

1.1 THIRD GENERATION IMPLEMENTATION PLAN AND CAPITAL IMPROVEMENT PROGRAM

To achieve the goals set forth above the Commission will operate a regulatory program, implement monitoring and education and outreach programs, and undertake capital improvement projects. The following sections summarize these programs, which are described in more detail in attached appendices. Following the descriptions,

Table Error! No text of specified style in document..5 describes how the programs and projects in this Implementation Program address the Problems and Issues identified in the Gaps Analysis and subsequent public review and input and Table Error! No text of specified style in document..2 details the Implementation Program and its estimated cost.

1.1.1 Rules and Standards and Project Reviews

In preparing this Third Generation Watershed Management Plan, the Commission developed modifications to its standards for new development and redevelopment, codifying them in a Rules and Standards document. The Commission chose to adopt those new standards in advance of this Plan, effective January 1, 2015. The modifications bring those standards closer to consistency with those of other jurisdictions and with state and other requirements, and provide additional nutrient and sediment load and runoff volume reductions as identified in the various TMDLs. The revised Rules and Standards are set forth in Appendix C.

Project Review Size Thresholds. The mandatory size threshold for application of water quality and water quantity standards had been either 5 or 8 acres for single-family detached projects, depending on density, and 1 acre for all other development types. Projects proposing impacts to wetlands or floodplains were also required to meet certain standards and be reviewed by the Commission. All single family residential projects that disturb more than one acre and all other non-single family residential land-disturbing projects regardless of size were required to submit erosion control plans for review.

The water quality and quantity review threshold for many other WMOs is one acre regardless of land use, with some even smaller, based on the amount of disturbed surface. During this planning process it was determined that the current review thresholds miss many smaller projects that could incorporate BMPs to provide pollutant load and volume reductions. The threshold of project size for application of Commission water quality and quantity rules and standards was lowered in the revised standards. That review threshold is now one acre, regardless of density of land use.

Member cities may now elect to take on project review responsibilities for all projects less than five acres by demonstrating that they have in place the necessary local ordinances, policies, practices, and expertise and executing a Memorandum of Understanding with the Commission. This MOU must provide for periodic performance reviews by the Commission, and a method to rescind this delegated authority should the member city be found out of compliance.

Infiltration. The standards adopted in the Second Generation Plan promoted but did not require infiltration of stormwater runoff. The new infiltration-from-net-new-impervious-surface requirement in the revised standards is 1.1 inches infiltrated within 48 hours. This is consistent with the MPCA's Minimal Impact Design Standards (MIDS) and the NPDES General and Construction Permits requirements of 1 inch, and with rules promulgated by other watershed management organizations. Where infiltration is not feasible, the revised rules require that runoff be filtered

before discharge off the site. The rules include several credits toward meeting that infiltration volume requirement, including: disconnection of impervious surface; conservation of existing native vegetation; and the use of decompacted and amended soil as a BMP.

Rate Control. The standards adopted as a plan amendment to the Second Generation Plan required detention of a Channel Protection Volume to reduce the potential for erosive velocities in the streams in the watershed. Those standards were replaced in the revised standards with the new infiltration requirement.

Water Quality. The standards adopted in the Second Generation Plan required no net increase in pollutant loading from pre-development to post-development. As adopted in the revised standards, that requirement is now “the load reduction achieved by abstracting 1.1 inch from net new impervious or no net increase in TP or TSS, whichever is lower.” From a practical standpoint, developers will need to calculate first, the loading from the pre-development condition, and second, the loading assuming the abstraction of 1.1 inch of impervious runoff from the post-development condition. The development must incorporate water quality BMPs to limit post-construction loading to the lesser of those two figures. Load reduction achieved by meeting the infiltration requirement can be applied toward meeting the water quality requirement.

Buffers. The Second Generation Plan required developers to provide a 50 foot buffer adjacent to Elm, Rush, North Fork Rush, and Diamond Creeks for any new or redevelopment, and encouraged property owners to provide a 20 foot buffer adjacent to wetlands, lakes, and streams. That requirement is revised in the new standards to require an average 50 foot, minimum 25 foot wide buffer adjacent to the aforementioned streams, and to require an average 25 foot, minimum 10 foot wide buffer adjacent to lakes, wetlands, PWI streams, and county ditches for any new development or redevelopment. This revised buffer requirement provides more flexibility in establishing the buffer while retaining the basic buffer functions.

1.1.2 2015-2024 Monitoring Program

The Third Generation Monitoring Program, which is set forth in more detail in Appendix D, has two organizing principles: continuation of routine flow and water quality monitoring Elm Creek and Sentinel Lakes, and rotating monitoring of other streams and lakes by the Commission and by volunteers.

The Third Generation Plan outlines a monitoring program for the next ten years. Each year the Commission will evaluate the proposed program and make modifications as necessary based on the most current data needs. The monitoring objectives guiding the Elm Creek monitoring program and the assessment of data are shown below.

MONITORING PROGRAM GOALS

1. To quantify the current status of streams and lakes throughout the watershed in comparison to state water quality standards.
2. To quantify changes over time, or trends, in stream and lake water quality in the watersheds.
3. To enhance the value of previous monitoring data by extending the period of record.
4. To track and quantify the effectiveness of implemented BMPs throughout the watersheds for the protection of water quality.
5. To evaluate progress toward meeting TMDL load reduction and other goals.

In general the components of the monitoring program include the following:

- Continuing routine flow and water quality monitoring on Elm Creek in partnership with the USGS.
- Periodic flow and water quality monitoring at additional upstream sites on Elm Creek (ECW and EC77); Rush Creek (RCSL); North Fork Rush Creek (RC116); and Diamond Creek (DCZ) on a rotating basis.
- Continuing the partnership with Hennepin County Environmental Services to obtain macroinvertebrate collections by volunteers each year through RiverWatch and the Stream Health Evaluation Program.
- Periodic macroinvertebrate collections on biotically-impaired streams to assess progress toward meeting those TMDLs, and periodic longitudinal dissolved oxygen surveys on those streams with a dissolved oxygen impairment. Annual monitoring of four “Sentinel Lakes:” Fish Lake, Rice Lake, Diamond Lake, and Weaver Lake. In the past this monitoring has been completed by the Three Rivers Park District under contract to the Commission.
- Continuation of the partnership with the Metropolitan Council to conduct lake surface water quality monitoring of other lakes by volunteers every two to three years through the Citizen Assisted Monitoring Program (CAMP).
- Each year Three Rivers Park District prepares a report on current water quality and trends, and reports water quality monitoring data to the state’s EQuIS database.

The schedule and monitoring program set forth in Appendix D is intended to collect data sufficient to evaluate progress toward meeting TMDL goals, and is consistent with the recommendations in the draft Elm Creek Watershed TMDL.

1.1.3 2015-2024 Education and Outreach Program

Education and Public Outreach is a core function of the Elm Creek Watershed Management Organization. The Commission has conducted some education and outreach activities and has also collaborated with other organizations in Hennepin County as part of the West Metro Water Alliance (WMWA) and participated in Metro-wide education and outreach initiatives such as Blue Thumb, Watershed Partners and Northland NEMO.

This Third Generation Education and Public Outreach Program expands the Commission’s education and outreach activities. The program is set forth in more detail in Appendix E. The following sections set forth the program goals and strategies.

WATERSHED EDUCATION AND PUBLIC OUTREACH PROGRAM GOALS

The goal of the Elm Creek Watershed Management Commission's Education and Outreach Program is to educate and engage everyone in the watershed by increasing awareness of water resources, and creating and supporting advocates willing to protect and preserve the resources in the watershed.

Implementation Strategies. Each year the Commission will evaluate the proposed Education and Outreach program and establish education and outreach activities for the coming year. The WRAPS study may identify additional goals and strategies to be pursued in the coming years. The Commission will rely on the following and other strategies to implement the program and achieve the Plan's education and outreach goals:

- Participate with collaborative groups such as WMWA and Blue Thumb to pool resources to undertake activities in a cost-effective manner, promote interagency cooperation and collaboration, and promote consistency of messages.
- Use the Commission's, member cities', and educational partners' websites and newsletters, social media, co-ops, local newspapers and cable TV to share useful information to stakeholders on ways to improve water quality.
- Prominently display the Commission's logo on information and outreach items, project and interpretive signs, and other locations to increase visibility.
- Provide opportunities for the public to learn about and participate in water quality activities.
- Provide education opportunities for elected and appointed officials and other decision makers.
- Enhance education opportunities for youth.

2015-2017 Priority Areas for Education and Outreach. The following are the priority areas by stakeholder group for the first few years of the Third Generation Plan:

1. All stakeholders: use multiple strategies to deliver simple messages: "where does our water go" and "why do we manage water quality."
2. Homeowners: Disseminate education materials to all stakeholders about actions they can take to protect and improve water quality. Targeted messages:
 - a. Redirect your runoff onto pervious areas.
 - b. Clean up after your pets.
 - c. Keep organic matter (leaves, grass clippings, seeds, etc.) out of streets, ditches, lakefronts, and storm sewers.
 - d. Reduce chemical and salt use.
3. Lakeshore property owners: sponsor workshops on basics of limnology, learning about AIS, and how to undertake lakescaping.
4. Elected officials and city staff: Sponsor watershed and water resources training opportunities such as NEMO (Nonpoint Education for Municipal Officials) for the city councils and planning commissions in the member cities. Develop a mechanism to share information about BMPs between the cities and with developers.
5. Students: expand the Watershed PREP program to all elementary schools in the watershed, and begin developing a companion program for older students.
6. Agricultural producers and hobbyists: identify and work with influential persons to spread the water quality and BMP message. Undertake a demonstration project with a co-op.

1.1.4 TMDL/WRAPS Implementation

The TMDL report and WRAPS study identified very significant TP, TSS, and *E. coli* annual load reductions from watershed runoff that are summarized in Section 4.1.2 above. Implementation in the coming years will rely on three key strategies: regulation, targeted load reductions, and agricultural outreach.

Regulation. A key TMDL/WRAPS implementation strategy to reduce nutrient and sediment loading to the lakes and streams in the watershed is to maximize load and volume reductions at the time of land use change. City Comprehensive Plans indicate that about 40 percent of the area of the Elm Creek hydrologic watershed is expected to change land use by 2030. In the Crow River hydrologic watershed, 60 percent of the Cowley Lake drainage area and 79 percent of the Sylvan Lake drainage area is expected to be converted.

An assessment of the impact of potential rule changes such as an infiltration requirement was completed as part of the development of this Plan (Wenck 2013). This assessment started with estimating the change in runoff volume and nutrient loads when agricultural or undeveloped lands are converted to various types of developed uses. The change in volume and loading was then estimated assuming 1.1 inches of infiltration based on the MPCA's Minimal Impact Design Standards (MIDS). This analysis found that when hayland, cropland, pasture, and grassland land covers are converted to various types of developed land uses, infiltrating or filtering the first 1.1" of runoff on average results in a net *reduction* of unit area TP load. Only when converting woodland would the area loading rate be expected to increase (Wenck 2013).

Implementing more rigorous development and redevelopment standards, including an infiltration requirement, should over time reduce watershed loads, improving water quality in impaired waters and preventing degradation in waters that currently meet water quality standards. Recognizing the value of this regulatory tool, the Commission elected to adopt these more stringent standards in advance of the Plan and the TMDL/WRAPS, effective January 1, 2015.

Targeted Load Reductions. The Commission will partner with member cities and to undertake subwatershed assessments to identify potential retrofit BMPs. The watershed modeling completed for the TMDL/WRAPS identified subwatersheds where nutrient and sediment loading potentially occurs at higher rates than average. Detailed, subwatershed assessments and modeling will systematically focus load reduction efforts to areas where even small actions such as retrofitting existing ponds with iron-enhanced filter benches, mitigating stream erosion, enhancing stream buffers, improving individual site manure management, or adding new bioinfiltration basins are most cost-effective.

Figure 4.1 shows the estimated TP loading rate (left figure) and annual load (right figure) as modeled for the Elm Creek TMDL/WRAPS. The subwatersheds in darker blues and reds, which are generally the headwaters of Rush Creek and North Fork Rush Creek have the potential to contribute higher amounts of TP to those impaired waters, and monitoring data confirms that exceedances of the state water quality standards are most severe in the upper watershed. The Commission will prioritize those areas for subwatershed assessment in the first five years of Plan implementation.

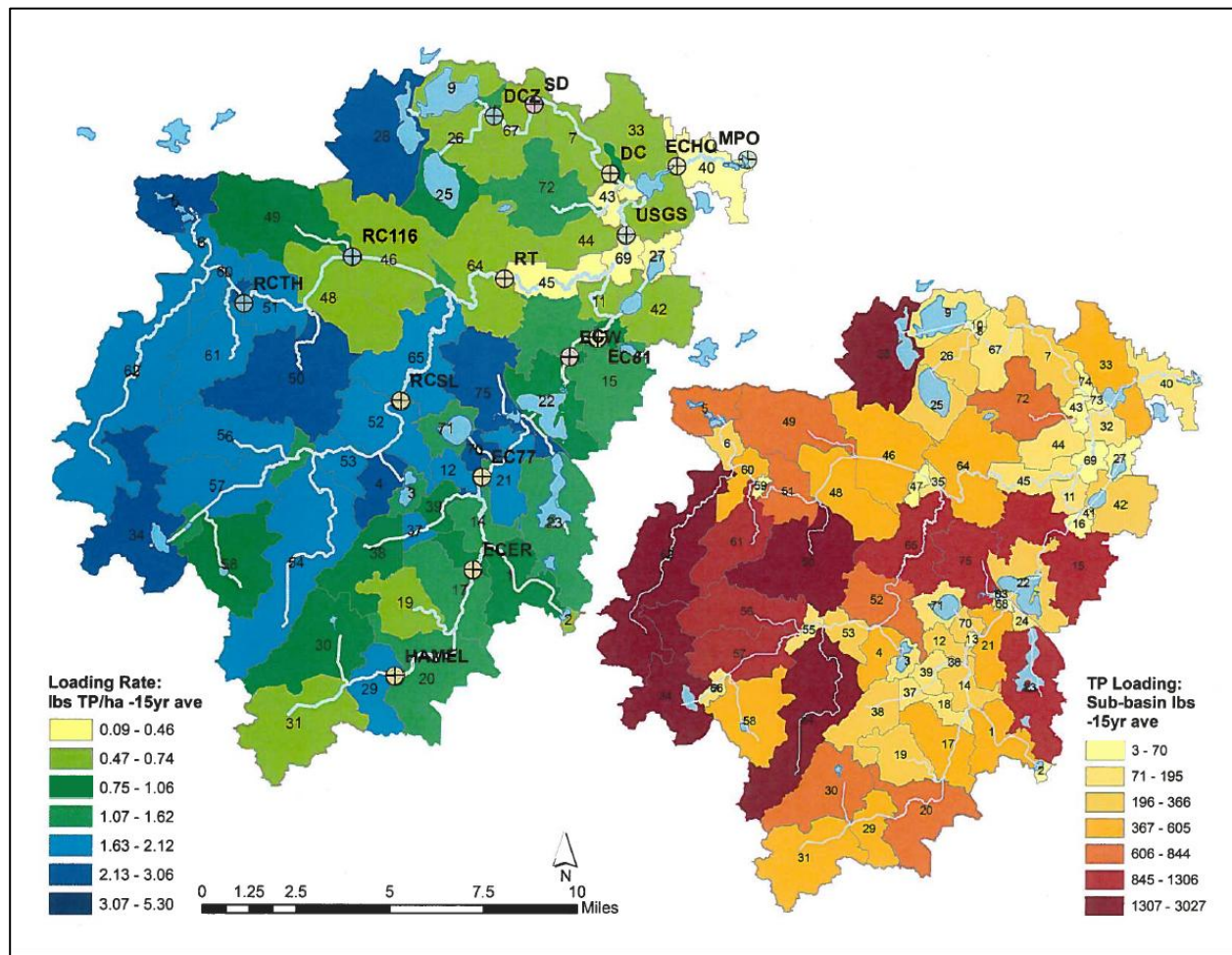


Figure Error! No text of specified style in document..1. Modeled TP loading by subwatershed.

Source: Elm Creek TMDL.

Agricultural Outreach. There are significant agricultural operations in the watershed, ranging from row crop production to horse hobby farms. The TMDL/WRAPS identified sources of agricultural loading, not only nutrients and sediment but also sources of bacteria. The Commission will periodically convene an agricultural TAC comprised of federal, state, and local specialists from U of M Extension, Minnesota Department of Agriculture, BWSR, Hennepin County, and other interested parties to craft partnerships in specialized education and other programs and BMPs such as targeted fertilizer application, erosion and sediment control, and manure management. This TAC will also advise the Commission as it completes subwatershed assessments in the agricultural parts of the watershed. The TAC will help identify appropriate implementation actions, and focus their technical expertise and resources on high-loading locations in subwatersheds of focus.

The TMDL identifies eight general strategies for the achievement of the TMDL load reduction goals. Table Error! No text of specified style in document..1 shows how those strategies have been incorporated into this Plan.

Table Error! No text of specified style in document..1. Actions in this Plan addressing Elm Creek Watershed TMDL implementation strategies.

Strategy	Actions in 3 rd Generation Plan
Maintain stringent stormwater mitigation standards to maximize load reductions during development and redevelopment.	More stringent standards, including a new infiltration requirement, were adopted effective January 1, 2015, and are included in Appendix C.
Adopt new standards governing siting and management of new non-production livestock operations.	This Plan requires member cities to develop and enforce such an ordinance, using the City of Medina's

Strategy	Actions in 3 rd Generation Plan
	ordinance as a guide.
Increase outreach to existing agricultural operations to identify and implement projects and target existing and new agricultural management resources.	The general operating budget includes funding to enhance education and outreach programs. The Commission will prioritize areas of the watershed and will partner with other agencies and organizations to target outreach.
Prioritize areas for the completion of subwatershed assessments to systematically identify and prioritize loading and volume management BMPs and other management practices.	The general operating budget includes funding to cost-share completion of subwatershed assessments. The Commission will use the monitoring and modeling completed for the TMDL to prioritize areas for assessments, and will convene a TAC of agency representatives specializing in ag BMPs and other interested parties to focus outreach and resources in agricultural areas.
Incorporate BMPs into road and highway projects, and other public projects as opportunities arise.	The Plan requires member cities to demonstrate how they will meet the load reductions in the TMDL, including identifying known upcoming projects such as street or highway reconstruction projects that will provide opportunities to include load and volume reduction BMPs.
Identify areas where increased infiltration would most beneficially enhance stream baseflow, and implement projects.	The Commission will use the monitoring and modeling completed for the TMDL and partner with the DNR, USGS, and other agencies to identify priority infiltration areas.
Incorporate habitat enhancements into stream stabilization and other projects.	The Commission will provide review and guidance to member cities to incorporate habitat enhancements on all projects impacting the streams in the watershed, and other projects that will protect and improve biotic integrity in the watershed's natural resources.

1.1.5 Capital Improvement Projects

The Commission's Joint Powers Agreement authorizes the Commission to undertake capital improvement projects. Those projects may be funded entirely by a member city, by the benefitting cities with the shares determined as set forth in the JPA or as agreed to by those cities, or by certifying for payment by the county all or any part of the cost of the capital improvement as set forth in Minn. Stat. 103B.251.

Capital projects that have been identified for inclusion in the Commission's Capital Improvement Program will be funded in accordance with the Commission's most current Capital Improvement Program Cost Share Policy. The Commission will actively pursue grant funding to supplement member city and cost-share funds for high priority projects.

This CIP will be amended from time to time as necessary to incorporate new projects, provide more detail for the "Other Projects" placeholder projects, and to provide specificity for the period 2020-2024.

Table Error! No text of specified style in document..2. Elm Creek Third Generation Plan Implementation Plan estimated cost.

	2014 Approved	2015 Approved	2016	2017	2018	2019	2020	2021	2022	2023	2024
GENERAL OPERATING BUDGET											
Expenses											
Administrative	90,000	89,000	90,780	92,600	94,450	96,340	98,270	100,240	102,240	104,280	106,370
Watershed-wide TMDL Admin	8,000										
Grant Writing		5,000	5,100	5,200	5,300	5,410	5,520	5,630	5,740	5,850	5,970
Website	4,000	5,000	5,100	5,200	5,300	5,410	5,520	5,630	5,740	5,850	5,970
Legal Services	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Audit	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Insurance	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500
Miscellaneous	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Subtotal	113,500	110,500	112,480	114,500	116,550	118,660	120,810	123,000	125,220	127,480	129,810
Project Reviews											
Technical HCEED	72,000	77,500	79,050	80,630	82,240	83,880	85,560	87,270	89,020	90,800	92,620
Technical Support Consultant	3,000	3,000	3,060	3,120	3,180	3,240	3,300	3,370	3,440	3,510	3,580
Admin Support	8,000	8,000	8,160	8,320	8,490	8,660	8,830	9,010	9,190	9,370	9,560
Subtotal	83,000	88,500	90,270	92,070	93,910	95,780	97,690	99,650	101,650	103,680	105,760
Wetland Conservation Act											
WCA Expense HCEED	8,000	12,500	12,750	13,010	13,270	13,540	13,810	14,090	14,370	14,660	14,950
WCA Expense Legal	500	500	500	500	500	500	500	500	500	500	500
WCA Expense Admin	3,000	2,000	3,100	3,100	3,100	3,250	3,250	3,250	3,250	3,250	3,250
Subtotal	11,500	15,000	16,350	16,610	16,870	17,290	17,560	17,840	18,120	18,410	18,700
Monitoring											
Stream Monitoring											
Stream Monitoring USGS	21,000	21,700	22,000	22,000	22,000	22,000	22,000	22,500	22,500	22,500	22,500
Stream Monitoring TRPD		7,000	7,140	7,280	7,430	7,580	7,730	7,880	8,040	8,200	8,360
Macroinvertebrate: River Watch	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000
Gauging Station Elec Bill	190	190	190	190	190	190	190	190	190	190	190
Rain Gauge Network	100	100	100	100	100	100	100	100	100	100	100
Lake Monitoring											
Lake Monitoring CAMP	1,750	1,650	1,650	1,100	1,650	1,100	1,650	1,100	1,100	1,650	1,650
Lake Monitoring TRPD	3,600	4,240	4,410	4,120	4,590	4,680	4,370	4,870	4,970	5,070	5,930
Wetland Monitoring WHEP	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Stream Health SHEP	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000
Subtotal	42,640	50,880	51,490	50,790	51,960	51,650	52,040	52,640	52,900	53,710	54,730
Education											
Education City/Citizen Programs	5,000	5,500	6,000	6,500	6,500	7,000	7,000	8,000	8,000	8,000	8,000
WMWA General Admin	3,750	4,000	4,080	4,160	4,240	4,320	4,410	4,500	4,590	4,680	4,770
WMWA Implementation Activities	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000
Rain Garden Workshops	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000

	2014 Approved	2015 Approved	2016	2017	2018	2019	2020	2021	2022	2023	2024
Education Grants	3,000	3,0 00	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Ag Specialist	5,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Subtotal	25,750	23,500	24,080	24,660	24,740	25,320	25,410	26,500	26,590	26,680	26,770
Special Projects											
Special Projects General	0	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000
BMP Implementation Program	0	0	0	0	0	0	0	0	0	0	0
South Metro Miss TMDL	0	0	0	0	0	0	0	0	0	0	0
Upper Miss Bacteria TMDL	0	2,000	0	0	0	0	0	0	0	0	0
CIPs/Studies/Project Identification	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Subtotal	13,500	37,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000
Contingency	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Subtotal	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Total Operating Expense	\$289,390	\$328,380	\$332,670	\$336,630	\$342,030	\$346,700	\$351,510	\$357,630	\$362,480	\$367,960	\$373,770
Project Review Fees	52,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000
Water Monitoring TRPD Coop Agreement	5,500	5,500	5,610	5,720	5,830	5,950	6,070	6,190	6,310	6,440	6,570
WCA Fees	1,500	4,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Membership Dues	203,000	209,000	215,360	221,820	228,470	235,320	242,380	249,650	257,140	264,850	272,800
Interest Income	100	100	100	100	100	100	100	100	100	100	100
From (To) Cash Reserves	27,290	29,190	30,100	27,490	26,130	23,830	21,460	20,190	17,430	15,070	12,800
Total Operating Revenue	\$289,390	\$328,380	\$332,670	\$336,630	\$342,030	\$346,700	\$351,510	\$357,630	\$362,480	\$367,960	\$373,770
	2014 Approved	2015 Approved	2016	2017	2018	2019	2020	2021	2022	2023	2024
Membership Dues	\$209,000	\$215,360	\$221,820	\$228,470	\$235,320	\$242,380	\$249,650	\$257,140	\$264,850	\$272,800	\$209,000
<i>Per Capita</i>	\$2.23	\$2.30	\$2.37	\$2.44	\$2.51	\$2.59	\$2.66	\$2.74	\$2.83	\$2.91	\$2.23
<i>Per \$100,000 market value</i>	\$2.30	\$2.37	\$2.44	\$2.52	\$2.59	\$2.67	\$2.75	\$2.83	\$2.92	\$3.01	\$2.30
% Increase	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Dollar Increase	\$6,000	\$6,360	\$6,460	\$6,650	\$6,850	\$7,060	\$7,270	\$7,490	\$7,710	\$7,950	\$6,000
<i>Increase per Capita</i>	\$0.06	\$0.07	\$0.07	\$0.07	\$0.07	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08	\$0.06
<i>Increase per \$100,000 Market Value</i>	\$0.07	\$0.07	\$0.07	\$0.07	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08	\$0.09	\$0.07
Contribution from Reserves		29,190	30,100	27,490	26,130	23,830	21,460	20,190	17,430	15,070	12,800
Reserves End of Year Cash Balance (est)	\$282,685	\$253,495	\$223,395	\$195,905	\$169,775	\$145,945	\$124,485	\$104,295	\$86,865	\$71,795	\$58,995

2010 Estimated Population: 93,700
2013 Estimated Market Value: \$9,072,723,913

Table Error! No text of specified style in document..3. Elm Creek Third Generation Plan Capital Improvement Program.
See Appendix G for project descriptions.

Description	Location	Priority	Estimated Project Cost	Partners	Funding Source(s)	Estimated Commission Cost					
						2015	2016	2017	2018	2019	2020-2024
<i>Special Studies</i>											
TMDL implementation special study	Watershed	H	50,000	Cities, HCEED	Operating budget	0	25,000	25,000	25,000	25,000	125,000
Stream segment prioritization	Watershed	H	10,000	Cities, HCEED, TRPD	Operating budget	10,000	0	0	0	10,000	0
<i>High Priority Stream Restoration Projects</i>				Cities, TRPD	Cities, TRPD, county levy, grants						
Elm Cr Reach E	Plymouth	H	1,086,000			250,000	0	0	0	0	0
Fox Cr, Creekview	Rogers	H	150,000			0	37,500	0	0	0	0
Mississippi Point Park Riverbank Repair	Champlin	M	300,000			0	75,000	0	0	0	0
Elm Creek Dam	Champlin	H	7,001,220			0	187,500	0	0	0	0
Tree Thinning and Bank Stabilization Project	Watershed	H	50,000			0	50,000	0	50,000	50,000	250,000
Fox Cr, Hyacinth	Rogers	M	360,000			0	0	90,000	0	0	0
Fox Cr, South Pointe, Rogers	Rogers	M	90,000			0	0	22,500	0	0	0
Other High Priority Stream Project	Watershed	H	500,000			0	0	0	125,000	125,000	250,000
<i>High Priority Wetland Improvements</i>				Cities	Cities, commission						
DNR #27-0437	Maple Grove	L	75,000			0	0	0	0	0	18,750
Stone’s Throw Wetland	Corcoran	M	450,000			0	0	112,500	0	0	0
Other High Priority Wetland Projects	Watershed	L	100,000			0	0	0	0	0	25,000
<i>Lake TMDL Implementation Projects</i>				Cities, lake assns.	Cities, Commission, grants, owners						
Mill Pond Fishery and Habitat Restoration	Champlin	H	5,000,000			0	0	250,000	0	0	0
Other Priority Lake Internal Load Projects	Watershed	M	100,000			0	0	0	0	0	25,000
<i>Urban BMPs</i>				Cities, HCEED	Cities, commission						
Stonebridge	Maple Gr	M	200,000			0	50,000	0	0	0	0
Rain Garden at Independence Avenue	Champlin	L	300,000			0	75,000	0	0	0	0
Mill Pond Rain Gardens	Champlin	M	400,000			0	0	100,000	0	0	0
Other Priority Urban BMP Projects	Watershed	L	200,000			0	0	0	0	0	50,000
<i>Other</i>											
Livestock Exclusion, Buffer & Stabilized Access	Watershed	M	50,000	Cities, owners, Extension, NRCS	Cities, owners, commission, NRCS	0	0	0	50,000	0	50,000
Agricultural BMPs Cost Share	Watershed	H	50,000	Cities, owners, Extension, NRCS	Cities, owners, commission, NRCS	0	50,000	50,000	0	50,000	100,000
Hydrologic & Hydraulic Modeling	Watershed	L	25,000	HCEED	Commission	0	0	0	25,000	0	0
Fourth Generation Plan	Watershed	H	70,000		Commission	0	0	0	0	0	\$70,000
TOTAL			\$16,617,220			\$260,000	\$550,000	\$875,000	\$275,000	\$260,000	\$963,750

Note: Plan amendment(s) will be required to provide more detail for the 2020-2024 period, and for the projects titled “Other Projects.”

1.1.6 Commission Self-Assessment

A periodic robust and frank self-assessment is necessary to ensure that organizations stay on track to achieve goals. During this Third Generation Plan, the Commission will annually review progress towards goals. This self-assessment will use a matrix such as Table Error! No text of specified style in document..4 below to systematically review and evaluate progress towards goals. This matrix will also be used to set each year's work plan as well as provide a "heads up" to member cities about future years' needs. This self-assessment will become part of the Commission's Annual Report.

Table Error! No text of specified style in document..4. Conceptual self-assessment matrix.

Goal	Actions Taken this Past Year	Actions Taken to Date	Additional Actions to Achieve Goal	Schedule, Responsible Party(ies), Cost and Funding
Goal 1	<i>To be completed annually</i>	<i>To be completed annually</i>	<i>To be completed annually</i>	<i>To be completed annually</i>
Goal 2	<i>To be completed annually</i>	<i>To be completed annually</i>	<i>To be completed annually</i>	<i>To be completed annually</i>
...

1.1.7 Addressing Identified Problems and Issues

As noted above, this planning process revealed a number of problems and issues to be considered in this Third Generation Watershed Management Plan. Table Error! No text of specified style in document..5 below repeats the problems and issues set forth in Error! Reference source not found., and describes how each were addressed in this Implementation Plan.

Table Error! No text of specified style in document..5. Actions in this Plan addressing the identified problems and issues.

#	Problem or Issue	Actions in 3 rd Generation Plan
<i>Water Quality</i>		
1.1	Numerous impairments on the primary streams and several lakes.	Expanded monitoring program to track the impacts of BMPs. Continued the capital projects cost-share policy. Added a line item in the cost estimate to fund the development of grant applications.
1.2	Land is transitioning from lightly-developed and agriculture to more densely developed land uses at higher imperviousness.	Revised the development rules and standards to increase required load reductions and added an abstraction/infiltration requirement.
1.3	Erosion and sedimentation issues continue on Elm Creek and the other streams and conveyances in the watershed.	The CIP includes high-priority stream restoration projects. Revised the development rules and standards to increase required load reductions and added an abstraction/infiltration requirement.

Table 4.7 Actions in this Plan addressing the identified problems and issues (continued)

#	Problem or Issue	Actions in 3 rd Generation Plan
<i>Agricultural Impacts on Water Quality</i>		
2.1	Need to increase the number and distribution of agricultural BMPs in the watershed.	Modeling completed for the WRAPS identified high-loading areas where BMPs would be most cost effective. This may help assure producers what they are being asked to do will make a difference.
2.2	Need to develop an effective mechanism to achieve voluntary adoption of BMPs	The Commission has identified key stakeholder actions and messages and will work with other ag –interested agencies as a Technical Advisory Committee (TAC) to focus technical resources and financial incentives.
2.3	Need more effective outreach to agricultural operators and hobbyists.	See above.
<i>Funding Needs</i>		
3.1	Additional funding is necessary to take on the actions identified in the Channel Study and WRAPS implementation study.	Continued the capital projects cost-share policy. Added a line item in the cost estimate to fund the development of grant applications.
3.2	Identify a sustainable funding level and sources that minimize impacts to city levies.	The cost estimate in this Plan assumes no more than a 3 percent annual increase in member assessments.
<i>Other Issues</i>		
4.1	Need to expand activities for education and outreach to increase knowledge about water resources issues and create behavioral change.	The Education and Outreach Plan identifies key message for stakeholder groups. The commission will continue to partner with collaborative groups such as WMWA to increase the scope and delivery of educational messages.
4.2	The Commission should be realistic about its Capital Improvement Program.	The Commissioners have prioritized capital projects to include on the CIP only those that could be feasibly completed in 2015-2024.
4.3	All the member cities need to be involved in watershed management.	Following adoption of the Plan, the Commission will consider requesting the TAC to meet semi-regularly to enhance information sharing and collaboration.
4.4	There are too many agencies involved in water management, and nothing gets done.	See above.