Bassett Creek Watershed Management Commission 2009 Annual Report



Crystal • Golden Valley • Medicine Lake • Minneapolis Minnetonka • New Hope • Plymouth • Robbinsdale • St. Louis Park



**May 2010** 

## Bassett Creek Watershed Management Commission 2009 Annual Report

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- 2008 Study of the Water Quality Of 192 Metropolitan Area Lakes (Metropolitan Council, October 2009)
- Excerpts of the 2009 Water Resources Report (Minneapolis Park & Recreation Board, April 2010)
- *Hennepin County River Watch 2009* (Hennepin County Environmental Services)
- A Biotic Index Evaluation of Bassett Creek and Plymouth Creek: 2008-2009 (Bassett Creek Watershed Management Commission, January 2010)
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# **Bassett Creek**Watershed Management Commission (BCWMC)



## **Executive Summary: 2009 Annual Report**

## **BCWMC's 2009 Activities & Achievements**

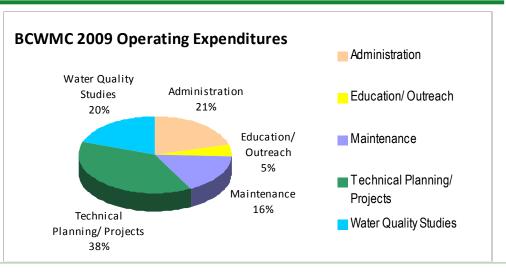
The BCWMC's activities and projects are guided by its *Watershed Management Plan (Plan)*. The most recent version of the BCWMC's *Plan* was approved by the Minnesota Board of Water and Soil Resources and adopted by the BCWMC in 2004. This summary highlights the BCWMC's work and accomplishments during its fiscal year 2009 (February 1, 2009 — January 31, 2010) in the following areas: capital improvements program, water quality activities, and education activities. See the full 2009 Annual Report for more details.

## **Capital Improvements Program (CIP)**

The BCWMC continued to implement its capital improvements program. The 2009 achievements included:

- Starting construction of the West Medicine Lake Park Ponds water quality improvement project. The purpose of the project is to improve the quality of stormwater runoff to Medicine Lake by removing significant amounts of sediment and phosphorus. The pond system will treat stormwater runoff from the entire 6,400-acre Plymouth Creek watershed. More than 50% of the project was completed by the end of 2009; the project will be completed in 2010. The total estimated cost of the project is \$1,100,000. The City of Plymouth constructed the project;
- Completing construction of the Northwood Lake East Pond project, at a total cost of \$139,000. The
  purpose of the pond is to improve the quality of stormwater runoff to Northwood Lake by removing
  sediment and phosphorus. The City of New Hope constructed the project;
- Completing a minor plan amendment to the BCWMC's Watershed Management Plan. The amendment comprised three additions to the Plan's Capital Improvements Program (CIP): two projects to restore Plymouth Creek in Plymouth and one project to restore the Main Stem of Bassett Creek in Golden Valley. The amendment also included revisions to change the Parkers Lake phosphorus goal, and change the flood elevations of Crane Lake and Oak Knoll Pond in Minnetonka;
- Completing feasibility studies to 1) restore the downstream reach of Plymouth Creek, in the City of Plymouth, and 2) restore the Main Stem of Bassett Creek in Golden Valley;
- Applying for and obtaining a \$360,000 BWSR Clean Water Fund Grant for the BCWMC's 2010 stream restoration CIP projects on Plymouth Creek and the Main Stem of Bassett Creek; and,
- Completing a draft Resource Management Plan to expedite the Corps of Engineers' permitting process for construction of the water quality improvement projects in the BCWMC's 2010 – 2017 CIP.

The BCWMC's 2009 operating expenditures are illustrated in the adjacent chart. For an itemization of the operating expenditures and for more information on the BCWMC's 2009 capital projects expenditures and financial report, please see the Financial Information Appendix of the annual report.



The Bassett Creek Watershed Management Commission (BCWMC) is governed by a board composed of representatives from each of the nine member cities: Crystal Golden Valley Medicine Lake Minneapolis Minnetonka New Hope Plymouth St. Louis Park and Robbinsdale. Representatives are appointed by their cities and serve threeyear terms on the board.



## **Water Quality Activities**

In 2009, the BCWMC implemented the following water quality activities:

- Working on three Total Maximum
  Daily Load (TMDL) studies to set
  pollutant reduction goals and
  develop implementation plans to
  restore the waters of Sweeney
  Lake and Wirth Lakes in Golden
  Valley and Medicine Lake in
  Plymouth. In 2009, draft TMDL
  reports were completed for all three
  lakes;
- Participating in the stakeholder and technical advisory committees of the Upper Mississippi River Bacteria TMDL study;
- Participating in Metropolitan Council Environmental Services' Citizen-Assisted Monitoring Program (CAMP) for four lakes;
- Performing a second year of E. coli

- bacteria sampling on Bassett Creek;
- Performing biotic index monitoring at stations on Plymouth Creek, the Sweeney Lake Branch, and the North Branch as part of an ongoing, longterm assessment of the creek's water quality;
- Conducting detailed water quality monitoring and analysis for Sweeney and Twin Lakes in Golden Valley, Northwood Lake in New Hope, North Rice Pond in Robbinsdale, and South Rice Pond in Robbinsdale and Golden Valley; and,
- Participating in Hennepin County's River Watch program by funding monitoring of Bassett Creek for benthic invertebrates, which are indicators of stream health.

## **Education Activities**

In 2009, the BCWMC implemented the following education-related activities:

- Conducting a tour of the Bassett Creek Watershed. Highlights included stops in Plymouth at the proposed West Medicine Lake Park Ponds project site, the Plymouth Creek channel erosion sites, and the completed erosion repair site at County Road 9 and 61; stops in Golden Valley at Bassett Creek Main Stem erosion sites and the completed Sweeney Lake Branch channel restoration project, and a stop in St. Louis park at the Westdale Park Pond project;
- Participating in a watershed education alliance with four neighboring WMOs;
- Running the BCWMC's education grant program and submitting program information to all of the schools in the watershed;
- Contracting for the writing and publication in local newspapers of articles on water quality best

- management practices;
- Staffing a booth at public events such as Plymouth's Yard/Garden Expo, Birchview Elementary's Environmental Fair, Meadowbrook Elementary's fall festival, and Westwood Nature Center's Earth Day celebration;
- Participating in developing the "10 Things You Can Do" brochure distributed to member cities;
- Giving away native plant seed packets;
- Partnering with Blue Thumb, a local program that encourages homeowners to use native plantings, rain gardens, and shoreline stabilization to reduce runoff from home yardscapes; Cosponsoring Metro Blooms rain garden workshops with member cities; and Participating in Metro WaterShed Partners, including the Minnesota Waters "Let's Keep Them Clean" campaign.

## I. Annual Activity Report

This annual report covers the Bassett Creek Watershed Management Commission's (BCWMC) activities for fiscal year 2009 (February 1, 2009—January 31, 2010). The BCWMC Annual Report was prepared to meet the Annual Reporting Requirements as set forth in Minnesota Rules Chapter 8410.0150, subparts 1, 2, and 3.

#### A. 2009 Commissioners

Municipality / Term Expiration	Commissioners	Alter	nates
Crystal	Pauline Langsdorf, Secretary	Stu Stockhaus	
	8100 33 <sup>rd</sup> Avenue North	3437 Adair Avenue No	rth
February 1, 2012	Crystal, MN 55427	Crystal, MN 55422	
	763-544-1317	StuJane@comcast.net	
	langsdorfp@aol.com		
Golden Valley	Mayor Linda Loomis, Treasurer	David Hanson	
	City of Golden Valley	1030 Angelo Drive	
February 1, 2012	7800 Golden Valley Road	Golden Valley, MN 55422	
	Golden Valley, MN 55427	763-588-1478	
	763-593-3990	davewhanson@gmail.c	<u>com</u>
	Linda.loomis@ci.golden-valley.mn.us		
Medicine Lake	Cheri Templeman	John O'Toole	Ted Hoshal
	PO Box 47091	MGO4SE, General	6960 Madison Ave.
February 1, 2012	Plymouth, MN 55447	Mills, Inc.	W., Suite 2
	612-750-3354	PO Box 1113	Minneapolis, MN
	Templeman@Justice.com	Minneapolis, MN	55427-3267
		55440	763-541-1140
		763-764-2422	dthoshal@luma-
		john.otoole@genmills	gard.com
		<u>.com</u>	
Minneapolis	Michael Welch, Chair	Lisa Goddard	
	212 Thomas Avenue S.	214 Logan Avenue Nor	
February 1, 2010	Minneapolis, MN 55405	Minneapolis, MN 55405	
	612-385-6885	763-475-0010	
	mjewelch@gmail.com	lgoddard@srfconsulting.com	
Minnetonka	Kris Sundberg	Tony Wagner	
	18617 Covington Road	1804 Traymore Road	
February 1, 2010	Minnetonka, MN 55345	Minnetonka, MN 55305	5
	952-380-3432	952-512-1817	
	Kristine sundberg@hotmail.com	twagner@eminnetonka	.com
New Hope	Daniel Stauner	John Elder	
E   4 00/0	8424 Meadow Lake Road E.	City of New Hope	
February 1, 2010	New Hope, MN 55428-3142	4401 Xylon Ave. N.	
	763-536-1415	New Hope, MN 55428	
	dstauner@ci.new-hope.mn.us	763-531-5100	
		jelder@ci.new-hope.mr	<u>1.us</u>

<sup>-</sup> Roster continued on next page -

Plymouth	Ginny Black, Vice (	Chair	Elizabeth Thornton	
	Plymouth City Hall		4270 Lawndale Lane North	
February 1, 2011	3400 Plymouth Blv	d	Plymouth 55446	
	Plymouth 55447		763-509-0784	
	763-509-5004		eathornt@comcast.net	
	Black.ginny@att.ne	<u>et</u>		
Robbinsdale	Wayne Sicora		Vacant	
	3706 Abbott Ave. North			
February 1, 2011	Robbinsdale 55422			
	763-532-8165			
	Wayne.sicora@rya	ncompanies.com		
St. Louis Park	Manuel Jordan	Jim deLambert	Sue Sanger	Justin Riss
	P.O. Box 26607	9257 West 22 <sup>nd</sup>	4717 W. 28 <sup>th</sup> St.	3732 Penn Ave S.
February 1, 2011	St. Louis Park	Lane, St. Louis	St. Louis Park	St. Louis Park 55426
	55426	Park 55426	55416	justinriss@yahoo.com
	952-544-7978	763-489-3150	Suesanger@	
	heritageshadetre	jimd@liesch.com	comcast.net	
	e@comcast.net			

#### **B. BCWMC Staff and Consultants**

#### **Attorney**

Charlie LeFevere Kennedy & Graven 470 U.S. Bank Plaza 200 South Sixth Street Minneapolis, MN 55402 612-337-9215 clefevere@kennedy-graven.com

#### **Deputy Treasurer**

Susan Virnig
City of Golden Valley
7800 Golden Valley Road
Golden Valley, MN 55427
763-593-8010
svirnig@ci.golden-valley.mn.us

#### **Engineer**

Leonard J. Kremer, P.E.
James P. Herbert, P.E.
Karen L. Chandler, P.E.
Barr Engineering Company
4700 West 77th Street
Minneapolis, MN 55435-4803
952-832-2600
lkremer@barr.com
kchandler@barr.com
jherbert@barr.com

#### **Bassett Creek Recording Administrator**

Amy Herbert c/o Barr Engineering Company 4700 West 77th Street Minneapolis, MN 55435-4803 952-832-2652 bcra@barr.com

#### C. BCWMC Goals and 2009 Work Activities

#### **Description of Overall Goals**

The BCWMC's general goals fall under the categories of water quality, flood control, erosion and sediment control, stream restoration, wetland management, groundwater, public ditches, and public involvement and information. The goals are to:

- Manage the water resources of the watershed, with input from the public, so that the beneficial uses of wetlands, lakes, and streams remain available to the community.
- Improve the quality of stormwater runoff reaching the Mississippi River by reducing the nonpoint source pollution (including sediment) carried as stormwater runoff.
- Protect and enhance fish and wildlife habitat and maintain shoreland integrity.
- Reduce flooding along the Bassett Creek trunk system which is defined as:
  - a. The main channel from Medicine Lake to the Mississippi River.
  - b. The North Branch from upstream of County Road 9 to its junctions with the Main Stem near T.H. 100.
  - c. The Sweeney Lake Branch, from its source in Section 5, T29N, R21W to its junction with the Main Stem downstream of Sweeney Lake.
  - d. Plymouth Creek, from the point where it intersects with Highway 55 in Section 17, T228N, R22W to Medicine Lake, including the lake.
  - e. The designated water quantity and water quality storage facilities.
  - f. All other drains designated as trunks by the BCWMC.
- Protect human life, property, and surface water systems that could be damaged by flood events.
- Regulate stormwater runoff discharges and volumes to minimize flood problems, flood damages, and the future costs of stormwater management systems.

- Provide leadership and assist member cities with coordination of intercommunity stormwater runoff planning and design.
- Prevent erosion and sedimentation to the greatest extent possible to protect the BCWMC's
  water resources from increased sediment loading and associated water quality problems.
- Implement soil protection and sedimentation controls whenever necessary to maintain health, safety, and welfare.
- Implement stream restoration measures whenever necessary to maintain health, safety, and welfare.
- Maintain or enhance the natural beauty and wildlife habitat value of Bassett Creek.
- Achieve no net loss of wetlands in the BCWMC, in conformance with the Minnesota Wetland Conservation Act (WCA) and associated rules.
- Protect the quantity and quality of groundwater resources.
- Manage public ditches in a manner that recognizes their current use as urban drainage systems.
- Raise awareness of the watershed's existence and the role that the BCWMC plays in protecting water quality and preserving the watershed's health and aesthetics.
- Enable the target audiences to have confidence in the BCWMC's expertise and participate in a meaningful way in the planning process and ongoing projects conducted by the BCWMC.
- Raise awareness of the impact that individuals, businesses, and organizations have upon
  water quality and motivate these audiences to change personal/corporate behavior that has a
  negative impact on water quality and the watershed.

#### 2009 Work Activities Completed

In addition to the activities described in the Executive Summary, the BCWMC conducted the following activities in 2009. Work associated with review of development proposals is listed in Section E. Work related to water quality monitoring is addressed in Section F.

- Capital Improvements Program (CIP)—The BCWMC continued to implement its capital improvements program. In 2009, these achievements included:
  - 1. Progress on CIP projects. The following CIP projects were completed or underway in 2009:
    - Northwood Lake East Pond—Construction of this water quality treatment pond (NL-7) in the city of New Hope was completed in 2009. The purpose of the pond is to improve the quality of stormwater runoff to Northwood Lake by removing sediment and phosphorus. The pond will treat stormwater from approximately 22 acres.
    - West Medicine Lake Park Ponds—Construction of these water quality treatment ponds (ML-11) in the city of Plymouth began in 2009. The purpose of the project is to improve the quality of stormwater runoff to Medicine Lake by removing significant amounts of sediment and phosphorus. The pond system will treat stormwater runoff from the entire 6,400-acre Plymouth Creek watershed.
    - Westdale Park Pond—Construction of this water quality treatment pond project (WST-1) was completed in 2006. The purpose of the project is to improve the quality of stormwater runoff to Westwood Lake. The BCWMC made the final reimbursement for the project in 2009.
  - 2. Completing a minor plan amendment to the BCWMC's *Watershed Management Plan*. The amendment comprised the following three additions to the Plan's Table 12-2, Water Quality Management and Flood Control 10-Year Capital Improvements Program (CIP):
    - Restoration of Plymouth Creek (PC-1) from 26th Avenue to Medicine Lake in the
       City of Plymouth.
    - Restoration of Plymouth Creek (PC-2) from 26th Avenue to 37th Avenue in the City of Plymouth.

 Restoration of the Main Stem of Bassett Creek from the City of Crystal boundary (upstream of Highway 100) to Regent Avenue.

The amendment also included:

- o Revisions to Tables 4-2 and 4-3 in the Plan to change the Parkers Lake phosphorus goal to 38 ppb in accordance with Plymouth's Surface Water Management Plan.
- Updates to Table 5-3, Bassett Creek Flood Profiles, to change the flood elevations of Crane Lake and Oak Knoll Pond in accordance with Minnetonka's Water Resource Management Plan.

At their July 16, 2009 meeting, the BCWMC passed resolution 09-04, approving the minor plan amendment.

- 3. Completing a feasibility study to restore the Main Stem of Bassett Creek from the City of Crystal boundary (upstream of Highway 100) to Regent Avenue; project to begin in 2010—estimated cost of improvement: \$636,000
- 4. Finalizing a feasibility study to restore the downstream reach of Plymouth Creek, from 26th Avenue to Medicine Lake (PC-1), in the City of Plymouth—estimated cost of improvement: \$965,000
- 5. Applying for and obtaining a \$360,000 BWSR Clean Water Fund Grant for the BCWMC's two 2010 stream restoration CIP projects: the Main Stem of Bassett Creek from the City of Crystal boundary (upstream of Highway 100) to Regent Avenue, and the downstream reach of Plymouth Creek, from 26th Avenue to Medicine Lake (PC-1), in the City of Plymouth.
- 6. Completing a draft Resource Management Plan to expedite the permitting process for the BCWMC's annual CIP projects, the U.S. Army Corps of Engineers (COE) recommended that the BCWMC complete a Resource Management Plan (RMP). In 2009, the BCWMC prepared and submitted for review a draft RMP that covers eleven water quality pond projects and five stream restoration projects that are expected to be completed between 2010 and 2017. COE approval of the RMP is expected in early 2010.

The BCWMC's 10-year capital improvements plan and potential future water quality capital improvements plan are included in the BCWMC *Watershed Management Plan* (September

2004). The table listing the BCWMC's capital improvement projects, updated to include all of the plan amendments, is appended.

• Impaired Waters and Total Maximum Daily Loads (TMDL) Studies—The following water bodies in the Bassett Creek Watershed were listed in the Minnesota Pollution Control Agency's (MPCA) draft 2010 "Inventory of Impaired Waters". The inventory includes listings of (1) impaired waters that require the development of a TMDL study, (2) impaired waters that have an approved TMDL study, but are not yet meeting water quality standards, and (3) impaired waters from natural causes that do not require a TMDL study. The inventory is available at the MPCA's Impaired Waters web site: <a href="http://www.pca.state.mn.us/water/tmdl/tmdl-303dlist.html">http://www.pca.state.mn.us/water/tmdl/tmdl-303dlist.html</a>.

Water Body (Lake/River ID #)	Pollutant or Stressor (Year of Listing)
Bassett Creek from Medicine Lake to Mississippi River (07010206-538)	Fish bioassessments (2004) Fecal coliform (2008) Chloride (2010)
Sweeney Lake (27-0035-01)	Nutrient/Eutrophication Biological indicators (2004)
Wirth Lake (27-0037-00)	Nutrient/Eutrophication Biological indicators (2002) Mercury in fish tissue (1998) <sup>1</sup>
Medicine Lake (27-0104-00)	Nutrient/Eutrophication Biological indicators (2004) Mercury in fish tissue (2004) <sup>1</sup>
Parkers Lake (27-0107-00)	Mercury in fish tissue (1998)
Northwood Lake (27-0627-00)	Nutrient/Eutrophication Biological indicators (2004)

<sup>&</sup>lt;sup>1</sup> The MPCA completed a statewide mercury TMDL that was approved 2007

1. **Sweeney Lake TMDL Study**—In the *Final EPA-Approved MPCA 2004 CWA 303(d) List of Impaired Waters*, Sweeney Lake was listed as impaired due to excess nutrients (phosphorus) and was listed as having a target TMDL study start date of 2009 and a target TMDL study completion date of 2012.

In 2007 the BCWMC contracted with the MPCA for Phase 1 of the Sweeney Lake TMDL study. The Phase 1 work plan is posted on the MPCA's Web site at <a href="http://www.pca.state.mn.us/publications/tmdl-sweeneylake-phase1workplan.pdf">http://www.pca.state.mn.us/publications/tmdl-sweeneylake-phase1workplan.pdf</a>. In 2008 the BCWMC contracted with the MPCA for Phase 2 of the Sweeney Lake TMDL study. The Phase 2 work plan is posted on the MPCA's Web site at <a href="http://www.pca.state.mn.us/publications/tmdl-sweeneylake-phase2workplan.pdf">http://www.pca.state.mn.us/publications/tmdl-sweeneylake-phase2workplan.pdf</a>. In 2008 the final pieces of Phase 1 were completed and 50% of Phase 2 was completed. In 2009,

the Phase 2 tasks completed included completion of a draft TMDL report and implementation plan, a number of stakeholder meetings and a public meeting on June 2, 2009. The Sweeney Lake TMDL estimated project timeline is posted on the MPCA's Web site at <a href="http://www.pca.state.mn.us/publications/tmdl-sweeneylake-projecttimeline.pdf">http://www.pca.state.mn.us/publications/tmdl-sweeneylake-projecttimeline.pdf</a>.

The components of Phase 2 of the TMDL study include the following tasks:

- A nutrient-loading analysis comprising an in-lake data collection, runoff
  monitoring, phosphorus loading analysis, evaluation of internal loading, surfacewater loading, in-lake mass balance, and aeration impacts, and BATHTUB
  modeling;
- A public involvement process;
- Development of the details of an implementation plan;
- Preparation of a recommended monitoring plan; and
- Preparation of the draft and final TMDL reports.

For more information about the Sweeney Lake TMDL study, visit the following Web sites:

The Sweeney Lake TMDL project Web site maintained by SEH, Inc. is at <a href="http://www.sehinc.com/online/sweeney/index.htm">http://www.sehinc.com/online/sweeney/index.htm</a>.

The Sweeney Lake TMDL project Web site maintained by the MPCA is at <a href="http://www.pca.state.mn.us/water/tmdl/project-sweeneylake.html">http://www.pca.state.mn.us/water/tmdl/project-sweeneylake.html</a>.

The TMDL page on the Bassett Creek Watershed Management Commission's Web site is at http://www.bassettcreekwmo.org/TMDLStudyHomepage.htm.

2. **Medicine Lake TMDL Study**—In the *Final EPA-Approved MPCA 2004 CWA 303(d) List of Impaired Waters*, Medicine Lake was listed as impaired due to excess nutrients (phosphorus) and was listed as having a target TMDL study start date of 2009 and a target TMDL study completion date of 2012. In 2008 the BCWMC approved conducting the Medicine Lake TMDL Study with the Minnesota Pollution Control Agency (MPCA) leading the project. The MPCA has partnered with Bassett Creek Watershed Management

Commission (BCWMC) and Three Rivers Park District (TRPD) to develop the work products necessary to complete the TMDL and Implementation Plan for Medicine Lake. The Medicine Lake Excess Nutrients TMDL Project Tasks and Timeline is posted on the MPCA's Web site at <a href="http://www.pca.state.mn.us/publications/tmdl-medicinelake-timeline.pdf">http://www.pca.state.mn.us/publications/tmdl-medicinelake-timeline.pdf</a> and the final work plan is posted on the Web site at <a href="http://www.pca.state.mn.us/publications/tmdl-medicinelake-workplan.pdf">http://www.pca.state.mn.us/publications/tmdl-medicinelake-workplan.pdf</a>.

In 2008 the Medicine Lake TMDL Steering Committee was formed with technical and non-technical stakeholders that will be affected by the final implementation plan. A list of the 2008 and 2009 Steering Committee meeting dates and topics is posted on the MPCA Web site at <a href="http://www.pca.state.mn.us/water/tmdl/medicinelake-scmeetings.pdf">http://www.pca.state.mn.us/water/tmdl/medicinelake-scmeetings.pdf</a>.

In 2009, work tasks completed included completion of the first draft of the TMDL and implementation plan, numerous meetings of the Medicine Lake Stakeholder Steering Committee, and a public meeting on October 29, 2009.

For more information about the Medicine Lake TMDL study, visit the following Web sites:

The Medicine Lake TMDL project Web site maintained by the MPCA is at http://www.pca.state.mn.us/water/tmdl/project-medicinelake-phosphorus.html

The TMDL page on the Bassett Creek Watershed Management Commission's Web site is at <a href="http://www.bassettcreekwmo.org/TMDLStudyHomepage.htm">http://www.bassettcreekwmo.org/TMDLStudyHomepage.htm</a>.

3. Wirth Lake TMDL Study—In the *Final EPA-Approved MPCA 2004 CWA 303(d) List of Impaired Waters*, Wirth Lake was listed as impaired due to excess nutrients (phosphorus in amounts greater than the state's goal of 40 micrograms per liter) and was listed as having a target TMDL study start date of 2009 and a target TMDL study completion date of 2012. In 2008 the BCWMC developed a scope of work for the TMDL and approved undertaking the TMDL study with the Minnesota Pollution Control Agency leading the project. The MPCA entered into an agreement with a contractor to conduct the technical work in the work plan. The final public meeting will be held in the spring of 2010.

In 2009, the work tasks completed included:

- Updating the watershed and in-lake water quality response modeling developed for the BCWMC Wirth Lake Plan;
- Calibrating the modeling to the most recent monitoring data for the lake;
- Evaluating watershed control measures and in-lake management techniques for phosphorus load reductions;
- Determining the margin of safety (MOS) and waste load allocations (WLA) and load allocations (LA) for phosphorus;
- Developing implementation and compliance monitoring plans;
- Coordinating and communicating with a stakeholder- technical advisory committee;
   and
- Completing the draft TMDL report.

For more information about the Wirth Lake TMDL study, visit the following Web sites:

The Wirth Lake TMDL project Web site maintained by the MPCA is at <a href="http://www.pca.state.mn.us/water/tmdl/project-wirthlake.html">http://www.pca.state.mn.us/water/tmdl/project-wirthlake.html</a>

The TMDL page on the Bassett Creek Watershed Management Commission's Web site is at <a href="http://www.bassettcreekwmo.org/TMDLStudyHomepage.htm">http://www.bassettcreekwmo.org/TMDLStudyHomepage.htm</a>

- 4. **Bassett Creek Fish Bioassessment Listing**—In the Final EPA-Approved MPCA 2004 *CWA 303(d) List of Impaired Waters*, the Main Stem of Bassett Creek, from Medicine Lake to the Mississippi River, was listed as impaired for fish (biota). In response to this listing, the MPCA completed fish sampling of the creek in 2008. The MPCA is currently reviewing the existing biota standards/listing criteria; this process is expected to take more than two years. The TMDL will not be started until the process is completed.
- 5. **Bassett Creek Fecal Coliform Listing** —In the 2008 Final TMDL List Inventory of all Impaired Waters, Bassett Creek, from Medicine Lake to the Mississippi River, was listed as impaired for fecal coliform. In response to this listing, E. coli sampling of Bassett Creek began in July 2008 and is slated to continue through June 2010. The BCWMC and the MPCA are cooperating in this effort—the BCWMC is collecting the samples and the MPCA is conducting the laboratory analysis of the samples. During June, July, August,

and September 2009, a contractor collected water samples along six locations along the creek to determine presence and quantity of bacteria in the creek. The samples were analyzed at the Minnesota Department of Health lab in St. Paul for E. coli bacteria. All samples tested contained E. coli bacteria. The BCWMC received the results of the analysis in January 2010. The Bassett Creek watershed will be included in the Upper Mississippi River E. coli TMDL, which is currently underway. Additional data for the Upper Mississippi River E. coli TMDL will be collected in 2010 and 2011, a draft TMDL report is expected sometime in 2012, and final approval of the TMDL is expected in 2013. The Upper Mississippi River E. coli TMDL project Web site maintained by the MPCA is at http://www.pca.state.mn.us/water/tmdl/project-uppermiss-bacteria.html.

- 6. Watershed-wide TMDL—In 2009, the BCWMC considered the MPCA's suggestion that the BCWMC prepare a watershed-wide TMDL for the remaining impaired waters in the BCWMC Bassett Creek (impaired for fecal coliform, fish bioassessments, and chloride (draft 2010)), and Northwood Lake (impaired for nutrient/eutrophication biological indicators (total phosphorus)). However, with the inclusion of the Bassett Creek watershed in the Upper Mississippi River E. coli TMDL, and the MPCA's review of its existing biota standards/listing criteria, the BCWMC decided not to pursue the watershed-wide TMDL at this time.
- Capital Improvement Project (CIP) Reserve Account. In 2005 the BCWMC established a \$250,000 reserve fund to address shortages in available funding in any given year for construction of water quality CIP projects. The BCWMC agreed to revisit the reserve account policy each year. In 2009 the BCWMC made no changes to the policy.
- Annual Report—The BCWMC prepared the 2008 Annual Report as set forth in the Minnesota Rules Chapter 8410.0150. The report was submitted to the Board of Water and Soil Resources and is available online at the Bassett Creek Watershed Management Commission Web site at http://www.bassettcreekwmo.org.
- Citizen Involvement— The BCWMC encourages citizen participation including an opportunity at each monthly BCWMC meeting to hear citizen-input about agenda and non-agenda items. The BCWMC posts its meeting calendar, upcoming meeting agendas, meeting materials, and previous meeting minutes on its Web site (<a href="www.bassettcreekwmo.org">www.bassettcreekwmo.org</a>) to provide citizens an opportunity to attend BCWMC and BCWMC Committee meetings and to monitor BCWMC actions. The BCWMC notified the public of and held public hearings on

March 19, 2009 regarding amending the BCWMC's *Watershed Management Plan* and on September 17, 2009 regarding ordering the 2010 CIP projects. Citizen involvement also is an important component on Total Maximum Daily Load (TMDL) studies; a number of stakeholder meetings were held and public meetings took place on June 3, 2009 regarding the Sweeney Lake TMDL, and on October 29, 2009 regarding the Medicine Lake TMDL.

Water Quantity—The BCWMC continued its lake- and stream-gauging program. The lake-gauging program consisted of collecting lake-level readings at Medicine Lake, Sweeney Lake, Parkers Lake, Westwood Lake, Crane Lake (Ridgedale Pond), Northwood Lake and the Theodore Wirth Park storage area (upstream of the Highway 55 control structure). Lake levels were measured twice per month between April and September. Graphs of lake levels are included in the appendices.

The stream-gauging program consisted of periodically surveying stages or inspecting the creek during periods of high flow. The BCWMC also participated with the Metropolitan Council and Minneapolis Park and Recreation Board on the watershed outlet monitoring program (WOMP) designed to continuously monitor flow and water quality.

Also note the following water level gages in the Bassett Creek watershed:

- A staff gage is located at the Medicine Lake outlet structure. The current 0.00 staff gage reading is equal to 887.00 MSL.
- The City of Golden Valley installed staff gauges along the main stem of Bassett Creek at the following street crossings: Pennsylvania Ave., St. Croix Ave., Westbrook Ave., Highway 100, Regent Ave., Bassett Creek Drive, and Golden Valley Road. Staff gages were installed along the Sweeney Lake branch, upstream of Highway 100 and at the pedestrian bridge in Schaper Park.
- The City of Golden Valley operates continuous automated flow level monitors along the main stem of Bassett Creek, upstream of Wisconsin Avenue and upstream of Hampshire Avenue, as part of its operation of the Wisconsin Avenue Control Structure.
- Watershed Inspection—The BCWMC performed monthly erosion control inspections of construction sites within the watershed. Following each inspection, a letter was prepared and

sent to the applicable municipality listing construction projects and the improvement needed for effective erosion control.

- **Flood Control Project Inspection**—The BCWMC performed its annual inspections of the flood control project. The 2009 inspection also included the periodic 5-year inspection of the double box culvert. Following the inspection, letters were prepared and sent to the applicable municipality, the Corps of Engineers and Mn/DOT summarizing the results of the inspection.
- Twin's Stadium Project—The BCWMC coordinated with the city of Minneapolis and the Minnesota Ball Park Authority regarding inspection and construction of the proposed stadium over the Bassett Creek Double Box Culvert. A post-Twins stadium construction inspection of the double box culvert beneath the Twins stadium was performed in conjunction with the BCWMC periodic 5-year inspection of the entire box culvert. A letter was sent to the Minnesota Ball Park Authority following the inspection.
- Development Proposals—The BCWMC reviewed 13 development proposals in the
  watershed for conformance to water quality and flooding policies. The BCWMC reviewed
  over 30 development proposals the previous year. See Section F: Project Reviews.
- **Technical Advisory Committee**—The BCWMC directed its Technical Advisory Committee (TAC) to review the following items:
  - 1. Including Channel Maintenance Projects in the BCWMC's CIP;
  - 2. The Plymouth Creek Restoration Project and its Feasibility Study;
  - 3. Proposed Capital Improvement Plan (CIP) modifications;
  - 4. Member-City Project Requests for Channel Maintenance Funds;
  - 5. Water Quality Modeling and Funding;
  - 6. BCWMC's Water Quality Goals for all Waterbodies in the Watershed;
  - 7. Member-Cities' Permit Approval Processes and 60-day Review Period and how those Processes are Integrated in the BCWMC's Permit Review Process;
  - 8. Maintenance of BCWMC Projects;
  - 9. 2009 Watershed Tour;

- 10. Resource Management Plan;
- 11. Technical Aspects of TMDL Load Allocations;
- 12. Individual versus Categorical Approach to TMDL Wasteload Allocation;
- 13. County Participation in TMDL Categorical Wasteload Allocation; and,
- 14. Model and Data Results for Medicine Lake TMDL Study.
- Channel Maintenance Fund—This fund is for creek and stream bank maintenance projects that are smaller than the channel maintenance projects that are part of the BCWMC's Capital Improvement Plan. The City of Plymouth used channel maintenance funds in 2009 to repair stream banks downstream of the fish barrier on Plymouth Creek.
- Flood Control Long-Term Maintenance Fund—These funds are for projects to repair structures associated with the Flood Control Project.
- **Resolutions**—The BCWMC passed the following resolutions in fiscal year 2009:
  - Resolution 09-01, A Resolution Approving the Reimbursement to the Bassett Creek Watershed Management Commission 2.5% of the 2008 Tax Levy, for Administrative Expenses for Capital Improvement Program (CIP) Projects and Approving the Transfer of the Funds from the CIP Account to the Administrative Account— The BCWMC adopted Resolution 09-01 at its January 15, 2009 meeting.
  - Resolution 09-02, A Resolution Designating Depositories for Bassett Creek
     Watershed Management Commission Funds— The BCWMC adopted Resolution
     09-02 at its January 15, 2009 meeting.
  - Resolution 09-03, A Resolution Amending the Bassett Creek Watershed Management Commission's 2009 Operating Budget by Reappropriating Funds from the 2008 Budgeted Expenditures into 2009. All Items Listed Were Approved in the 2008 Budget but for Various Reasons Were Not Expended— The BCWMC adopted Resolution 09-03 at its February 19, 2009 meeting.
  - Resolution 09-04, A Resolution Approving Watershed Plan Amendment— The BCWMC adopted Resolution 09-04 at its July 16, 2009 meeting.

- Resolution 09-05, A Resolution Ordering 2010 Improvements, Designating
  Members Responsible for Construction, and Making Findings Pursuant to
  Minnesota Statutes, Section 103B.251— The BCWMC adopted Resolution 09-05 at
  its September 17, 2009 meeting.
- Resolution 09-06, A Resolution Approving the Local Plan Prepared by the City
  of St. Louis Park— The BCWMC adopted Resolution 09-06 at its September 17,
  2009 meeting.
- Resolution 09-07, A Resolution Approving the Transfer of Bassett Creek
  Watershed Management Commission Funds from the Administrative Account to
  the Erosion/ Sediment (Channel Maintenance) Account, Long-Term
  Maintenance Account, and TMDL Studies Account— The BCWMC adopted
  Resolution 09-07 at its December 17, 2009 meeting.
- Resolution 10-01, A Resolution Approving the Reimbursement to the Bassett Creek Watershed Management Commission 2.5% of the 2009 Tax Levy, for Administrative Expenses for Capital Improvement Program (CIP) Projects and Approving the Transfer of the Funds from the CIP Account to the Administrative Account—The BCWMC adopted Resolution 10-01 at its January 21, 2010 meeting.
- Resolution 10-02, A Resolution Approving the Local Plan Prepared by the City of Crystal— The BCWMC adopted Resolution 10-02 at its January 21, 2010 meeting.

## D. 2010 Projected Work Plan

Following is a list of tasks to be completed during 2010:

- Capital Improvements Program (CIP)—The BCWMC will continue to implement its capital improvements program. In 2010, this work will include:
  - Capital Improvement Program and Prioritization—The BCWMC will review and update
    its capital improvement program and its water resource prioritization. The Capital
    Improvements Program is included in the report appendices.
  - 2. Progress on CIP projects:
    - West Medicine Lake Park Ponds—Construction of these water quality treatment ponds (ML-11) in the city of Plymouth will be completed in 2010.
      - Restoration of Plymouth Creek (PC-1) from 26th Avenue to Medicine Lake—
         Work on this project in the City of Plymouth will begin in 2010.
      - Restoration of the Main Stem of Bassett Creek from the City of Crystal boundary (upstream of Highway 100) to Regent Avenue—Work on this project in the cities of Crystal and Golden Valley will being in 2010.
  - 3. Completing and gaining approval of a major plan amendment to the BCWMC's Watershed Management Plan to add the following projects to Table 12-2 of the Plan (Water Quality Management and Flood Control 10-Year Capital Improvements Program (CIP)):
    - Restoration of the North Branch of Bassett Creek, from 36<sup>th</sup> Avenue to Bassett Creek Park, in the City of Crystal—the estimated project cost is \$660,000.
    - Restoration of the Main Stem of Bassett Creek from Highway 169 to the City of Crystal boundary (upstream of Highway 100), in the City of Golden Valley—the estimated project cost is \$780,000.
  - 4. Signing a grant agreement, preparing and gaining approval of a work plan, and submitting project updates for the BWSR Clean Water Fund Grant for the BCWMC's two 2010 stream restoration CIP projects.

- 5. Completing feasibility studies for the above North Branch and Main Stem (from Highway 169 to the City of Crystal boundary) channel restoration projects.
- 6. Final approval of the Resource Management Plan by the U.S. Army Corps of Engineers.
- Second Generation Watershed Management Plan—The BCWMC will implement its Capital Improvements Program and its annual water quality and flood control programs, as described in the BCWMC Watershed Management Plan.
- Water Quantity—The BCWMC will perform its lake- and stream-gauging program. The lake-gauging program will encompass Medicine Lake, Sweeney Lake, Parkers Lake, Westwood Lake, Crane Lake (Ridgedale Pond), Northwood Lake, Bassett Creek Park Pond and Theodore Wirth Park Storage area upstream of TH 55 control structure. The stream-gauging program will consist of periodically surveying stages or inspecting the creek during periods of high flow.
- Watershed Inspection—The BCWMC will perform its watershed construction-site inspection program. The inspections have proved valuable in correcting erosion- and sediment-control practices that are not in conformance with BCWMC policies.
- Flood Control Project Inspection—The BCWMC will perform its flood control project inspection program as set forth in the Bassett Creek Flood Control Project Operations and Maintenance Manual.
- Water Quality—Proposed water quality tasks for 2010 include performance of the following:
  - 1. Water Quality Monitoring: The BCWMC and Three Rivers Park District will perform detailed lake monitoring of Medicine Lake in the Cities of Medicine Lake and Plymouth. Winter (through ice) water quality monitoring and summer sediment sampling will also be conducted at Twin Lake in the City of Golden Valley.
  - 2. *Citizens Assisted Monitoring Program (CAMP):* The program will be managed by Metropolitan Council Environmental Services (MCES). The lake-gauging program will include lake monitoring through CAMP. Volunteer citizens will monitor the following lakes: Sweeney Lake and Twin Lake in Golden Valley, Medicine Lake in the Cities of

- Medicine Lake and Plymouth, Northwood Lake in New Hope, Westwood Lake in St. Louis Park, and Parkers Lake in Plymouth.
- 3. Watershed Outlet Monitoring Program (WOMP): The program will be managed by Metropolitan Council Environmental Services (MCES) and the Minneapolis Park and Recreation Board (MPRB). The BCWMC will provide \$5,000 financial support to MPRB for operating the station and will provide technical assistance to MCES for maintenance of the rating curve.
- 4. Wirth Lake will be monitored by MPRB.
- 5. River Watch Program: The BCWMC will participate in the River Watch program managed by Hennepin County Environmental Services (HCES); two sites on Bassett Creek will be sampled. HCES will provide a final report of the 2010 sampling results to the BCWMC.
- 6. Stormwater flow monitoring and in-stream water quality monitoring in the Medicine Lake watershed will be performed by Three Rivers Park District and the City of Plymouth.
- **Development**—The BCWMC will review development proposals in the watershed for conformance to water quality and flooding policies.
- Citizen Involvement—The BCWMC will continue to encourage citizen participation at its monthly BCWMC and at its Committee meetings. The meetings are noticed to the public and a meeting calendar is posted on the BCWMC's Web site. A public meeting on the Wirth Lake TMDLs will take place in 2010. Also, a public hearing on a Watershed Management Plan amendment is expected to take place in 2010.
- Channel Maintenance Fund—The BCWMC will continue its creek and streambank maintenance fund. The member cities will be assessed \$25,000 annually for the fund.
- Flood Control Long-Term Maintenance Fund—The BCWMC established a long-term maintenance fund to be used to repair structures associated with the Flood Control Project. The member cities will be assessed \$25,000 annually to a not-to-exceed fund amount of \$1 million.

- Annual Report—The BCWMC will prepare an annual report, submit the report to BWSR and member cities, and post it on the BCWMC Web site.
- Sweeney Lake TMDL Study—The BCWMC and its contractor will continue with the Phase 2 tasks of the TMDL study on Sweeney Lake including: completing the implementation plan; finalizing the recommended monitoring plan; and preparing the draft and final TMDL reports. The BCWMC anticipates the final TMDL report will be completed by fall of 2010.
- Medicine Lake TMDL Study—The BCWMC and the MPCA and their contractors will
  continue working on the project tasks, including preparing the final TMDL and
  implementation reports. The BCWMC anticipates the final report will be completed by fall of
  2010.
- Wirth Lake TMDL Study—The BCWMC and the MPCA and their contractors will conduct the tasks in the work plan, including completing the final TMDL report, and conducting the final public meeting. The goal is to have the final TMDL report completed by fall of 2010.
- **Bassett Creek Main Stem Biota Listing**—The next steps regarding the fish bioassessment (e.g., TMDL) will not be known until the MPCA revises the biota standards/listing criteria, which is expected sometime during 2012-2013.
- Bassett Creek Main Stem Fecal Coliform Listing—In June 2010, the BCWMC will complete the E. coli sampling of Bassett Creek that began in July 2008. The BCWMC will collect samples, while the MPCA will complete the laboratory analysis of the samples. Water samples will be collected at six locations along the creek to determine presence and quantity of bacteria in the creek. The BCWMC will continue to participate in the upper Mississippi River E. coli TMDL process.

## **E. Project Reviews**

Two tables have been prepared that list development proposals and other plans that were reviewed by the BCWMC and/or its engineering consultant. The following table, *Plans Presented for BCWMC Review and Comment* includes development proposals and other plans that were reviewed and discussed during the BCWMC meeting. The second table, *Plans Presented for Administrative Review and Comment*, is a list of projects that were reviewed by the BCWMC's engineer in accordance with policies of the BCWMC. The second table is included in the report appendices.

#### Plans Presented for BCWMC Review and Comment

Appl. Form #	Project Name	Date Submitted	City	Comments	Date of BCWMC Meeting
2008-28	9209 40 ½ Avenue North	10/13/08	New Hope	BCWMC directed TAC to review application	2/19/09
2009-4	2009 Minnetonka Street Rehab- Sherwood Forest Area	3/2709	Minnetonka	Conditional approval, Public road	4/16/09
2008-28	9209 40 ½ Avenue North	10/13/08	New Hope	Status report to BCWMC (no action required)	5/21/09
2009-5	26 <sup>th</sup> Avenue Plymouth Creek Culvert replacement	3/27/09	Plymouth	Approval, Public road, crossing	5/21/09
2009-6	Plymouth Middle School Parking Improvements	5/29/09	Plymouth	Conditional approval Institutional improvements	6/18/09
2009-8	Laurel Hills East Condominium Improvements	7/1/09	Golden Valley	Conditional approval Multiple Residential improvements	7/16/09
2005-28	CIP PL-6 Circle Park Pond	8/25/09 9/06/09	Plymouth	No action required (CIP project review)	10/15/09
2010-10	GVCC Pond Dredging/ Creek Stabilization	1/12/10	Golden Valley	Conditional approval	1/21/10
2009-1A	TruStone Financial Federal Credit Union	1/11/10	Plymouth	Conditional approval, Commercial redevelopment	1/21/10

#### F. Water Quality Monitoring Data and Studies

The following water quality monitoring and water quality studies were performed:

- Sweeney Lake, Twin Lake, Northwood Lake, North Rice Pond, and South Rice Pond—
  The BCWMC and Three Rivers Park District performed detailed lake monitoring of Sweeney Lake, Twin Lake, Northwood Lake, North Rice Pond, and South Rice Pond. Samples were collected on eight occasions in Sweeney Lake and Twin Lake and on six occasions in Northwood Lake and North and South Rice Pond. Sweeney Lake samples were collected from two basins (North and South). Dissolved oxygen, temperature, specific conductance, pH, and Secchi disc transparency (Secchi depth) were measured in the field, and water samples were analyzed in the laboratory for total phosphorus, soluble reactive phosphorus, total nitrogen, and chlorophyll a. Three Rivers Park District performed the sampling and analysis of water quality parameters. Three Rivers Park District also collected phytoplankton and zooplankton samples; BCWMC staff analyzed these samples. The report 2009 Lake Water Quality Study Sweeney Lake, Twin Lake, Northwood Lake, North Rice Pond, and South Rice Pond (January, 2010) was prepared by the BCWMC. A copy of the executive summary is appended. The report is also available on the Bassett Creek Watershed Management Commission Web site (http://www.bassettcreekwmo.org)
- Citizens Assisted Lake Monitoring Program (CAMP)—The BCWMC participated with the Metropolitan Council Environmental Services (MCES) in its citizen-assisted lakemonitoring program (CAMP). In 2009, citizen volunteers monitored the following lakes: Sweeney Lake in Golden Valley, Northwood Lake in New Hope. Parkers Lake in Plymouth, South Rice Pond in the cities of Golden Valley and Robbinsdale, and Westwood Lake in St. Louis Park. For results of the 2008 CAMP, see 2008 Study of the Water Quality Of 192 Metropolitan Area Lakes (Met Council, October 2009) (the report on the 2009 CAMP is not yet available). The report is also available on the Metropolitan Council Web site: (<a href="http://www.metrocouncil.org/environment/RiversLakes/Lakes/2008LakesDocument/Full\_08\_Lakes\_Report.pdf">http://www.metrocouncil.org/environment/RiversLakes/Lakes/2008LakesDocument/Full\_08\_Lakes\_Report.pdf</a>).
- Detailed stream monitoring at Bassett Creek WOMP station—Stream monitoring was performed in cooperation with the Metropolitan Council Environmental Services (MCES) and the Minneapolis Park and Recreation Board (MPRB) as part of the stream monitoring

and watershed outlet monitoring program (WOMP). See the MCES Web site for additional information: http://www.metrocouncil.org/environment/RiversLakes/index.htm.

Wirth Lake, Spring Lake, Birch Pond and Bassett Creek WOMP Data—The Minneapolis Park & Recreation Board (MPRB) monitored the water quality of Wirth Lake and Spring Lake in 2009. Although the MPRB did not monitor Birch Pond in 2009, information about the pond is included in the MPRB's report (see citation below). The MPRB also managed the Bassett Creek WOMP station. A copy of the executive summary and other sections related to Bassett Creek watershed from the MPRB's 2009 Water Resources Report (April 2010) are appended; the full document can be obtained from the Minneapolis Park & Recreation Board Web site at:

http://www.minneapolisparks.org/documents/caring/WaterResourcesReport2009.pdf

- Medicine Lake—The City of Plymouth and Three Rivers Park District (TRPD) monitored Medicine Lake. The 2009 results can be obtained from Plymouth or TRPD staff.
- Parkers Lake—The City of Plymouth monitored Parkers Lake. The 2009 results can be obtained from Plymouth staff.
- Stormwater flow monitoring and in-stream water quality monitoring in the Medicine Lake watershed was performed by Three Rivers Park District and the City of Plymouth.
- **River Watch Program**—The BCWMC has supported the Hennepin County Environmental Services' River Watch Program. The program began in 1995 and uses volunteers to conduct biological monitoring as a means of monitoring water quality. The grading scale used in River Watch takes into account three major biotic indices used routinely in biological monitoring programs:
  - o The Family Biotic Index, which measures the overall community of invertebrates and their tolerance to pollution levels. The scale ranges from 0 to 10 with the lower values indicating high sensitivity and good water quality if present.
  - o EPT, which stands for Ephemeroptera, Plecoptera, and Trichoptera, or mayflies, stoneflies, and caddisflies. These three families include the most sensitive individuals and are looked at for indications of presence or absence. Higher scores indicate better water quality.

 The number of families, which measures the overall abundance of families or total diversity of family units. Again, with this index, the higher the number the better.

Students have been monitoring Bassett Creek since 1999. There were two River Watch sites in the Bassett Creek Watershed in 2009 including site GM, which is located on Betty Crocker Drive in the City of Golden Valley, and site #13, which is located east of Highway 100 and south of Bassett Creek Drive. The report *Hennepin County River Watch 2009* is appended. Site GM was too dry to collect invertebrate samples in 2009; in 2008, this site received an overall grade of "C", the same grade the site received in 2007. Site 13 received a grade of "C+" in 2008, which is an improvement from its "D" grade in 2008.

See the Hennepin County Environmental Services Web site for additional information about River Watch:

 $\frac{\text{http://wwwa.co.hennepin.mn.us/portal/site/HCInternet/menuitem.3f94db53874f9b6f68ce1e10}{\text{b1466498/?vgnextoid=e76d26b92c9fc010VgnVCM1000000f094689RCRD\&vgnextfmt=defa}}$  ult.

- **BCWMC E. Coli Bacteria Monitoring**—The BCWMC collected water samples at six locations along Bassett Creek during the summer of 2009 to determine the presence and quantity of bacteria in the stream. The attached January 13, 2010 technical memorandum from Barr Engineering Co. presents and summarizes the results.
- **BCWMC Biotic Index Monitoring**—Assessing the benthic invertebrates found in a stream provides a long-term assessment of its water quality. During 1980, 1983, 1991, 1995, 2000, 2003, 2006, 2008, and 2009 benthic invertebrates were collected from Plymouth Creek, the Sweeney Lake Branch, the North Branch and the Main Stem of Bassett Creek to evaluate its water quality and to detect changes in water quality over time.

Because Bassett Creek is impaired for biota/fish, the MPCA assisted the BCWMC with the collection of biological samples from the Main Stem of Bassett Creek during 2008. During 2009, the BCWMC conducted biological monitoring of benthic invertebrates at three stations: Plymouth Creek, and the Sweeney Lake Branch and North Branch of Bassett Creek to evaluate the water quality of the streams. The BCWMC did not monitor the Main Stem of Bassett Creek in 2009. Data collected from the 2008 MPCA monitoring program were included in the 2009 study to evaluate current conditions in the Main Stem, as well as changes since the reach was monitored in 2006.

Over the 2008 and 2009 sampling seasons, the same six stations that were monitored in previous surveys were monitored. Hilsenhoff's Biotic Index and the Invertebrate Community Index (ICI) were used to evaluate existing water quality and assess changes. The executive summary from the report "A Biotic Index Evaluation of Bassett Creek and Plymouth Creek: 2008-2009" (BCWMC, January 2010) is appended. The entire report is available on the Bassett Creek Watershed Management Commission Web site (http://www.bassettcreekwmo.org).

## G. Local Plan Adoption

Many of the municipal plans were prepared prior to adoption of the BCWMC 2004 plan. The following table shows the status of the surface water management plan preparation for each municipality.

Municipality	Local Plan Status	Comments
Crystal	Completed	Local plan was approved by the BCWMC in January 2010. Resolution 10-02.
Golden Valley	Completed	Local plan approved by the BCWMC in August 1999. Resolution 99-6. Revised plan was approved by the BCWMC in September 2008. Resolution 08-06.
Medicine Lake	In progress	Final plan scheduled to be completed in 2010.
Minneapolis	Completed	Local plan was approved by the BCWMC in September 2006. Resolution 2006-04.
Minnetonka	Completed	Local plan was approved by the BCWMC in October 1997. Resolution 97-8. Revised plan was approved by the BCWMC in September 2008. Resolution 08-05.
New Hope	Completed	Local plan was approved by the BCWMC in August 1996; reconfirmed in April 1997. Resolution 97-4. Revised plan was approved by the BCWMC in October 2008. Resolution 08-08.
Plymouth	Completed	Local plan conditionally approved by the BCWMC in February 1999. Resolution 99-3. Revised plan was approved by the BCWMC in November 2008. Resolution 08-09.
Robbinsdale	Completed	Local plan was approved by the BCWMC in October 1996; reconfirmed in April 1997. Resolution 97-5. Local plan was reviewed as part of the city's comprehensive plan review in 2008. Revised plan was submitted to the BCWMC for review in December 2009.
St. Louis Park	Completed	Local plan was approved by the BCWMC in March 2000; Resolution 00-2. Revised plan was approved by the BCWMC in September 2009. Resolution 09-06.

#### H. Watershed Communication/Public Education

In accordance with Minnesota Rules, Chapter 8410, Subpart 4, the BCWMC utilized the following information sources for providing information to the general public:

- Improvements and Development Requirements—The report Requirements for Improvements and Development Proposals, prepared by the BCWMC (2008), is posted for use and reference on the BCWMC's Web site at <a href="http://www.bassettcreekwmo.org/require/2008\_Requirements/2008RequirementsTOC.htm">http://www.bassettcreekwmo.org/require/2008\_Requirements/2008RequirementsTOC.htm</a>.
- Web Site—The BCWMC updated information on its Web site throughout 2009. Information posted on the site includes: the roster of BCWMC members, consultants, and professional services contractors, the meeting/ events calendar for the BCWMC and its Committees, the BCWMC's Watershed Management Plan, BCWMC meeting materials including agendas, meeting minutes, water quality information, details of the Total Maximum Daily Load studies being undertaken by the BCWMC, the permit application form and the requirements for development and improvement proposals being submitted for BCWMC review, and the BCWMC's annual reports. In 2009, there were approximately 73,239 visits to the BCWMC's Web site. A copy of the Web site Usage Report from January 1, 2009, through December 31, 2009, is included in the appendices. The address for Bassett Creek Web site is <a href="http://www.bassettcreekwmo.org">http://www.bassettcreekwmo.org</a>.
- **BCWMC Meeting Packet** Each month in 2009 the BCWMC posted online meeting packets on its Web site and mailed a hard copy of the monthly meeting packets to approximately 20 interested parties. The packets included the BCWMC meeting agenda, meeting minutes, and meeting materials such as various correspondence items and other documents pertaining to the meeting agenda.
- Communications Coordination—The BCWMC will continue to implement a public information plan as recommended by the Policy and Citizens Advisory Groups at its November 13, 2001, special meeting.
- Technical Advisory Committees (TAC) Meetings—The TAC met the first Thursday of every other month and on additional days as needed to discuss issues directed to it by the BCWMC. The TAC meetings were noticed and were open to the public.

- Metro Watershed Partners—The BCWMC participated as a member of the Metro Watershed Partners as a general supporter of the program and also as a supporter of the Metro Clean Water MN Media Campaign. Metro Watershed Partners maintains a listserve and a Web site as forums for information sharing, holds monthly meetings for members to collaborate, displays an exhibit at the State Fair to educate the public about watersheds. The Clean Water Minnesota Media Campaign is a stormwater education collaboration that develops and delivers stormwater educational materials to a broad audience through television, radio, and billboard campaigns as well as through its Web site <a href="https://www.cleanwatermn.org">www.cleanwatermn.org</a>.
- Demonstration and Public Communications—The BCWMC's small-grant program is
  designed to promote water-quality improvement projects and communications and education
  programs that reduce pollution. The grant program provides up to \$1,000 to grantees to
  support the following activities:
  - 1. Water-quality improvement projects;
  - 2. Communication and education programs on reducing pollution from household activities; and
  - 3. Projects that raise citizen awareness of their role/ responsibility in improving and maintaining water quality in the watershed.

In 2009 the BCWMC awarded the following grants:

- Birchview Elementary The BCWMC granted funds for the school to provide Minnaqua training for educators.
- Cedar Manor School The BCWMC granted funds for sixth-grade students, under the guidance of Westwood Hills Nature Center staff, to identify and remove invasive plant species and to capture and relocate purple loosestrife beetles to an area of purple loosestrife infestation.
- Meadowbrook Elementary-The BCWMC granted matching funds to assist students, staff, and volunteers to construct an outdoor classroom on the school grounds.

The BCWMC has information about grant eligibility and application procedures in its grant program section of the Bassett Creek Watershed Management Organization Web site at http://www.bassettcreekwmo.org/index.html.

- BCWMC Education and Public Outreach Committee: In addition to the activities
  described in the Executive Summary, the Committee conducted the following activities in
  2009:
  - 1. The Education and Public Outreach Committee participated in quarterly joint meetings of the Education and Public Outreach Committees (EPOC) of the Bassett Creek Watershed Management Organization (WMO), Elm Creek WMO, Shingle Creek/ West Mississippi WMO, and Pioneer-Sarah Creek WMO. The group is formalizing its partnership and is in the process of becoming the West Metro Watershed Alliance (WMWA). The purpose of the joint meetings is to promote consistent and cooperative messages in the participating watersheds. The WMWA created a draft joint education plan and is working toward finalizing that plan and submitting it to the WMOs for their adoption.
  - 2. The Education and Public Outreach Committee discussed public education topics with writer Judy Arginteanu, who was contracted by the BCWMC to write articles that would highlight steps that residents could take to improve water quality in the Bassett Creek Watershed. The Committee reviewed and approved the article "Capture the Rain in Barrels and You Help the Earth," which was published in the August 13, 2009, issue of the Crystal, Robbinsdale, New Hope, & Golden Valley Sun-Post. The Committee also reviewed and approved the article "Adopting Storm Drains an Easy Way to Help the Environment," which was published in the October 8, 2009, issue of the New Hope and Golden Valley Sun-Post.
  - 3. The Education and Public Outreach Committee coordinated and moderated a teacher focus group. The purpose of the focus group was to provide the Committee with the opportunity to learn what the teachers are currently doing with regards to watershed and water quality education, what barriers they face to conducted that type of education, what materials are available to them, what materials they would want to use, whether they see barriers to teachers in the BCWMC's education grant application process or in the grant's structure, and what the teachers ideas are for improving the

education grant program. The information that the Education Committee gained through the focus group has provided the Committee with valuable background on which to base specific Committee and Commission goals for its public education efforts.

#### I. Professional Services Proposal

In accordance with Minnesota Statutes, Section 103B.227, Subdivision 5, the BCWMC solicited proposals in 2008 for administrative, legal, and engineering technical consulting services. The BCWMC did not need to solicit for proposals in 2009 since the statutes require the solicitation to occur every two years. The BCWMC will solicit proposals in 2010.

## J. Assessment of Changes in Fund Balance

A discussion of the fund balance is included in the BCWMC's annual financial audit report. A copy of the annual audit report will be made available on the Bassett Creek Watershed Management Commission's Web site at <a href="http://www.bassettcreekwmo.org">http://www.bassettcreekwmo.org</a>.

## K. Wetland Conservation Act/Wetland Banking Program

**1991** Wetland Conservation Act—The interim program of the 1991 Wetland Conservation Act was effective through December 31, 1993. On January 1, 1994, the permanent program of the 1991 Wetland Conservation Act became effective. Each municipality was required to designate the local government unit (LGU) responsible for administrating the interim program and the permanent program of the 1991 Wetland Conservation Act. The following table indicates the local governmental unit for each municipality.

Municipality	Permanent Program (Effective 1/1/94)
Crystal	Crystal
Golden Valley	Golden Valley
Medicine Lake	BCWMC
Minneapolis	Minneapolis
Minnetonka	Minnetonka
New Hope	New Hope
Plymouth	Plymouth
Robbinsdale	BCWMC
St. Louis Park	BCWMC

BCWMC = Bassett Creek Watershed Management Commission

**Wetland Mitigation Policy**—The BCWMC's wetland mitigation policy specifies that filling or developing existing lakes and wetlands require an evaluation of the benefits of the wetland for stormwater storage, water quality enhancement, and wildlife habitat, as well as the development of a plan to mitigate the loss of those benefits somewhere in the affected municipality.

Wetland Banking Program—The BCWMC has not adopted a wetland banking program.

## **II. Annual Financial Report**

The 2009 fiscal year for the Bassett Creek Watershed Management Commission (BCWMC) commenced on February 1, 2009 and ended January 31, 2010.

## A. Approved Budget

The approved operating budget for fiscal year 2009 was \$504,875. Each member's contribution toward the annual budget is based 50 percent on the total area of the municipality within the watershed and 50 percent on the tax capacity of the area within the watershed. A copy of the 2009 budget description, member-city assessment table, and operating budget table are appended.

## **B.** Report of Revenues

See the Financial Audit Report in the appendices.

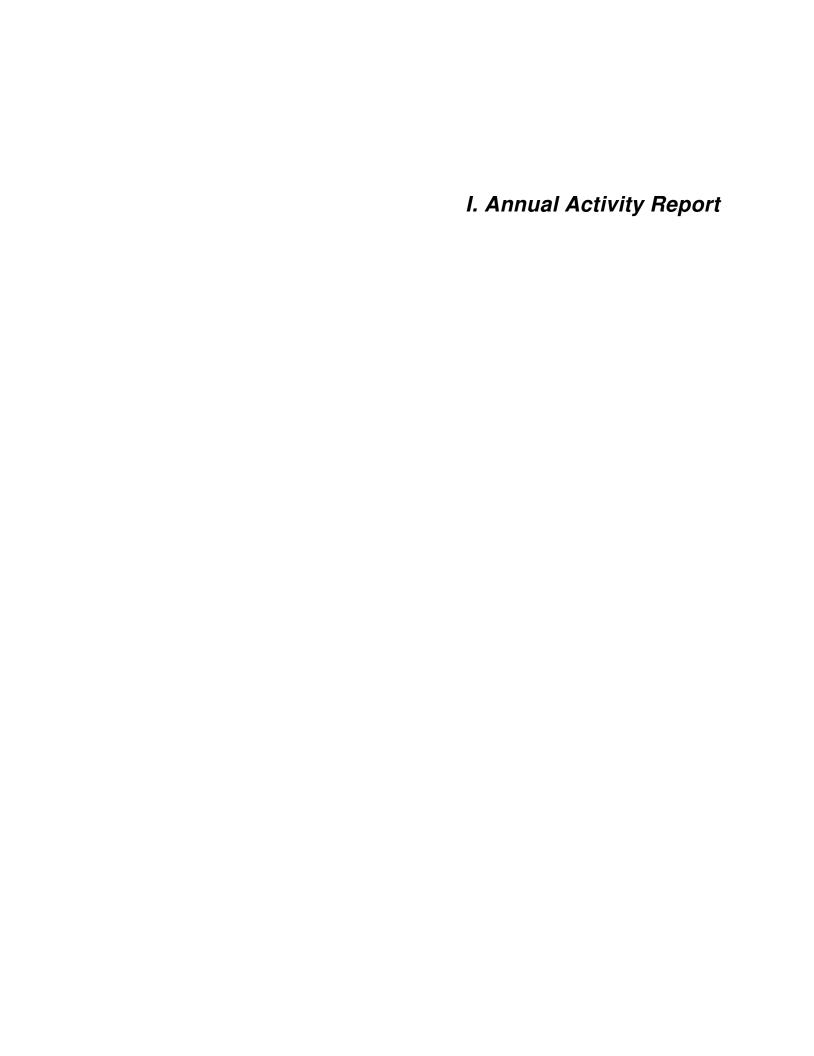
## C. Report of Expenditures

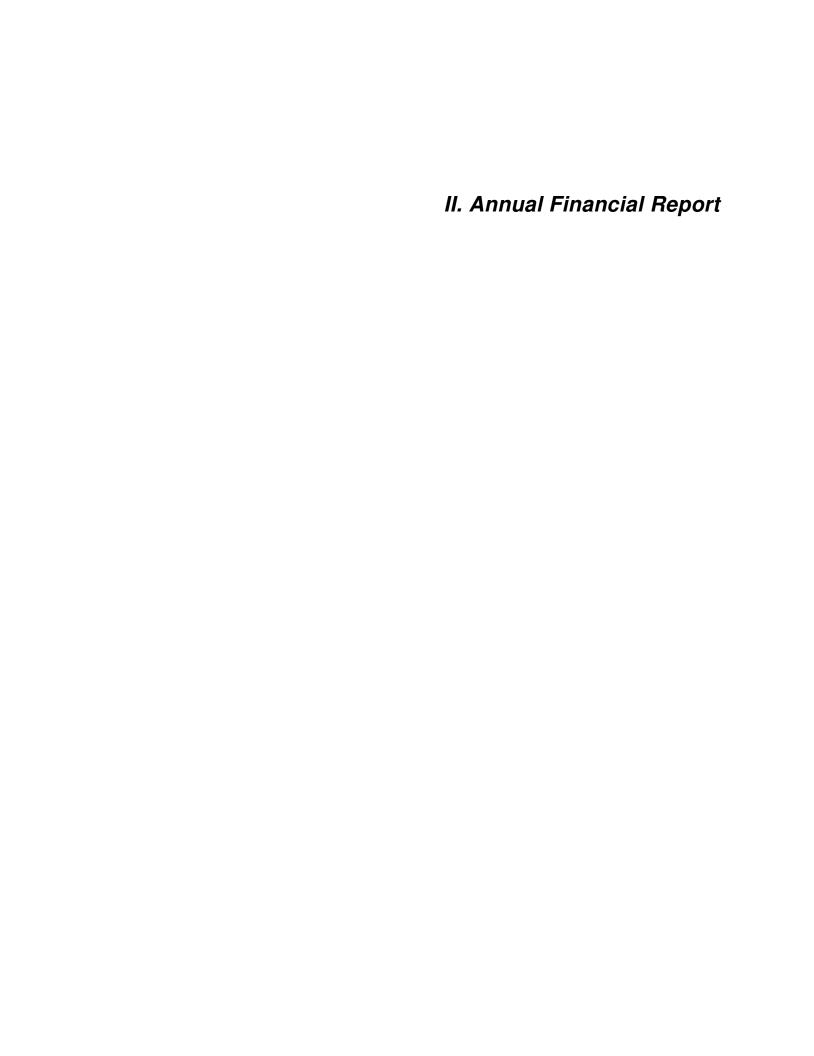
See the Financial Audit Report in the appendices.

## **D. Financial Audit Report**

The annual audit report for the year ending January 31, 2010, was performed by Malloy Montague Karnowski Radosevich & Co., P.A. A copy of the annual audit report is included in the appendices and also is available on the Bassett Creek Watershed Management Commission's Web site at <a href="http://www.bassettcreekwmo.org">http://www.bassettcreekwmo.org</a>.

# **Executive Summary**





# Appendix A Lake Levels

## Appendix B

Water Quality Monitoring

### Appendix C

Watershed Communications

### Appendix D

Financial Information

### Appendix E Resolutions

### Appendix F

Capital Improvements Program

# Appendix G Web Site Usage Report

# Appendix H Historical BCWMC Roster

### Appendix I

Plans Presented for Administrative Review and Comment

### **Plans Presented for Administrative Review and Comment**

Appl. Form #	Project Name	Date Submitted	City <sup>1</sup>	Туре
2005-28	CIP PL-6 Circle Park Pond	9-06-09 8-25-09	Ply	Public-CIP
2008-28	9209 40½ Avenue	10-13-08	NH	Single-Family
2009-01	Teachers Federal Credit Union	1-28-09	GV	Commercial
2009-01A	TruStone Financial Federal Credit Union	1-11-10	GV	Commercial
2009-02	CenterPoint Energy Utility Crossing @ Regent Avenue	2-11-09	GV	Utility
2009-03	Crystal Cub Foods Fueling Center	2-27-09	Cry	Commercial
2009-04	2009 Minnetonka Street Rehab— Sherwood Forest Area	3-27-09	Mtka	Public-Street
2009-05	26 <sup>th</sup> Avenue/Plymouth Creek Culvert	3-27-09	Ply	Public-Street
2009-06	Plymouth Middle School Parking Improvements	5-29-09	Ply	Commercial
2009-07	SP 2772-81: TH 169 Medicine Lake Road Ramp	6-25-09 (prelim)	Ply	Public-Street
2009-08	Laurel Hills East Landscape Improvements	7-1-09	GV	Multiple Residential
2009-09	36 <sup>th</sup> Avenue Street Reconstruction	7-30-09	Ply	Public-Street
2009-10	GVCC Pond Dredging/Creek Stabilization	1-12-10	GV	Public

<sup>&</sup>lt;sup>1</sup>Cry = Crystal, GV = Golden Valley, Mtka = Minnetonka, NH = New Hope, Ply = Plymouth