustainable stream ecosystem.

Canoe Landings

Following early 2007 inspections staff will propose any required maintenance.

IV. Project Coordination and Management

The following projects are coordinated and managed by this program area. Project purpose, status and 2007 activities are described below

Gideon Glen

In 2000 the District partially funded the purchase of a 5 acre parcel at the NW corner of Co. Rd. 19 and Smithtown Road and coordinated water quality improvements and wetland restoration with the City of Shorewood and Hennepin County. Restoration activities include excavation, seeding, plantings, live stakes and preservation of old trees. Construction of the new Co. Rd. 19 intersection and stormwater pond is complete and the wetland restoration activities which were on going in 2006 have

been substantially completed. Activities for 2007 will include vegetation monitoring and educational, interpretive signage.

Gleason Lake

A preliminary design was brought to the Board the end of 2005. Per the Boards request the plans were modified early 2006. The project consists of excavation a second pond at the north end of Gleason Lake to improve water quality. A Challenge Grant from BWSR was awarded for this project which provides \$60,000 for the City of Plymouth to contribute to the benefit of the proposed project. Tree removal in the project area has occurred this fall. Weather permitting, excavation of the pond will be complete by February 1, 2007 and revegetation completed in June 2007. The City of Plymouth has conducted site investigation, survey and design work for the north end of Gleason Creek. They will be doing over 200 feet of stream work and some additional stormwater pond excavation. Additional costs above the grant award will be assumed by the City. City construction is expected early 2007.

Headwaters

In 2005 the Board approved a project to beautify the Grays Bay dam and make is an amenity. Early 2006 construction began to build a large viewing platform over the dam. Simultaneously the City of Minnetonka constructed a new trail across the wetland and installed a new bridge over the Creek, down stream of the dam. The project was substantially complete in August. This fall staff worked with the City and contractor to add additional vegetation around the construction area to tie into the natural look of the recently construction shoreline project. New operational features of the control structure include new wheels and new, aluminum stop logs which can be manually installed and removed. Staff has coordinated stop log installation and removal with the City of Minnetonka public works. The project is currently being closed out. In 2007 there will be educational signage added to the site and a Park dedication with the City of Minnetonka.

Painter Creek

Project implementation began in 2005. The project is located in a 2000 foot stretch of Painter Creek just south of Co. Rd. 26 and primarily consists of a remeander of Painter Creek. The purpose of the project is to use natural wetland functions to remove phosphors from the creek and improve the water quality of Jennings Bay. The final design was approved early 2006 and a contractor was brought on board anticipating the verbal consent from landowners would timely translate to signed easements in time for fall/winter construction in 2006. To date, required easements have not been granted. Staff will continue to diligently seek voluntary easements and provide Board with options to move forward early 2007.

Part of the project includes a new rough fish barrier under Painters Road and vegetation restoration of the adjacent property owned by the District at 301 Rolling hills drive. Design on both pieces is currently under way. Construction is planned for 2007 independent of the creek remeander portion of the project.

2007 / 2008 Project Coordination

Implementation plans and schedules for eight projects in 2007 are currently being developed. This plan includes detailed task items and milestones. Detailed updates are anticipated to be included in the monthly Administrator's report.

There are eight projects identified in the Plan for 2008. Staff is currently developing a critical path of tasks to have the 2008 projects ordered prior to September 15, 2007. The critical path identifies specific tasks with associated program areas and anticipated Board action dates.