1.0 Executive Summary

The Bassett Creek Watershed Management Commission (BCWMC) *Watershed Management Plan* (Plan) sets the vision and guidelines for managing surface water within the boundaries of the BCWMC. The following summarizes the location, history, goals, policies, and implementation tasks of the BCWMC.

1.1 History and Background Information

The Bassett Creek watershed is located in Hennepin County, in the northwestern portion of the Twin Cities. Bassett Creek and its three branches cross nine cities: Plymouth, Medicine Lake, Golden Valley, Robbinsdale, Crystal, New Hope, Minnetonka, St. Louis Park, and Minneapolis. In downtown Minneapolis, the creek discharges into the Mississippi River below St. Anthony Falls.

In 2000, the BCWMC and the Mississippi Water Management Organization (WMO) entered into a joint and cooperative agreement for a boundary change, which transferred 1,002 acres from the BCWMC to the Mississippi WMO. This boundary change was undertaken to reflect the changed drainage conditions upon completion of the Bassett Creek Flood Control Project.

Prior to the adoption of a formal joint powers agreement, the cities in the Bassett Creek watershed acted together as a committee, which was formed to study flood control issues in the watershed. In 1968, the Bassett Creek Flood Control Commission was formed by adoption of a joint powers agreement between the nine communities in the watershed. In 1984, the Bassett Creek Flood Control Commission revised its joint powers agreement and created the BCWMC. Again in 1993, the BCWMC revised its joint powers agreement (Appendix A), which will remain in effect until 2015. The BCWMC Board of Commissioners consists of nine commissioners and nine alternates appointed by the member cities. Each of the nine member cities appoints one commissioner and one alternate. The term of each commissioner and alternate is three years. Regular meetings of the BCWMC are held on the third Thursday of each month.

The powers and duties of the BCWMC are outlined in the joint powers agreement.

1.2 Purpose and Goals of BCWMC

1.2.1. BCWMC Overall Purposes

The Metropolitan Water Management Act requires local units of government in the seven-county metropolitan area to prepare and implement watershed management plans through membership in a watershed management organization. A watershed management organization can be organized as either a watershed district, a function of county government, or a joint powers agreement organization (such as the BCWMC). The act states that the purposes of WMO water management programs (quoted from Minnesota Statutes 103B.201) are as follows:

1. Protect, preserve, and use natural surface and groundwater storage and retention systems.
2. Minimize public capital expenditures needed to correct flooding and water quality problems.
3. Identify and plan for means to effectively protect and improve surface and groundwater quality.
4. Establish more uniform local policies and official controls for surface and groundwater management.
5. Prevent erosion of soil into surface water systems.
6. Promote groundwater recharge.
7. Protect and enhance fish and wildlife habitat and water recreational facilities.
8. Secure the other benefits associated with the proper management of surface and groundwater.

In 1992, the Minnesota Board of Water and Soil Resources (BWSR) developed rules (Minnesota Rules Chapter 8410) for the content of watershed management plans. The rules require, among other items, more specificity in citizen participation, control of erosion and sedimentation, wetland assessment, and the design of new stormwater conveyance, ponding, and treatment systems. The rules also require the establishment of the necessary authorities to ensure implementation of programs.

1.2.2. BCWMC Goals

With this Plan, the BCWMC's general purposes are similar to those stated above and are reflected in the goals and policies sections stated later in this Plan. 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.
- 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 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.

1.3 Land and Water Resource Inventory

The Plan contains information on climate and precipitation, topography, soils, geology and groundwater resources, land use and public utilities, surface water resource information, natural communities and rare species, and pollutant sources in the BCWMC. This information is important because it is the foundation information that describes the condition of the watershed and it affects decisions about infrastructure, development, and ecological preservation.

For example, average weather poses little strain on the typical drainage system, but extremes in precipitation and snowmelt are important design considerations for flood control systems. Understanding the topography of the watershed helps determine drainage patterns. The information gained from a soil survey allows for proper planning of drainage systems and increases the awareness of potential flooding issues. Similarly, information about geology and groundwater resources, land use and public utilities, surface water resource information, natural communities and rare species, and pollutant sources provides the BCWMC with valuable information for planning purposes.

1.4 Summary of Issues and Policies

The Plan outlines the issues, goals and policies related to water quality, flooding and rate control, erosion and sediment control, stream restoration, wetland management, groundwater, public ditches, and public involvement and information. The goals are listed in Section 1.2.3. This section discusses issues and policies for the categories mentioned above.

1.4.1. Water Quality

The BCWMC recognizes the need to ensure adequate water quality in the lakes, ponds, streams, and wetlands within the watershed. The BCWMC has taken steps to protect these resources, including adopting a water quality management policy, classifying major water bodies, collecting water quality data, preparing watershed and lake management plans, developing an implementation program to meet water quality goals, and reviewing proposed projects for conformance with BCWMC policies.

The Plan includes policies relating to lake and stream management, fish and wildlife habitat and shoreland management, and the administration of BCWMC water quality management standards. Some of the new policies include the implementing and funding of water quality improvement projects, identifying opportunities to maintain or improve the excellent water quality in Twin Lake, giving higher priority to water quality improvement projects that are the most effective at achieving water quality goals, monitoring of water quality, requiring stormwater runoff to be treated to BCWMC Level I standards, and working with member cities and others to study, evaluate and develop appropriate and reasonable standards for vegetative buffers adjacent to water resources.

As required by the Federal Clean Water Act, the Minnesota Pollution Control Agency (MPCA) has recently issued a draft list of impaired waters of the state. These waters were determined to be not meeting water quality standards and not supporting assigned beneficial uses. Five Bassett Creek lakes and Bassett Creek have been listed as impaired on this draft *2004 Minnesota Pollution Control Agency Clean Water Act Section 303(d) Total Maximum Daily Load List of Impaired Waters*. The BCWMC will work with the cities to complete assessments to address the courses and sources of impairment to these water bodies.

1.4.2. Flooding and Rate Control

Beginning in the 1960s, the Bassett Creek watershed experienced flooding problems due to aging stormwater control facilities and rapid urbanization. The biggest problem—the 1.5-mile undersized

and deteriorating Bassett Creek Tunnel—was remedied by a $40 million flood control project. The project included five control structures, ten channel crossings, several stormwater storage ponds, flood walls and retaining walls, channel improvements, floodproofing for several homes, a railway bridge replacement, two fish barriers, and replacement of the 1.5-mile tunnel in Minneapolis.

The current flood control issues include maintenance and repair of the flood control project system, floodproofing or removal of homes that are remaining in the floodplain, and management of development and redevelopment throughout the watershed to prevent flooding.

The Plan includes policies to address these issues, including using remaining funds from the flood control project for floodproofing of homes, inspecting, maintaining and repairing the flood control project system and funding these activities, and managing land use in the BCWMC-established floodplain.

1.4.3. Erosion and Sediment Control

Sediment, in terms of volume, ranks above domestic sewage, industrial wastewaters and chemicals as a major contributor to water pollution. Suspended sediment—fine particles of soil, dust and dirt carried in moving water—results from stormwater runoff from streets and parking lots, and abounds when erosion occurs. This sediment load clouds lakes and streams, disturbs aquatic habitat, reduces the oxygen content of water, and is a major source of phosphorus, which causes algal blooms in lakes. Construction activities are a major source of erosion and sedimentation problems.

The BCWMC established standards for erosion and sediment control and reviews erosion and sediment control plans for certain construction projects. These standards are aimed at preventing or slowing the transport of fine soil, dust, and dirt particles into the watershed's water resources.

As defined in the Plan, the BCWMC will:

- Encourage land use planning and development that minimizes sediment yield.
- Review projects and developments for compliance with BCWMC erosion and sediment control standards.
- Require preparation of erosion control plans for construction projects.

- Perform regular erosion and sediment control inspections and inform member cities of required improvements.

- Require that the member cities adopt, administer, implement and enforce ordinances addressing erosion and sediment control.

- Require that the member cities' ordinances include the requirements and procedures for reviewing, approving, and enforcing erosion control plans.

- Require local watershed management plans to describe existing and proposed city ordinances, permits, and procedures addressing erosion and sediment control, and preparation of erosion control plans.

- Review local watershed management plans for compliance with this Plan's goals and policies regarding erosion and sediment control.

1.4.4. Stream Restoration

There are two major issues in the Bassett Creek watershed regarding stream restoration: (1) the preservation of the natural beauty along the stream corridor and (2) significant streambank erosion and sedimentation problems along Bassett Creek. In many parts of the watershed, residential areas abut Bassett Creek. There is concern that any channel modifications could destroy the natural beauty of the area and have a corresponding effect on property values. The BCWMC and its member cities have identified the extent and severity of streambank erosion along most of the Bassett Creek trunk system.

In order to address both issues, the BCWMC has written several policies. These policies include:

- Establishing and maintaining a fund for maintenance, repair and sediment removal, and using the fund to finance maintenance and repairs of streambank areas.

- Considering the effect of stream/ditch structures on natural habits and the needs of people/pedestrians, as well as the effect of future flood control projects on the natural beauty and wildlife habitat values of Bassett Creek.

- Encouraging the restoration of stream and streambank areas where the natural beauty of the creek has been compromised.

- Maintaining the scenic and aesthetic qualities of stream channels consistent with public needs and public use.

- Reviewing local watershed management plans for compliance with this Plan's goals and policies regarding stream restoration.

1.4.5. Wetland Management

In addition to the forested areas, numerous wetlands were once present in the central and eastern portions of the watershed, but the majority have been drained or filled for development. Remaining wetland areas are concentrated in the western part of the watershed.

The BCWMC has not played a major role in wetland management because the member cities (except Medicine Lake, Robbinsdale, and St. Louis Park) serve as the local government unit responsible for administering the WCA. The BCWMC administers the WCA for Medicine Lake, Robbinsdale, and St. Louis Park.

As defined in this Plan, the BCWMC adopts the Minnesota Rapid Assessment Method (MnRAM) as the wetland assessment method and the wetland management classification system for the member cities to utilize when assessing and classifying wetlands located within their cities. The BCWMC will study, evaluate and establish appropriate and reasonable standards and requirements for vegetative buffers adjacent to water resources; require the member cities to manage wetlands in accordance with the WCA; will continue to serve as the local government unit for member cities as requested; and will review local watershed management plans for compliance with this Plan's goals and policies for wetland management.

1.4.6. Groundwater

The majority of cities in Hennepin County, including Plymouth, Minnetonka, Robbinsdale, St. Louis Park, and Medicine Lake obtain their domestic water supplies from groundwater. Although the BCWMC does not have direct responsibility for groundwater usage rates or groundwater protection, it recognizes the importance of protecting groundwater resources.

The Plan includes several policies involving Minnesota Department of Natural Resources (DNR) groundwater appropriation permits, the collection and management of groundwater data, the adoption of wellhead protection programs, the enforcement of proper well abandonment, and the lining of detention ponds to prohibit infiltration in sensitive areas.

1.4.7. Public Ditches

A large portion of the main stem of Bassett Creek, downstream of the Medicine Lake outlet, as well as a portion of the north branch of Bassett Creek, is designated as a county ditch. Hennepin County is currently responsible for the management of these ditches, but this responsibility could be turned over to the BCWMC if agreed to by both the county and the BCWMC. Currently, if the BCWMC or the member cities want to perform work in public ditches, a Minnesota State Law requires they go through the public ditch process to perform this work. Because this is a cumbersome process, the BCWMC, as one of its policies, will support legislation abandoning public ditches in the watershed and allowing all drainage to be managed in accordance with the BCWMC's latest adopted Plan.

1.4.8. Public Involvement and Public Information

The water quality of the BCWMC's water resources can be improved or protected by increasing stormwater retention and by reducing the nonpoint source pollutants carried in stormwater runoff. Through watershed education efforts, it is possible to reduce nonpoint source pollution and increase stormwater detention. The BCWMC recognizes the importance of the public's role in this effort.

The BCWMC and member cities have used various methods to educate/inform the public about BCWMC activities. The BCWMC wishes to continue this effort by implementing an effective public involvement and public information program. The BCWMC will relay key messages about the watershed to target audiences and then evaluate its success at reaching these target audiences. The BCWMC will also incorporate public involvement and public education efforts into all of its proposed projects.

1.5 Administration and Implementation Program

1.5.1. Responsibilities

The Plan outlines the responsibilities of the BCWMC, the member cities, and other agencies regarding watershed management related issues.

The BCWMC will work closely with its nine member cities to assign responsibility for water resource issues, seeking to efficiently and effectively use the cities' and the Commission's planning and implementation resources. The BCWMC will assist citizens and cities with the management of water resources in the following areas:

- Partner with member communities in the management of surface and groundwater for the benefit of citizens within the watershed and region.

- Work with citizens, citizen advisory groups, and member communities to establish goals and prioritize and implement initiatives that will preserve and improve water resources within the watershed.

- Collect, develop, and distribute information regarding surface water and groundwater in the watershed to assist citizens and member cities in the preparation of local plans for the management of water resources.

BCWMC specific responsibilities include the trunk system, review of improvements, development proposals, and other agency permits, intercommunity planning and design (including review of city watershed management plans and apportionment of intercommunity project costs), and dispute resolution.

The BCWMC has been a successful organization as a result of its leadership and the cooperation of its nine member cities. City responsibilities include appointing representatives and alternates to the BCWMC Board, appointing a technical advisor to the BCWMC Board, informing developers and other project applicants of the BCWMC policies, ensuring that proposed projects meet BCWMC requirements, development of a local watershed management plan, contributing annually to the BCWMC general fund, and routine maintenance of the flood control project system.

The Plan provides a brief description of the responsibilities of other units of government, including the Minnesota Department of Natural Resources (DNR), the Minnesota Board of Water and Soil Resources (BWSR), the Minnesota Pollution Control Agency (MPCA), the Minnesota Department of Health (MDH), the Minnesota Environmental Quality Board (EQB), the U.S. Army Corps of Engineers (COE), and the Metropolitan Council.

1.5.2. Implementation Program

The Plan includes comprehensive lists of the projects, programs and official controls that comprise the BCWMC implementation (and potential future implementation) program. All but one of the capital projects listed in Table 12-2, the BCWMC's 10-year capital improvement program (10-year CIP), are water quality improvement projects. The one remaining capital project is a flood control improvement project. Table 12-3 lists potential future water quality improvement projects that are

unlikely to be implemented in the 10 years following adoption of the Plan. Table 12-4 lists the BCWMC's annual water quality and flood control programs.

The BCWMC proposes to fund the capital projects in accordance with the joint powers agreement. In particular, the BCWMC proposes to finance all of the capital water quality improvement projects through an ad valorem tax levied by Hennepin County (per Minnesota Statutes 103B.251). The only other capital project is a flood control (floodproofing) project, which will be funded from remaining funds from the Bassett Creek Flood Control Project.

The nonstructural activities will be financed through the BCWMC general fund, in accordance with the joint powers agreement.

1.6 Plan Organization

The BCWMC Plan sets the course for the BCWMC in managing stormwater runoff and the quality of the BCWMC water resources. The Plan outlines the regulations involved, assesses specific and watershed-wide issues, sets goals and policies for the BCWMC and its resources, and lists implementation tasks to achieve the goals. The Plan also discusses the financial considerations of implementing the Plan and other funding sources that may be available to the BCWMC and/or its member cities. The BCWMC Plan is organized into 13 major sections, summarized as follows:

Section 1.0 Executive Summary – provides a summary of the Plan, including background information, issues, goals, and plan contents.

Section 2.0 History and Background Information – provides information about the location, history, management structure, powers and duties of the BCWMC.

Section 3.0 Land and Water Resource Inventory – presents information about the BCWMC's climate and precipitation, topography, soils, geology and groundwater resources, land use and public utilities, surface water resource information, natural communities and rare species, and pollutant sources. This is the basic information that describes the surface and subsurface conditions of the BCWMC.

Sections 4.0 through 11.0 – present the issues, goals, policies, and background information for the following topics:

4.0 – Water Quality

5.0 – Flooding and Rate Control

6.0 – Erosion and Sediment Control

7.0 – Stream Restoration

8.0 – Wetland Management

9.0 – Groundwater

10.0 – Public Ditches

11.0 – Public Involvement and Public Information

Section 12.0 Administration and Implementation Program – presents the program elements and discusses the responsibilities, priorities, and financial considerations associated with the implementation program. This section also discusses the impact of the Plan on the local governments, the BCWMC requirements for local watershed management plans, and procedures for amending the BCWMC Plan.

Section 13.0 References – lists the documents used in preparation of the BCWMC Plan.