# Section 5
# Planning and Implementation

## Overview

The City of Minneapolis has well established programs that have been created to protect, maintain and improve surface water quality. The intent of the implementation plan in this LSWMP is to continue these programs and to supplement with additional activities, as needed, to fill gaps identified for each program.

## Additional Activities Needed to Meet Water Resources Goals

Minneapolis water resources management activities were compared against current City goals, watershed district/organization requirements, and other regulatory mandates to identify additional activities necessary to maintain or improve the quality of Minneapolis surface waters. Generally, the existing City programs exceed, fully meet, or partially meet existing regulatory requirements. Some programs are in need of additional activities to make the programs fully consistent with requirements. City staff identified service gaps and additional activities that will help meet existing and impending regulatory demands and meet the City's water resources management goals. The details of this analysis are summarized in detail in Appendix N. Additional activities which will supplement the City's water resources management activities and help to meet the City's long-term goals of sustainable water resources are identified and described in the following pages. A schedule to implement these activities is contained in Table 5-1.

### Protect People, Property and the Environment (Guiding Principle #1)

#### Construct improvements to sanitary sewers and storm drainage systems that provide protection

1. Implement capital improvement projects which create integrated solutions to multiple wet weather problems of excessive infiltration, inflow, flood mitigation and/or stormwater quality. Evaluate green initiative techniques for stormwater runoff volume control as alternative to flood mitigation projects recommended in Flood '97 report.

2. Update prioritization system for capital improvement projects that incorporates life-cycle considerations, multiple objectives, and cooperating partnerships.

3. Expand existing hydraulic and water quality models, including tunnel model and MCWD H&H model to create predictable backbone model that establishes baseline flow rates, and is linked to sanitary model. Model should be able to be expanded to assess impact of specific proposed improvement, and measure baseline stormwater volumes for sustainability targets.

4. Work with BCWMC and MCWD to resolve differences between Minneapolis Floodplain Ordinance and watershed rules.

5. Accelerate program to inspect for and remove rainleader and foundation drain connections to sanitary sewers to meet requirements of MCES I/I Surcharge Program.

6. Investigate feasibility of redesign or limiting access to manholes subject to frequent surcharging during storm events that exceed design capacity of storm drain.

## Maintain and Enhance Infrastructure (Guiding Principle #2)

### Maintain condition of sanitary sewer and storm drainage systems

1. Expand sanitary sewer preventive maintenance inspections to storm drainage system. Consider inspection schedules recommended in 2005 Minnesota Stormwater Manual.

2. Increase length of sanitary sewers that are visually inspected to locate areas of excessive infiltration in order to meet requirements of MCES I/I Surcharge Program.

3. Renegotiate and amend cooperative agreements between Minneapolis, MN/DOT and BCWMC that govern the operation, maintenance and repair of Bassett Creek Tunnel and Culvert to be consistent with current policies of BCWMC.

### Maintain capacity of sanitary sewer and storm drainage systems

1. Expand existing hydraulic and water quality models, including tunnel model and MCWD H&H model to create predictable backbone model that establishes baseline flow rates, and is linked to sanitary model. Model should be able to be expanded to assess impact of specific proposed improvement, and measure baseline stormwater volumes for sustainability targets.

2. Define allowable emergency CSO overflow conditions for renewal of NPDES CSO Permit.

3. Investigate use of in-line storage in sanitary sewers to minimize overflows.

4. Continue to assess opportunities to remove excessive infiltration and inflow from sanitary sewers.

5. Institute CMOM (Capacity Management Operation and Maintenance) practices as basis of asset management system.

6. Measure actual stormwater outflow at selected outfalls to determine if sustainability goals are being met.

7. Fully investigate impacts on stormwater drainage system prior to disconnection of inflow sources from sanitary sewers.

8. Investigate techniques and policies to decrease area of impervious surfaces in public construction projects.

9. Formalize design parameters for stormwater infiltration systems.

10. Investigate methods to incorporate stormwater runoff volume controls into Minneapolis Code of Ordinances, Chapter 54 (Stormwater Management) and Title 20 (Minneapolis Zoning Code).

## Provide Cost-Effective Services in a Sustainable Manner (Guiding Principle #3)

### Optimize enhancements to sanitary sewer and storm drainage systems

1. Implement capital improvement projects that create integrated solutions to multiple wet weather problems of excessive infiltration, inflow, flood mitigation and/or stormwater quality.

2. Update prioritization system for capital improvement projects that incorporates life-cycle considerations, multiple objectives, and cooperating partnerships.

3. Create unified City-wide stormwater runoff hydraulic and water quality design standards that meet regulatory requirements. Work with watersheds, other public agencies, and private property representatives to resolve conflicting standards.

## Meet or Surpass Regulatory Requirements (Guiding Principle #4)

### Operate and maintain public lands consistent with Best Current Practices and City's NPDES permits

1. Continue funding for removal of inflow sources from public properties.

*Staff training on efficient use of snow management practices (Source: Minneapolis Public Works).*

2. Investigate whether existing street maintenance practices comply with recommendations of TMDL implementation studies, including the Shingle Creek Chloride TMDL Implementation Plan.

3. Expand sweeping program to include public owned parking lots and parking ramps.

4. Continue to train staff on best current practices such as construction site erosion control and lawn care management.

5. Apply unified stormwater hydraulic and water

quality design standards, erosion and sediment control requirements and stormwater management requirements to all public projects.

6. Use City funds to leverage stormwater BMP improvements on non-City public projects, including Minneapolis School Board & Library Board properties.

### Provide ongoing assessments of sanitary sewer and storm drainage systems

1. Create a clearinghouse for all assessment studies conducted in City, including TMDL, lake, stormwater, CSO, and stream monitoring efforts.

2. Establish coordinator as central contact point for all Minneapolis based TMDL projects and other monitoring studies.

3. Consider revisions to water quality standards for new construction projects (Minneapolis City Council Resolution 2000R-042) after new water quality standards are formally approved by a watershed district/organization or after TMDL implementation plans are formally approved.

### Implement effective water quality improvement programs

1. Negotiate implementation of TMDL based projects in a manner that is consistent with City goals and objectives.

### Enforce required rules and regulations

1. Work with MPCA to negotiate NPDES permits that are consistent with City goals and objectives.

## Educate and Engage the Public and Stakeholders (Guiding Principle #5)

### Enhance quality and minimize quantity of runoff from redevelopment sites

*Stormwater Filtration System on First Street North (Source: Minnesota Stormwater Manual).*

1. Require disconnection of sources of inflow to the sanitary sewers as a condition of rehabilitation-type building permits.

2. Investigate incorporation of stormwater runoff volume controls into Chapter 54.

3. Investigate reduction of impervious surface requirements in the Minneapolis Zoning Code.

4. Update stormwater hydraulic design standards to incorporate storage for purposes of flood mitigation and storage of snowmelt.

5. Investigate financial or water quality sizing based credit system for redevelopment projects that preserve natural site characteristics, such as buffers and native vegetation.

6. Improve compliance of Erosion and Sediment Control Ordinance.

7. Track and disseminate results and successes of pilot BMP projects. Use as model for new projects.

8. Update Chapter 54 to revise water quality standards after new standards are formally approved by watershed.

9. Work with BCWMC to ensure that new construction and redevelopment projects in Minneapolis comply with BCWMC non-degradation policy.

### Maintain or enhance quality and minimize quantity of runoff from existing private properties

1. Enforce ordinance requirements to eliminate inflow sources from private properties.

2. Investigate financial or water quality sizing credit based system for properties which recreate natural vegetation systems.

3. Investigate additional maintenance requirements for privately owned parking lots, including sweeping and use of deicing chemicals.

4. Educate the public on environmental degradation caused by excessive use of deicing chemicals.

5. Reassess education activities to identify audiences not targeted and to maximize coordination with existing education efforts where feasible. Educate landscape businesses about hazards of improper disposal into curb & gutters and control of stormwater runoff from plant nurseries.

## Enhance Livability and Safety (Guiding Principle #6)

### Preserve, maintain and enhance the City's natural and recreation resources

1. Complete MPRB inventory of wetlands in City. Initiate inventory of non-MPRB wetlands.

2. Complete MPRB inventory of natural and riparian corridors. Initiate inventory of non-MPRB natural and riparian corridors.

3. Complete comprehensive shoreline and streambank condition assessment for MPRB properties. Initiate inventory of non-MPRB shorelines.


*Beach Warning Sign (Source: MPRB).*

4. Evaluate need for wetland ordinance for privately owned shoreline.

5. Evaluate need for shoreline stabilization program in cooperation with watershed district/organizations.

### Maintain and/or improve the quality of the City's surface waters

1. Include inspection of sediment deltas as part of outfall inspection programs. Remove excessive sediment in accordance with DNR requirements.

2. Establish agreements on responsibilities for surface water systems Operation and Maintenance where none currently exist.

## Financial Considerations

As described in Section 2, the Minneapolis budget is current only for the year that it is adopted. Projected budgets are presented for planning purposes, and there is no certainty that future funding will follow the projected budgets. Refer to the actual annual budget, and not to this planning document for the most up-to-date direction of the City. The most current budget for all City programs can be found on the City's web page at Adopted Budget.

The 2006 annual budget for water resources related activities by the City of Minneapolis is approximately $76 million per year. Of this amount, $27 million is paid directly to the Metropolitan Council for wastewater conveyance and treatment and $11.5 million is to pay the debt on sewer bonds. The remaining $37.5 million is spent on a variety of activities, including sewer maintenance, engineering, street cleaning, and capital improvement projects. The City has no plans to increase this budget in the future, other than to accommodate a projected rate of inflation of 3 percent.

The City works to keep all its activities within the limits of available funding. Prioritization is critical to selecting the specific capital improvement project or regulatory activity within current budgetary limits. The following section summarizes the funding sources typically used by the City in all water resources management activities.

**Table 5-1. Implementation Plan for Additional Activities**

| Guiding Principle | | Activity | Program | | | | Implementation Year | | | | | | | Priority | Partners |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CSO | I/I | Flood Mitigation | Water Quality | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | | |
| **Protect people property and environment** | | | | | | | | | | | | | | | |
| Construct improvements to sanitary sewer and storm drain system to provide protection | | | | | | | | | | | | | | | |
| | 1 | Implement CIP projects that solve multiple wet weather problems | x | x | x | x | ← | — | — | — | — | — | → | H | MPRB |
| | 2 | Update prioritization system | x | x | x | x | ↔ | | | | | | | H | MPRB |
| | 3 | Expand existing H&H models | x | x | x | x | | ← | — | — | → | | | M | All watersheds |
| | 4 | Resolve differences in floodplain requirements | | | x | | | | | ↔ | → | | | M | MCWD and BCWMC |
| | 5 | Accelerate rainleader and foundation drain disconnections | x | x | | | ← | — | → | | | | | H | MCES, MPCA |
| | 6 | Investigate feasibility of redesign of manholes subject to frequent surcharging | | | | | | | ↔ | → | | | | M | MNDOT |
| **Maintain and enhance infrastructure** | | | | | | | | | | | | | | | |
| Maintain condition of sanitary sewer and storm drainage systems | | | | | | | | | | | | | | | |
| | 1 | Expand sanitary sewer preventive maintenance schedule to include storm drainage system | | | x | x | | | | ↔ | → | | | M | MN/DOT, Hennepin County |
| | 2 | Increase annual length of sanitary sewers visually inspected | x | x | | | ← | — | → | | | | | H | |
| | 3 | Amend Bassett Creek Tunnel maintenance agreement with MN/DOT and BCWMC to be consistent with BCWMC policies | | | | | | | ↔ | → | | | | M | BCWMC, MN/DOT |
| Maintain capacity of sanitary sewer and storm drainage systems | | | | | | | | | | | | | | | |
| | 1 | Expand existing H&H models | x | x | x | x | | ← | — | — | → | | | M | All watersheds |
| | 2 | Define emergency CSO conditions | x | x | | | ↔ | | | | | | | H | MPCA |
| | 3 | Investigate use of in-line storage for sanitary peak flow control | x | x | | | | ↔ | → | | | | | H | MCES |
| | 4 | Continue to assess opportunities to remove I/I | x | x | | | ← | — | → | | | | | H | MCES |
| | 5 | Institute CMOM | x | x | x | | | | ↔ | → | | | | M | MCES |
| | 6 | Measure actual volumes of stormwater runoff | | | x | x | | | ↔ | → | | | | M | MPRB |
| | 7 | Investigate impacts on stormwater system for each CSO project | x | x | x | x | ← | — | — | — | → | | | H | All watersheds |
| | 8 | Investigate techniques to decrease impervious surface on public construction projects | | | x | x | | | ↔ | → | | | | M | MNDOT, Hennepin County |
| | 9 | Formalize design parameters for stormwater infiltration systems | | x | x | x | | | ↔ | → | | | | M | All watersheds |
| | 10 | Investigate methods to incorporate runoff volume controls into Code of Ordinances | | | | | | | ↔ | → | | | | M | |
| **Provide cost effective services** | | | | | | | | | | | | | | | |
| Optimize enhancements to sanitary sewer and stormwater drainage systems | | | | | | | | | | | | | | | |
| | 1 | Implement CIP projects that solve multiple wet weather problems | x | x | x | x | ← | — | — | — | — | — | → | H | |
| | 2 | Update prioritization system | x | x | x | x | ↔ | | | | | | | H | |
| | 3 | Create unified design standards for stormwater BMPs | | | x | x | | | ↔ | → | | | | M | All watersheds |
| **Meet or surpass regulatory requirements** | | | | | | | | | | | | | | | |
| Operate and maintain public lands consistent with best current practices and with permit requirements | | | | | | | | | | | | | | | |
| | 1 | Continue funding for removal of inflow sources from public buildings | x | x | | | ← | — | → | | | | | H | |
| | 2 | Implement recommendations of Shingle Creek Chloride TMDL Implementation Plan | | | | x | | ↔ | | | | | | M | SCWMC |
| | 3 | Expand sweeping program to include public owned parking areas | | | | x | | | ↔ | → | | | | M | |
| | 4 | Continue staff training on best current practices | x | x | x | x | ← | — | — | — | — | — | → | M | |
| | 5 | Unify stormwater hydraulic and BMP design standards to be consistent with private requirements | | | x | x | | | ↔ | → | | | | M | All watersheds |
| | 6 | Leverage BMP improvements on non-City public facilities using City funds | | | | x | | | ↔ | → | | | | M | |
| Provide ongoing assessments of sanitary sewer and stormwater drainage systems | | | | | | | | | | | | | | | |
| | 1 | Create clearinghouse for all water resource assessment studies | x | x | x | x | | | | | | ↔ | → | L | All watersheds, MPRB |
| | 2 | Establish central Mpls coordinator for TMDL projects | | | | x | ↔ | | | | | | | H | |
| | 3 | Revise water quality standards after new standards are formally approved by watershed | | | | x | | | ↔ | → | | | | M | All watersheds |
| Implement ongoing assessments of sanitary sewer and stormwater drainage systems | | | | | | | | | | | | | | | |
| | 1 | Negotiate TMDL implementation activities in a manner that is consistent with City goals and objectives | x | x | x | x | | ← | — | — | — | — | → | H | All watersheds and MPCA, MPRB |
| Enforce existing rules and regulations | | | | | | | | | | | | | | | |
| | 1 | Negotiate NPDES permits that are consistent with City goals and objectives | x | x | x | x | ← | — | → | | | | | H | MPCA, MPRB |
| **Educate and engage the public** | | | | | | | | | | | | | | | |
| Enhance quality of runoff from redevelopment sites | | | | | | | | | | | | | | | |
| | 1 | Require separation of inflow sources as condition of rehabilitation building permit | x | x | | | ← | — | → | | | | | H | |
| | 2 | Investigate methods to incorporate runoff volume controls into Chapter 54 | | | x | x | | | ↔ | → | | | | M | |
| | 3 | Investigate methods to reduce impervious surface requirements in Zoning Code | | | x | x | | | ↔ | → | | | | M | |
| | 4 | Update stormwater hydraulic design standards to incorporate storage for flood mitigation and snowmelt | | | x | x | | | | ↔ | → | | | M | |
| | 5 | Investigate financial or water quality sizing credits for redevelopment projects that preserve natural characteristics | | | | x | | | | | | ↔ | → | L | All watersheds |
| | 6 | Improve compliance with Erosion and Sediment Control Ordinance (Chapter 52) | | | | x | | | ← | — | — | — | → | H | All watersheds and MPCA |
| | 7 | Track success of BMP pilot projects for dissemination and use as model in new projects. | | | x | x | | | | | | ↔ | → | M | All watersheds |
| | 8 | Revise water quality standards after new standards are formally approved by watershed | | | | x | | | ↔ | → | | | | M | All watersheds |
| | 9 | Work with BCWMC to clarify non-degradation policy for new impervious surface and incorporate into site requirements | | | | x | | | ↔ | → | | | | M | BCWMC |
| Maintain or enhance quality of runoff from existing private properties | | | | | | | | | | | | | | | |
| | 1 | Enforce ordinance requirements to eliminate inflow sources from private properties | x | x | | | | ↔ | → | | | | | H | |
| | 2 | Investigate financial or water quality sizing credits for sites that preserve natural characteristics | | | x | x | | | | | | ↔ | → | L | All watersheds |
| | 3 | Investigate additional maintenance requirements for privately owned parking lots | | | | x | | | ↔ | → | | | | M | |
| | 4 | Educate public on environmental degradation caused by excessive use of deicing chemicals | | | | x | | | | ↔ | → | | | H | MPRB, All watersheds |
| | 5 | Reassess education activities to identify audiences not targets and to maximize coordination with other effo | x | x | x | x | | | ↔ | → | | | | H | All watersheds |
| **Enhance livability and safety** | | | | | | | | | | | | | | | |
| Preserve, maintain and enhance the City's natural and recreational corridors | | | | | | | | | | | | | | | |
| | 1 | Complete inventories of MPRB and privately owned wetlands | | | | x | | | | | | ↔ | → | L | MPRB |
| | 2 | Complete inventories of MPRB and privately owned natural and riparian corridors | | | | x | | | | | | ↔ | → | L | MPRB |
| | 3 | Complete condition assessment of MPRB and privately owned shorelines | | | | x | | | | | | ↔ | → | L | MPRB |
| | 4 | Evaluate opportunities to expand Audubon Society practices to all golf courses | | | | x | | | | | | ↔ | → | L | MPRB |
| | 5 | Evaluate need for wetland buffer ordinance for privately owned shoreline | | | | x | | | | | | ↔ | → | L | All watersheds |
| | 6 | Evaluate need for shoreline stabilization program in cooperation with watersheds | | | | x | | | | | | ↔ | → | L | All watersheds |
| Maintain and/or improve the quality of the City's surface waters | | | | | | | | | | | | | | | |
| | 1 | Inspect sediment deltas as part of outfall inspection programs | | | | x | | ← | — | — | — | — | → | M | |
| | 2 | Establish agreements on responsibilities for O&M of surface waters | | | | x | | | | ↔ | → | | | M | MPRB, all watersheds |

## Funding Mechanisms

***General Fund*:** Property taxes spread capital, operations, and maintenance costs of the surface water system over the entire city. General fund revenues are not a major source of funding for water resources projects or programs in Minneapolis. However, these funds may pay for a storm drainage improvement that is part of a larger capital improvement project, such as a highway reconstruction project. General funds are also used to fund some activities of the Minneapolis Park and Recreation Board.

***Stormwater Utility Funds:*** In 2005, Minneapolis implemented a stormwater utility. Revenue from this fee is used for stormwater activities. Implementation of this fee did not create new revenue, but instead changed how each property was billed for stormwater services. The stormwater utility fee is similar to other fees the City charges its residents for services provided, such as a sanitary sewer fee and garbage disposal fee. Stormwater utility rates are based on an estimate of runoff generated and discharged to the City's system from a particular property. The revenues collected are dedicated to water resources management activities.

***Sewer Fund:*** Minneapolis utilizes revenue from the sewer fund to pay MCES for wastewater conveyance and treatment. This is also the major source of funding for CSO related projects and sanitary sewer maintenance activities.

***Sewer Bonds:*** In certain years, the City may decide to issue sewer bonds to raise money to pay for infrastructure upgrading and replacement. The debt service on these bonds is typically paid for by the sewer fund or by the stormwater utility.

***Special Assessments*:** Assessments against benefiting or responsible properties could be used to finance surface water improvements. Historically, Minneapolis has opted to use more general funding sources for water resources improvements which spread the cost across either the City as a whole or some smaller area of the City.

***Area and Connection Charges*:** These are fees charged to developments and redevelopments on an area (cost per acre) and/or connection (cost per unit) basis. These charges are frequently used in communities to ensure that proposed development pays for facilities required to serve it. Minneapolis has not used this funding approach. Future assessments of revenue sources by the budget department may include this approach as a new funding source.

***Grants*:** Though subject to budgetary constraints, a number of state and other grant programs are available for surface water management programs. Grants are a good way to supplement locally available resources, but are not very dependable as a sole source of funding and can be scarce when the City needs them most. Most recently, Minneapolis has received water resources funding from the following grant programs:

- Metropolitan Council Parks and Open Space
- Metropolitan Council Metro Environment Program

- Legislative Committee on Minnesota Resources
- Mississippi Watershed Management Organization
- MNDNR Flood Mitigation
- MNDNR Shoreland Habitat
- Direct appropriation of state bonds by Minnesota Legislature
- Bassett Creek Watershed Management Commission
- Minnehaha Creek Watershed District

## Financial Impacts – Capital Improvement Program

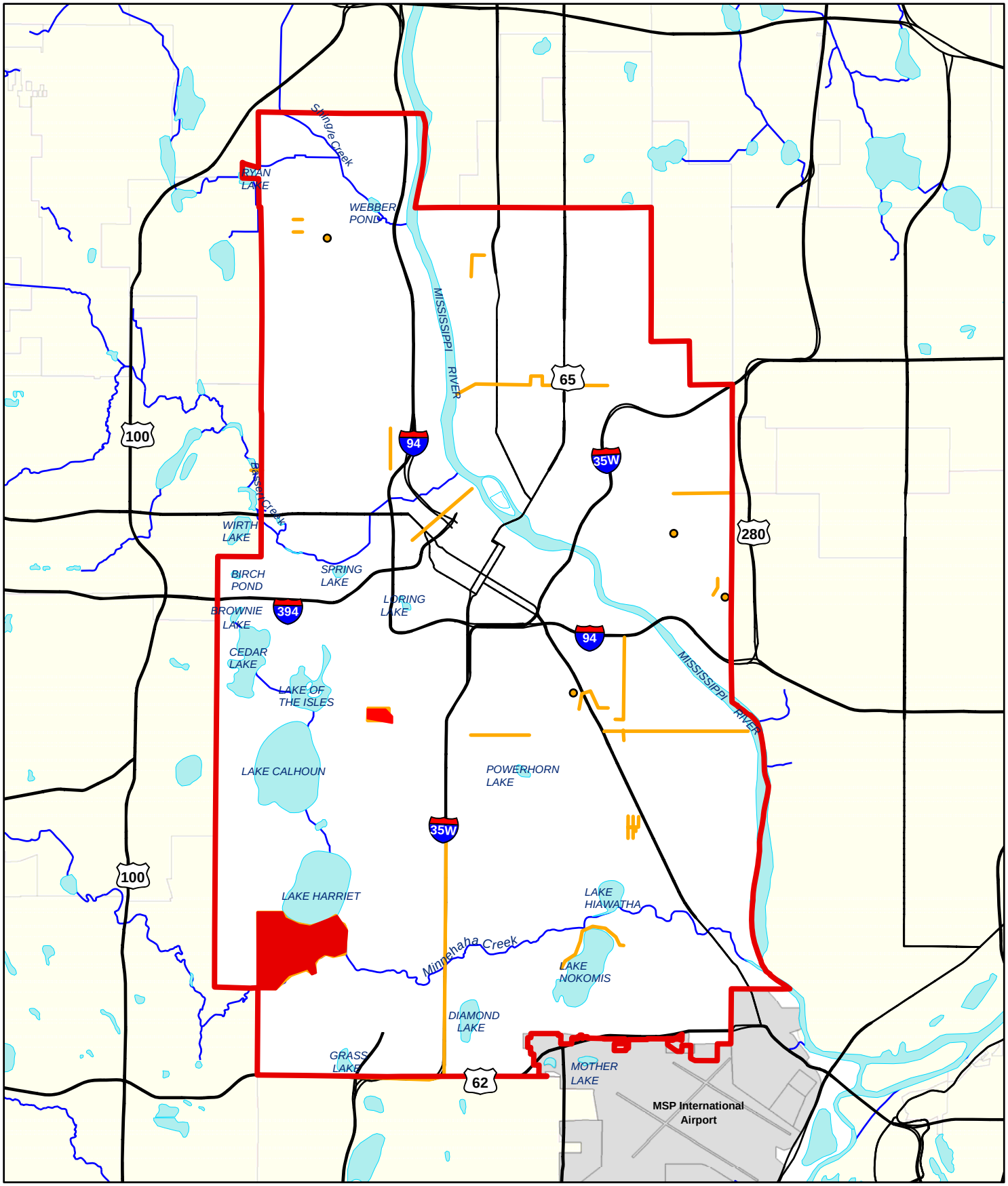
Figure 5-1 and Table 5-2 show the water resources capital improvement projects listed in the 2006 budget. The funding for 2006 is set; the remaining years are projected for planning purposes. The final budget for each of these future years will likely be adjusted to meet the specific needs of that year. Funding for these projects is a combination of sewer bonds, sewer revenue, stormwater utility revenue, and other minor sources.

In 2006, the City and the Minneapolis School Board jointly funded construction of five water resources management projects located on school sites:

- Folwell Middle School
- Longfellow Elementary School
- Sanford Elementary School
- Ramsey International Fine Arts School
- Washburn High School

These facilities provide for flood mitigation, improve water quality and provide an environmental education curriculum and stormwater awareness education. The City used the Alternative Stormwater Strategy Funds for its share of this jointly funded project.

In addition to the water resources funding in Table 5-1, the City implements water quality improvements, where feasible, in street reconstruction projects. Richfield Road is an example where three structural units, costing $135,000, were installed in 2005. The City is also working with Hennepin County to incorporate at least five units in the Lake Street reconstruction project. MN/DOT has agreed to install a treatment system on one of its Diamond Lake outfalls in conjunction with the Interstate 35W and Trunk Highway 62 reconstruction project.


Bassett Creek
RYAN LAKE
WEBBER POND
MISSISSIPPI RIVER
65
94
35W
100
280
WIRTH LAKE
BIRCH POND
SPRING LAKE
LORING LAKE
BROWNIE LAKE
394
CEDAR LAKE
LAKE OF THE ISLES
LAKE CALHOUN
POWERHORN LAKE
LAKE HARRIET
LAKE HIAWATHA
Minnehaha Creek
LAKE NOKOMIS
DIAMOND LAKE
GRASS LAKE
62
MOTHER LAKE
MSP International Airport
N
W
E
S
Miles
1
0
1
City of Minneapolis
Capital Improvement Plan Projects
Local Surface Water Management Plan
Figure 5-1
Water Resources Projects
Water Resources & Street Combination Projects
Water Resources & Street Combination Project Areas
General City Boundary
Highways

Other smaller scale water quality projects include the rain garden filtration strips at the 3rd Precinct, pervious pavement at the animal control facility, and a green roof at the Fridley Maintenance Center.

**Table 5-2. Water Resources Capital Improvement Projects**

| Project/Program | 2006 Minneapolis Water Resources Capital Improvement Funding (in $1,000) | | | | | |
|---|---|---|---|---|---|---|
| | 2006 | 2007 | 2008 | 2009 | 2010 | Total |
| Storm and Sanitary Tunnel and Sewer Rehabilitation | 2,500 | 2,500 | 2,800 | 4,000 | 2,500 | 14,300 |
| Misc. Storm Drains | 220 | 220 | 220 | 220 | 220 | 1,100 |
| Stormwater Regulations | 150 | 150 | 150 | 150 | 150 | 750 |
| CSO Improvements | 0 | 4,000 | 0 | 0 | 0 | 4,000 |
| CSO Separation – facilities | 400 | 0 | 0 | 0 | 0 | 400 |
| Diamond Lake/35W Water Quality Improvements | 497 | 0 | 0 | 0 | 0 | 497 |
| Alternative Stormwater Strategies | 700 | 500 | 500 | 500 | 500 | 2,700 |
| Lake Hiawatha – Blue Water Partnership | 700 | 800 | 1,000 | 0 | 0 | 2,500 |
| I-35W Tunnel Reconstruction | 0 | 0 | 7,938 | 7,938 | 3,175 | 19,051 |
| Heritage Park | 250 | 250 | 0 | 0 | 0 | 500 |
| Street Renovation | 115 | 115 | 115 | 115 | 0 | 460 |
| University Research Park | 495 | 0 | 0 | 0 | 0 | 495 |
| 27th Ave S | 666 | 0 | 0 | 0 | 0 | 666 |
| Lyndale Ave N | 249 | 0 | 0 | 0 | 0 | 249 |
| Chicago Ave S | 0 | 0 | 95 | 0 | 0 | 95 |
| LaSalle Ave S | 0 | 0 | 0 | 0 | 424 | 424 |

*Source: City of Minneapolis 2006 Adopted Budget*

## Financial Impacts – Non-CIP

The City's budget for all other water resources activities can be found in Section 5, Financial Plans of the City's annual budget. Table 5-3 summarizes the sanitary sewer fund and stormwater utility fund information contained in the 2006 budget. The 2006 column is the final approved budget; future funding is presented as a forecast which is subject to future change prior to annual adoption.

**Table 5-3. Non-capital Water Resources Management Activity Budgets**

| Activity | 2006 Minneapolis Sewer and Storm Funding (in $1,000) | | | |
|---|---|---|---|---|
| | 2006 | 2007 | 2008 | 2009 |
| Maintenance – Sanitary | 9,200 | 10,000 | 11,000 | 12,000 |
| Maintenance – Sweeping | 6,100 | 6,300 | 6,600 | 6,700 |
| Maintenance – Storm | 7,700 | 7,900 | 8,200 | 8,400 |

The total annual budget for the Public Works activities is limited by the amount raised by the sewer rate fee and stormwater utility fee. Total revenue collected from these fees is not expected to increase, other than modest adjustments based on inflation. The amount budgeted to specific activities is likely to adjust, based on future changes in priorities or regulatory requirements. Table 5-4 details the sewer and stormwater utility rates charged to City users.

**Table 5-4. Sewer and Stormwater Utility Rates and Projected Revenue**

| Year | Sewer Rate (per 100 cubic feet) | Projected Sewer Revenue | Stormwater Rate (per Equivalent Stormwater Unit) | Projected Stormwater Revenue |
|---|---|---|---|---|
| 2006 | 2.10 | $36,300,000 | 9.17 | $30,500,000 |
| 2007 | 2.19 | $37,900,000 | 9.57 | $31,900,000 |
| 2008 | 2.26 | $39,000,000 | 9.91 | $33,000,000 |
| 2009 | 2.32 | $40,100,000 | 9.91 | $33,000,000 |

# Implementation

## Implementation Framework

The City has created a framework for life-cycle management of systems and programs that is the basis for decision making with respect to water resources management. A specific activity begins because of a specific need or regulation, an assessment of the condition is made, planning for improvement is initiated, and then the improvement is implemented. A new structure/program/activity is operated/maintained/ inspected until a new need or regulation triggers another change. Figure 5-2 illustrates this implementation framework.

The life-cycle of water resources management activities include three principal phases: assessment, planning and implementation. Components of each include:

### Assessment

Assessment involves an array of techniques to validate if water resources management practices and infrastructure meet critical City efficiency objectives, such as structural integrity, ability to relieve impacts to health, safety, property, infrastructure, and aquatic life, and regulatory compliance. Activities include inspection, monitoring, routine record-keeping and emergency response readiness:


Figure 5-2. City Goals and Regulations Implementation Framework

- System condition inspection and assessment
- System capacity inspection and assessment
- Regulatory compliance – assessment activities
- Problem identification and definition
- Regulatory administrative responsibilities
- Identification of gaps in regulatory controls and programs
- Surface water monitoring – sampling protocols, data analysis and reporting

## Planning

Planning uses the finding from the assessment phase to identify capital, operational, regulatory, and administrative measures to cost-effectively address critical impacts. Planning activities are initiated once a problem has been identified in the assessment phase or when a new regulation is being promulgated by a public agency. Typical activities include:

- Creation of specific land use controls
- Financial management of programs and projects
- Financial impact analyses
- Implementation plans
- Public engagement
- Prioritization

- Scheduling
- Design standards
- Regulatory compliance, including reports and permitting
- Future updates to Minneapolis Local Surface Water Management Plan

### Implementation

Implementation puts plans to action by constructing the capital improvements, conducting the maintenance activities, and enforcing the regulations. Activities include:

- Design and construction of prioritized capital improvements
- Operation and maintenance
- Start-up and continuation of new regulatory activities
- Ongoing regulatory compliance activities
- Permitting and enforcement

## Additional Activities and the Implementation Framework

The additional activities needed to meet water resources management goals will add increased value to activities that are already in place. These additional services will be developed under the auspices of the implementation framework. For each proposed activity, stakeholders will be consulted, the scope will be developed, budgets proposed, and authorization to proceed with the activity will be at the will of the Mayor and City Council. As an activity receives prioritization and funding, an assessment of conditions will be made, planning for implementation will be conducted, and the activity will be implemented.

## Prioritization

One of the additional activities identified during development of this plan is for the City to develop an updated system of prioritization for new/improved water resources activities. To meet the intent of this LSWMP, the new system could be set to give preference to activities that meet multiple water resources management objectives. For example, a capital improvement project which removes inflow sources plus adds water quality improvement for runoff that drains to an impaired lake could be given greater preference than a project that only adds a water quality improvement. A quantitative method that assigns points based on water resources objectives could also be created. Points could be assigned based on relative health and safety benefits, number of objectives accomplished, cooperating partners, and other such considerations. Since funding for new programs is limited, available funding could be directed toward the projects or new programs that receive the highest points under the City-adopted priority ranking system.