VI. IMPLEMENTATION PLAN

A. Overview

The Implementation Plan is the final section of the Plan, and one which is intended to provide guidance in carrying out the Plan goals and objectives. The implementation section summarizes capital improvement projects, studies and ongoing maintenance, inspection, monitoring and other management activities. This Plan is intended to serve the City for at least the next ten years and possibly out to the year 2030. Procedures for amending the Plan are provided.

Based on the action-implementation plans from each of the seven goals, a process for accomplishing the goals and policies of this SWMP is established. In order to focus the implementation efforts towards achieving the stated goals, each of the individual goal sections of this Plan include an implementation plan summary. A similar summary is provided in Section IV of this Plan. Table 30 includes the elements of all the individual plan implementation tables and further includes a planning-level cost estimate for each activity or project. A summary of the estimated program costs is provided at the end of this section.

While the City has an extensive list of projects to implement and activities to conduct on an ongoing basis, there are several efforts that are considered the highest priority to complete. Table 45 below lists these priority projects and activities in the order they appear in this Plan, without assigning a direct priority ranking to each one. Planning level costs and a more detailed description for each project are provided in Table 46.

Table 45. Implementation Program Priority Projects and Activities

ID	Project Name	Description	Plan Section Reference	Year
1	Evaluate High Water Levels on Lotus Lake	Review previous efforts and evaluate opportunities to reduce risks.	Table 7 - 5	2007
2	Update Storm Water Ordinance	Update to reflect standards in App. D.	Table 9 - 7	2006
3	Update Wetland Ordinance	Update to reflect Plan recommendations.	Table 11 - 3	2007
4	Identify stream bank protection needs at storm outlets	Identify improvement locations during NPDES outfall inspections process.	Table 13 - 3	2006 -07
5	Select/create storm system inspections/reporting database	Identify long-term system for record keeping, planning and reporting.	Table 17 - 3	2006 -07
6	Pond LL-P7.5 (Lotus Lake watershed)	Proposed pond installation in current lake association property.	Table 25, Appendix I	2007
7	Pond LL-P10.17 (Lotus Lake watershed)	Add treatment adjacent to channel / wetland in backyards.	Table 25, Appendix I	2008
8	Pond LL-P2.2 (Lotus Lake watershed)	Add treatment area adjacent to wetland on lake association property.	Table 25, Appendix I	2008
9	Pond LM-P8.8 (Minnewashta watershed)	Add pond in Fir Tree street recon project area. MCWD P-reduction project.	Table 27, Appendix G, I	TBD
10	Pond LM-P1.5 (Minnewashta watershed)	Pond in City park, Orchard Lane street recon area. MCWD P-reduction project.	Table 27, Appendix G, I	TBD
11	Pond LR-P2.3 (Lake Riley watershed)	Potential pond in Bandimere Park	Table 29, Appendix I	TBD
12	Pond LR-P2.6 (Lake Riley)	Proposed pond installation in current lake association property.	Table 29, Appendix I	TBD

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Table 46. Implementation Plan Summary/Overview

Plan Section (Table No.)	ID	Activity / Project	Resources	Measurement	Schedule	Estimated Cost	Completed (Y/N) Notes
Water Quantity Goals **(Table 7)**	1	Explore opportunities for discharge rate reductions or hydrograph modifications in the Bluff Creek System.	• Review of proposed development projects • Hydrologic / hydraulic models • Analysis of downstream impacts	• BMPs installed for additional detention • Reduction in peak/duration of erosive flows • Reduction in bank erosion	Ongoing (annual cost)	$10,000	
	2	Refine City-wide hydrologic model as proposed projects are completed	• City-wide model • Engineering Dept. staff • Developer's plans and modeling submittals	• Improved system model	Ongoing (each project)	Staff Time	
	3	Review easement coverage on City owned and maintained storm systems relative to the 100-year HWL	• Property records • City pond GIS data and parcel coverages • Property owners	• GIS analysis of parcel data • Dedicated easements over ponds to the 100-year high water level - annually	2008 (Ongoing/annual)	$20,000 $15,000	
	4	Initiate Private System Maintenance Program	• Example agreement in Appendix of this plan • "www" access to O&M requirements • City inspection and maintenance staff	• Reduction of localized flooding • Improved water quality treatment efficiency • Pond/BMP cleanout	2007 (Ongoing/annual)	$10,000 $50,000	
	5	Complete Feasibility Study to evaluate potential reductions of extended high water levels on Lotus Lake	• City-wide model • XP-SWMM if needed • Coordinate with watershed district efforts	• Completed Study • Identified opportunities for volume and water quality benefits	2007	$20,000	
Water Quality Goals **(Table 9)**	1	Continue Education program as part of the City's NPDES Permit program SWPPP	• NPDES SWPPP • Water Resources Coordinator • Watershed Organizations	• Education events	Ongoing (annual cost)	$5,000 Staff Time	
	2	Coordinate BMP maintenance program with NPDES SWPPP and private system maintenance program.	• City staff inspectors • Maintenance staff • Private maintenance program in Table 7, ID 4.	• Measurable goals from NPDES SWPPP • BMPs maintained • Materials removed	Ongoing (annual cost)	$10,000	
	3	Explore opportunities for water quality improvement projects. Focus on Riley and Lotus Lakes to jump start anticipated TMDL results. Identify direct discharges (no treatment pond/system) to priority water resources.	• Review of proposed development projects • City-wide hydrologic model • GIS database of storm systems, ponds, wetlands • Street recon projects (see Appendix G) • Recommended pond data in Appendix I.	• BMPs installed • Improved water clarity trends • Increased treatment capacity	Ongoing (Avg. annual cost - see App. I of Plan for pond summary info.)	$350,000	
	4	Participate in TMDL Studies for Riley and Lotus Lakes	• MPCA • Watershed Organizations	• Final Study Recommendations	Pending	MPCA Funded	
	5	Continue water quality monitoring programs on City lakes and key resources	• MPCA Citizen Monitoring • City staff • Lake Management Plans and Studies	• Annual assessment of data • Management approach adjustments	Annually	Staff Time	
	6	Complete Neighborhood studies and implement treatment BMPs	• Study memorandums in Appendix G. • Street reconstruction project plans • See Figure 8	• Completed implementation projects • Treatment capacity established	Varies (annual cost)	Included in Table 9	
	7	Update storm water management ordinance	• 2006 Plan standards in Appendix D • Local watershed standards	• Completed ordinance update	2006-2007	Staff time	

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Table 46. Implementation Plan Summary/Overview (continued)

Plan Section (Table No.)	ID	Activity / Project	Resources	Measurement	Schedule	Estimated Cost	Completed (Y/N) Notes
Wetland Goals **(Table 11)**	1	Implement the wetland management program described in Section V of this Plan	• 2006 Inventory • Wetland Conservation Act • MnRAM, GIS Database • Watershed Organizations • Development project reviews	• Completion of annual WMP project review activities • Implemented projects • New wetland created	Ongoing	Staff time	
	2	Update Wetland Inventory with project data. Digitize created wetlands and modify impact wetlands per projects.	• Development projects • MnRAM, GIS Database • City staff	• Maintained, updated database	Ongoing	Staff time	
	3	Update wetland management ordinance	• 2006 Inventory • Draft ordinance recommendations - Appendix K of Plan	• Completed ordinance update	2007	$5,000	
Erosion and Sediment Control Goals **(Table 13)**	1	Continue to implement the erosion and sediment control inspection program.	• Development projects • Carver County • Watershed Organizations • Clean Water Hotline	• Implemented projects	Ongoing		
	2	Explore opportunities for erosion protection and bank stabilization at key storm system conveyances and outlets	• Review of proposed development projects • City-wide hydrologic model • Analysis of peak rates on downstream impacts	• BMPs installed • Reduction in bank erosion • Reductions in gullies, washouts	Ongoing	Staff time	
	3	Evaluate the need for improving the efficiency and effectiveness of the inspection program.	• Implement new technologies for inspection tracking • Dedicated staff to supplement work of Carver County staff	• Improved compliance at construction sites • Reduced sediment delivered to water bodies	2006 (Ongoing/annual)	$5,000	
Financing Goals **(Table 15)**	1	Complete an assessment of trunk storm water and utility system fees needed to support the overall City water resources program.	• Original Utility Study • City staff • NPDES SWPPP requirements • Water Quality Hotline	• Completed study • Implemented changes to assessments and or utility rates	2006 Review after Non-Deg Plan Completion	Done	
	2	Explore opportunities for grant program funding to implement water resource improvement projects	• MPCA Programs • Watershed Organizations • Metropolitan Council	• BMPs installed • Water quality improvement, education and/or demonstration projects	Ongoing (annual cost)	$5,000	

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Table 46. Implementation Plan Summary/Overview (continued)

Plan Section (Table No.)	ID	Activity / Project	Resources	Measurement	Schedule	Estimated Cost	Completed (Y/N) Notes
Regulatory Responsibility Goals **(Table 17)**	1	Continue to implement the City's NPDES Permit program SWPPP.	• SWPPP and individual BMPs • Permit activity tracking system • Adjacent MS4s	• Annual Report and program assessment summary	Annually June 30 (tracking system annual cost)	Staff time $3,000	
	2	Maintain consistency with Watershed Management Organization Plan Goals and Policies	• Minnehaha Creek Plan • Riley-Purgatory Bluff Creek Plan • Carver County Plan • Lower Minnesota River Watershed District Plan	• Plan updates as needed	Ongoing	Staff time	
	3	Establish electronic NPDES inspection and maintenance program tracking and reporting system	• Current GIS data for structures • Recommendations in Appendix J • Off-the-shelf software or in-house system	• Evaluate options • System established and fully functional • Ongoing data collection/reporting	2006 2007 Annually	$10,000	
Public Participation Information and Education Goals **(Table 19)**	1	City Storm Water Program and Annual NPDES Permit Public Meeting	• SWPPP and individual BMPs • Permit activity tracking system • Adjacent MS4s • Public Input	• Annual Report and program assessment summary • Public hearing held at City Council	Annually Prior to June 30	$2,000	
	2	Remain involved in local educational campaigns	• Metro WaterShed Partners • Counties • Watershed Districts	• Resulting products and/or information distributed	Ongoing	Staff time	
	3	Recruit volunteers to participate in the Citizen Assisted Monitoring Program (CAMP) for lakes	• Metropolitan Council • City staff	• Annual results in report from Metropolitan Council	Annually	Staff time	
	4	Include water resources articles in Chanhassen Connection	• Metro WaterShed Partners • Watershed Districts • City staff	• Articles placed in newsletter quarterly	Quarterly; Ongoing	Staff time	
	5	Provide water resources-related information on the City's website	• Metro WaterShed Partners • City staff	• Updated information on website regarding waterbody water quality, ongoing projects and current issues	Ongoing	Staff time	
	6	Continue to maintain Clean Water Hotline	• City staff	• Regular updates to outgoing messages to provide information on current water resources projects	Ongoing	Staff time	

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Table 46. Implementation Plan Summary/Overview (continued)

Plan Section (Table No.)	ID	Activity / Project	Resources	Measurement	Schedule	Estimated Cost	Completed (Y/N) Notes
Lake Management Recommend-ations **(Table 31)**	Lake Ann	Monitor and manage Eurasian watermilfoil and curlyleaf pondweed Water quality monitoring events should occur at least once every five years (phosphorus levels, especially within the hypolimnion). Secchi disc sampling monthly every year during the summer	• City staff • Citizen Monitoring program • Watershed District Staff/Coordination • Use Attainability Analysis	• Reduction of watermilfoil and curlyleaf pondweed • Steady to improved water quality trends	Ongoing		
	Christmas Lake	Continue to follow the 1994 Lake Management Plan recommendations	• City staff • Citizen Monitoring program • Watershed District Staff/Coordination	• Steady to improved water quality trends	Ongoing		
	Lotus Lake	Control nuisance invasive/exotic species, Eurasian watermilfoil, curlyleaf pondweed, purple loosestrife. Curlyleaf pondweed should be monitored and controls implemented if it becomes dominant. Purple loosestrife control should be continued or initiated using biocontrol agents (beetles)	• City staff • Citizen Monitoring program • Watershed District Staff/Coordination • Technical expert/consultant	• Reduction of nuisance invasive/exotic species	Ongoing		
	Lake Lucy	Curlyleaf pondweed should be monitored and a control/management plan should be developed. Complete a Lake Management Plan. A vegetation management plan should be developed separately or as part of an updated Lake Plan.	• City staff • Citizen Monitoring program • Watershed District Staff/Coordination • Technical expert/consultant • Use Attainability Analysis	• Reduction of nuisance invasive/exotic species • Steady to improved water quality trends	2008 (Plan) Ongoing	$25,000	
	Lake Minne-washta	Monitor adjacent wetlands for phosphorus input. Implement nuisance/invasive species control (Eurasian watermilfoil and purple loosestrife). Curlyleaf pondweed monitoring is recommended.	• City staff • Citizen Monitoring program • Watershed District Staff/Coordination • Technical expert/consultant	• Reduction of nuisance invasive/exotic species • Steady to improved water quality trends	Ongoing		
	Rice Marsh Lake	Continued implementation of the 1994 Lake Management Plan. Development and implementation of a strategy for controlling curlyleaf pondweed.	• City staff • Citizen Monitoring program • Watershed District Staff/Coordination • Technical expert/consultant • Use Attainability Analysis	• Reduction of nuisance invasive/exotic species • Steady to improved water quality trends	Ongoing		
	Lake Riley	Support the implementation of water quality treatment practices throughout the watershed.	• City staff • Citizen Monitoring program • Watershed District Staff/Coordination • Technical expert/consultant • Use Attainability Analysis	• Steady to improved water quality trends	Omgoing		
	Lake Susan	Monitoring and managing nuisance species, including Eurasian watermilfoil and curlyleaf pondweed. Active control of rough fish. Participate in carp barrier project with the TH 101 corridor project.	• City staff • Citizen Monitoring program • Watershed District Staff/Coordination • Technical expert/consultant • Use Attainability Analysis	• Reduction of nuisance invasive/exotic species • Reduction in rough fish populations	Ongoing		
	Lake St. Joe	Evaluate use of in-lake phosphorus treatments. Continued monitoring is recommended, especially for phosphorus concentrations.	• City staff • Citizen Monitoring program • Watershed District Staff/Coordination • Technical expert/consultant	• Steady to improved water quality trends	Ongoing		

B. Implementation Priorities and Costs

Paying for water management projects and administrative activities has become more complex in recent years. In the past, special assessments against benefited properties financed most of the necessary improvements. However, the financial options have broadened considerably. The question is, which method(s) best suits the needs of the City. The major categories of funding sources are: Ad Valorem Taxes; Special Assessments; Storm Water Utility; and Grants as summarized below.

- *Ad Valorem Tax*. General taxation is the most common revenue source used to finance government services, including minor maintenance measures for drainage and water quality facilities. Using property tax has the effect of spreading the cost over the entire tax base of a community. A special tax district can also be used to raise revenue. The special tax district is similar to the administrative structure under general taxation except that all or part of the community may be placed in the tax district. The principle is to better correlate improvement costs to benefited or contributing properties.
- *Special Assessments*. Municipalities are familiar with the use of special assessments to finance special services from maintenance to construction of capital improvements. The assessments are levied against properties benefiting from the special services. The philosophy of this method is that the benefited properties pay in relation to benefits received. The benefit is the increase in the market value of the properties.
- *Trunk Storm Sewer/Development Fees.* Fees charged to new development that generates runoff can be charged to finance infrastructure needed to serve the development. This is a useful tool in communities that are rapidly developing.
- *Storm Water Utility*. A utility is a service charge or fee based on usage, similar to the fees charged for sanitary sewer or potable water supply. The fee is typically charged against improved parcels based on the concept of contributors (or users) pay. The rate structure is based on the land use type, density, and parcel size to reflect the typical runoff contributed by a given parcel. In some cases parcels may be eligible for a credit to reduce their fee.
- *Grants*. State grants are available for surface water management and non-point source pollution. However, it is generally not a good financial practice to rely on grants for a service program. This source of revenue is not dependable and requires constant speculation as to its availability. Grants are useful but should only be used to supplement a planned local revenue source. Some of the agencies and programs that may have available grant funds include:
    - Environmental Protection Agency
    - Watershed Districts and WMOs
    - U. S. Fish and Wildlife Service
    - Minnesota Department of Natural Resources
    - Metropolitan Council
    - Minnesota Pollution Control Agency

The City currently has a storm water utility (Surface Water Management Utility Fee) in place. The 1994 Surface Water Management Plan recommended the establishment of a trunk fee system for new development. This funding served to supplement the already-existing surface water utility fee. The Purpose of each funding approach is described in Table 47.

Table 47. Surface Water Management Fees in Chanhassen

Fee	Established	Purpose
Surface Water Connection Charge	1994	Funding improvements related to increasing the capacity of or reconstructing infrastructure to accommodate new development.
Surface Water Management Utility Fee	1990	Planning, monitoring, capital expenditures, personnel, maintenance, equipment.

The surface water connection charge is a one-time charge payable upon subdivision of a property. The connection charge includes a water quality and a water quantity fee for each net developable acre. For the purpose of fee calculations, the net developable area generally includes total site area after subtracting the land that cannot be developed including, but not limited to, pond or wetland areas, buffer areas and steep slopes.

The surface water management utility fee is a quarterly fee charged to each property within the City. Single family residential, rural residential, agricultural and undeveloped properties are charged a fixed quarterly fee. All other land uses are charged based on a base rate multiplied by the utility factor for the land use multiplied by the acreage of the parcel, exempting public right-of-way and lakes.

These revenue sources will be continued in order to fund surface water management activities within Chanhassen. The charges and fees will be reviewed and adjusted annually to ensure adequate funding for the activities set forth in this plan and those required by law.
In order to establish a baseline estimate of the overall program costs for the next 20 to 30 years of the Plan, individual activity and project cost estimates were developed. The costs represented below do not account for the parts of the overall program implementation budget that include costs such as staff salaries, street sweeping equipment, water quality monitoring equipment or sampling costs, and sweeping disposal costs. The costs also do not include land acquisition costs (capital or legal) which may be necessary to implement the pond or water quality treatment BMPs recommended in the Plan (see Appendix I for recommended pond options).

Table 48 summarizes the estimated implementation costs on an annual basis for the projects and activities presented in Table 31. These estimated costs will be updated as the Plan proceeds through the final review and approval process, and are intended here as an order of magnitude estimate of the funding needed for the projects and activities identified in this Plan.

Table 48. Implementation Plan Financial Summary

Category	Description (examples)	Estimated Annual Costs (2006 Dollars)
Planning Costs Studies Ordinance Updates Public Education Efforts	• Feasibility Study - Lotus Lake High Water Levels • Review of Easements on Ponds/BMPs City-wide • Update Storm Water and Wetland Ordinances • Public Education Materials and Event Participation	$50,000
Capital Construction Costs Construction of Ponds, Outlet Structures and/or Structural BMPs Pond/BMP Cleanout	• Sediment Removal from Pond and structural BMPs • Storm Pond and BMP Construction Costs	$350,000
Operation and Maintenance Program Management New Technologies for Program Management New System and Site Inspections	• Updates to GIS Databases for easements, pond projects, BMP Tracking • Inspections Coordination with County Staff • Updates to NPDES Program Tracking Systems	$35,000
Estimated Total Annual Cost		**$435,000**

C. Amendments to the Plan

1. Amendments Procedures

The Surface Water Management Plan is intended to extend approximately through the year 2016. In conjunction with this Plan, the NPDES SWPPP activities will be reviewed and evaluated annually in a public meeting and the permit program itself will be updated as required by the MPCA NPDES permit program. For this plan to remain dynamic, an avenue must be available to implement new information, ideas, methods, standards, management practices, and any other changes which may affect the intent and/or results of this Plan. Amendment proposals can be requested at any time by any person or persons either residing or having business within the City.

2. Request for Amendments

Any individual can complete a written request for a Plan amendment and submit the request to City staff. The request shall outline the specific items or sections of the Plan requested to be

amended, describe the basis and need for the amendment and explain the desired result of the amendment towards improving the management of surface water within the City. Following the initial request, staff may request that additional materials be submitted in order for staff to make a fully-informed decision on the request.

3. Staff Review

Following a request for Plan amendments, staff will make a decision as to the completeness and validity of the request. If additional information is needed by staff to determine the validity of the request, staff will generally respond to the requestor within 30 days of receiving the request. Following receipt of sufficient information such that validity of the request can be evaluated, there are three options which are described below:

a) Reject the amendment. Staff will reject the amendment if the request reduces, or has the potential to reduce, the Plan's ability to achieve the goals and policies of the Plan, or will result in the Plan no longer being consistent with one or more of the watershed district's plans.

b) Accept the amendment as a minor issue, with minor issues collectively added to the plan at a later date. These changes will generally be clarifications of plan provisions or to incorporate new information available after the adoption of the 2006 Plan. Minor changes will generally be evaluated on the potential of the request to help staff better implement and achieve the goals and policies the Plan. Minor issues will not result in formal amendments but will be tracked and incorporated formally into the Plan at the time any major changes are approved.

c) Accept the amendment as a major issue, with major issues requiring an immediate amendment. In acting on an amendment request, staff should recommend to the City council whether or not a public hearing is warranted. In general, any requests for changes to the goals and policies or the development standards established in the Plan will be considered major amendments.

Staff will make every attempt to respond to the request within 30-60 days of receiving sufficient information from the requestor. The timeframe will allow staff to evaluate the request internally and gather input from the WD/WMOs and other technical resources, as needed. The response will describe the staff recommendation and which of the three categories the request falls into. The response will also outline the schedule for actions, if actions are needed to complete the requested amendment.

4. WMO Approval

All proposed major amendments must be reviewed and approved by the appropriate Watershed Management Organizations and Water Districts prior to final adoption of the amendments. Major amendments would include changes to the goals and policies of the Plan. Staff will review the proposed amendments with the WD/WMOs to determine if the change is a major amendment and if determined to be major amendment, then will assess the ability of the requested amendment to maintain consistency with WD/WMO plans.

5. Council Consideration

Major amendments and the need for a public hearing will be determined by staff and if identified as a major amendment, the request will be considered at a regular or special Council meeting. Staff recommendations will be considered before decisions on appropriate action(s) are made. The requestor will be given an opportunity to present the basis for, and intended outcomes of, the request at the public hearing and will be notified of the dates of all official actions relating to the request.

6. Public Hearing and Council Action

The initiation of a public hearing will allow for public input or input based on public interest in the requested amendment. Council, with staff recommendations, will determine when the public hearing should occur in the process. Consistent with other formal Council actions and based on the public hearing, Council would adopt the amendment(s), deny the amendment(s) or take other action.

7. Council Adoption

Final action on any major amendments, following approval by the Watershed Management Organizations and/or Watershed Districts, is Council adoption. Prior to the adoption, an additional public hearing may be held to review the Plan changes and notify the appropriate stakeholders.

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