

Coon Creek Watershed District
2016 Annual Report and
2017 Management and Work Plan

Board of Managers

President	Byron Westlund
Vice-President	Warren Hoffman
Treasurer	Nick Phelps
Secretary	Scott Bromley
At Large	Anthony Wilder

District Administrator

Tim Kelly

763-755-0975

tkelly@cooncreekwd.org

Approved by Board of Managers May 10, 2017

OUTLINE

Reporting Requirements	5
Coon Creek Watershed District at a Glance	7
Mission	
Roles	
Organization	
Goals	
Priorities	
How District Programs Accomplish the Mission and Goals	
Significant Events in 2016	13
Implementation of the Comprehensive Plan	
Mission Goals	
Issue Goals	
Influences on 2017 & 2018 Budget	17
Changes in Taxable Market Value	
Growth in Population, Households and Related Demands on District Programs and Services	
Changes in Physical Condition of the Watershed	
Changes in Legislative Directives and Demands that affect District Operations	
Barriers to Achieving Long Term Results	23
Options and Alternatives for Improving Capabilities	
Needed Management Adjustments to Achieve District Mission and Strategic Goals	
Evaluation of District Management and Operating Needs	25

Reporting Requirements

The Coon Creek Watershed District (District) is required to annually report on a variety of activities. These requirements and the state and federal laws that mandate the reporting are:

1. The Minnesota Watershed Act (M.S. 103D.351)
2. The Metropolitan Water Management Act (M.S. 103B.231)
3. The Minnesota Wetland Conservation Act (M.S. 103A)
4. The National Pollution Discharge Elimination System (NPDES) Program.

NOTE: A review and audit of the District's finances is provided in the District's Annual Financial Report and Audit of 2014 performed by the Minnesota State Auditor.

REPORT and REVIEW OBJECTIVES

Additionally, the objectives of this report and management review are to:

1. Monitor the implementation of the 2013 – 2023 Comprehensive Watershed Management Plan as a whole and of its component projects in relation to changes in the context, operating environment and circumstances of their implementation.
2. Provide a method of evaluating District management and operations.
3. Validate the goals, priorities and program focus areas in the Comprehensive Watershed Management Plan.
4. Evaluate the progress towards long term results and identify barriers to achieving those results.
5. Identify and adopt new ways to improve capabilities for accomplishing results and remove barriers.
6. Adjust management direction to reasonably assure achievement of the District's mission and strategic goals.
7. Implement a rapid problem identification system as well as a system for internal communications to various stakeholders.
8. Facilitate evaluation procedures during and other activities through the definition of specific indicators.

COON CREEK WATERSHED DISTRICT AT A GLANCE

District Mission

To manage ground water and the surface water drainage system to prevent property damage, maintain hydrologic balance and to protect water quality for the safety and enjoyment of citizens and the preservation and enhancement of wildlife habitat.

To carry out its mission, the District:

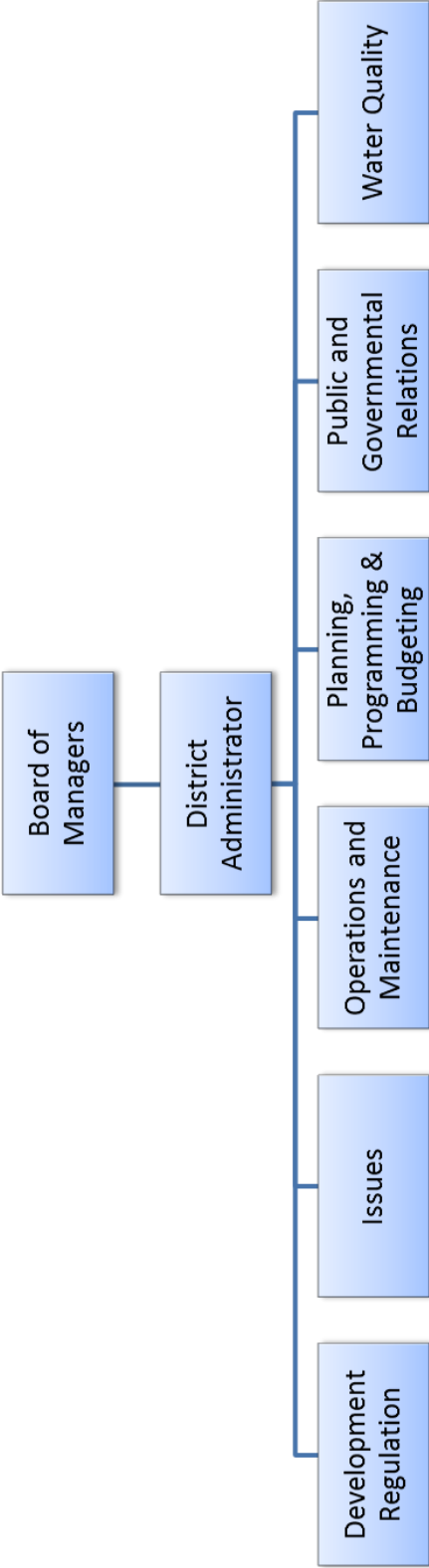
1. Advocates a conservation ethic in promoting the health, productivity, diversity, and beauty of water and related land resources.
2. Listens to citizens and responds to their diverse needs in making decisions.
3. Protects, restores, and manages the watershed's water and related resources for sustainable multiple-use management of water resources.
4. Provides educational, technical and financial assistance to Cities, Anoka County and private landowners, encouraging them to practice good stewardship and quality land management in meeting their specific objectives and improve their water resources.
5. Help communities to wisely use the water and related resources to promote economic development and a quality environment.
6. Develops and provides scientific and technical knowledge and educational programs aimed at improving the capability to protect, restore, manage, and use water and related resources.

District Roles

The Coon Creek Watershed District serves the following specific and required statutory roles:

- (1) **Drainage Authority** over all public drainage ditches within the watershed under M.S. 103E
- (2) **Comprehensive Surface Water Management Organization (WMO)** for Coon Creek Watershed and select adjacent subwatersheds under the Metropolitan Water Management and Watershed Acts (M.S. 103B & MS 103D)
- (3) **Local Governmental Unit (LGU)** administering the Wetland Conservation Act (WCA) except for the City of Spring Lake Park where the District provides assistance and oversight when and where needed.
- (4) **Municipal Separate Storm Sewer System (MS4)** permittee to the Minnesota Pollution Control Agency under the Federal Clean Water Act NPDES program.

Coon Creek Watershed District 2016-17 Organizational Chart



Goals

The District has adopted five mission goals and eight issue goals. Pursuit of these goals is articulated in the District Comprehensive Watershed Management Plan.

Mission Goals

1. To prevent property damage from flooding, erosion or degraded water quality
2. To ensure balance between inflow, outflow and storage of water
3. To protect and enhance water quality
4. To provide for multiple beneficial uses including the safety and enjoyment by the watershed's residents
5. To preserve and enhance wildlife

Issue Goals

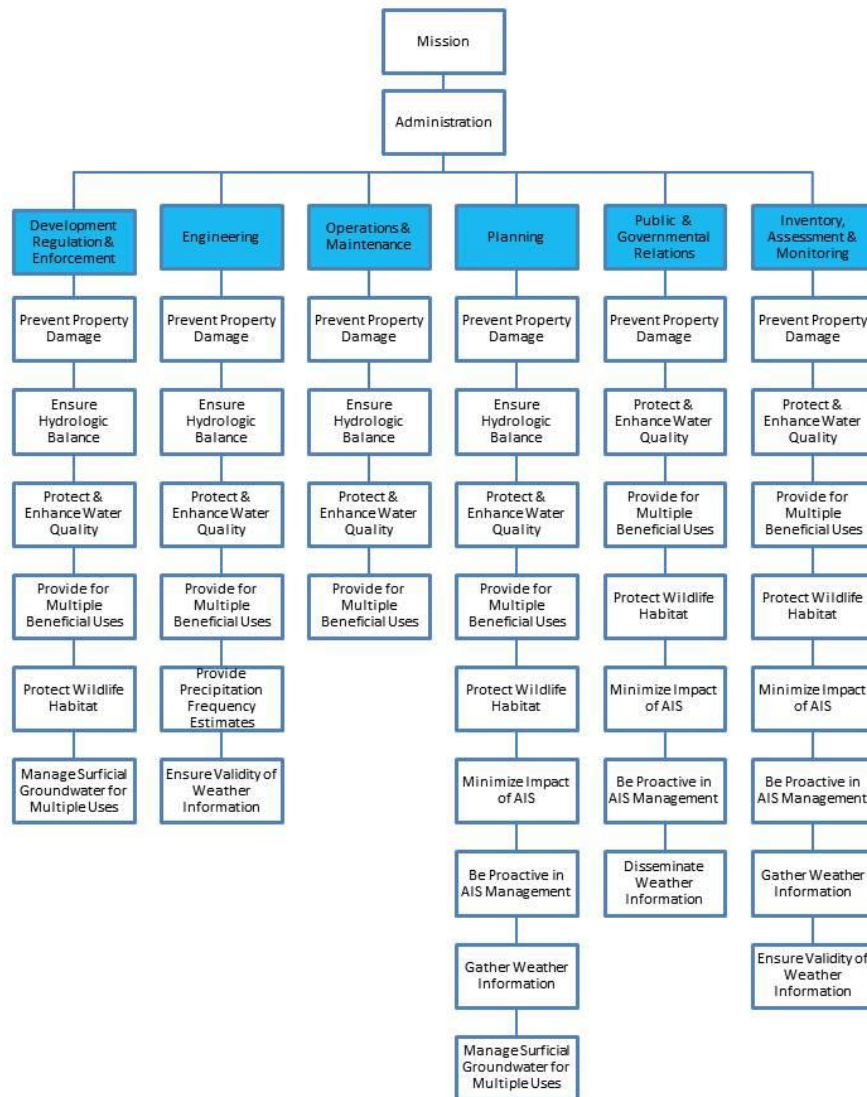
6. To minimize the harmful ecological, economic and human health impacts of aquatic invasive species (AIS).
7. To be proactive in aquatic invasive species management through education and projects that improves lake and stream water quality and/or reduces the risk of entry of invasive species.
8. To control the spread of AIS and minimize their impacts on native habitats and species.
9. To gather and disseminate weather data and climatic information, and provide meteorological expertise in support of Watershed water and related resource management decisions and weather related management activities.
10. To ensure validity, integrity, and utility of weather information provided for Watershed use.
11. To provide precipitation frequency estimates for the Coon Creek Watershed
12. To manage surficial ground water resources for multiple-uses by balancing present and future resource use with domestic water supply needs.
13. To manage groundwater dependent ecosystems under the principles of multiple use and sustainability, while emphasizing protection and improvement of soil, water and vegetation, particularly because of effects upon aquatic and wildlife resources.

Management Priorities

1. Prevent flooding
2. Improve water quality in impaired or impacted waters
3. Maintain and enhance water quality in waters that are not impaired.

How District Programs Accomplish the Mission

The District provides stewardship and management to more than 68,000 acres and 165,000 people through the following seven programs



Administration: Implements the District mission and the approved policies of the Board of Managers, administers the financial affairs of the Coon Creek Watershed District, and ensures the accountability of public funds and serves the District financial needs. Although these business processes are often out of view to the public, without them the District would be unable

to deliver the beneficial uses that the citizens of the District expect. The Administration Program consists of six elements: the Board of Managers, Records, Contract and Personnel Administration, Training and Seminars, Financial Management and Risk Management.

Development Regulation: Evaluates permits and monitors plans and programs affecting the District mission and the water and related resources of the District in an orderly and informed fashion. The Development Regulation and Issue Management Program consist of five activities: Environmental Review, which includes comments on DNR and Corps of Engineers Permits; Issues and Complaints; Permit Inspection and Enforcement; Permit Review; Permit Issuances.

Engineering: Provides accurate and timely geographic information in graphic or digital form for use by water resource managers, planners, and the general public; to achieve uniform District-wide mapping formats and standards; and ensure that District wide engineering activities are performed at an acceptable level. Program consists of the following activities: flood prevention; public drainage and mapping; hydrologic investigations and modeling; and design and construction

Operations and Maintenance: Planning, design, construction and maintenance of the District's ditch system and water control structures and to preserve the location, character and extent of the District's ditch and conveyance system. Program consists of the following activities: Annual Inspections, Issues & Complaints, Construction, Repair, Routine Maintenance, and Demonstration Projects.

Planning: Is the framework used to conform to laws and regulations governing the management of the Coon Creek Watershed. The planning process is focused on the concept of sustainability under planning regulations that require the District to perform assessments that include physical, social and management issues across the watershed's entirety. This program coordinates the planning, prioritizing and financing of the District's programs and activities and consists of the following activities: Annual Assessment, Reporting and Planning, Budgeting and Program Planning, Comprehensive Planning, Policy and Procedures.

Public and Governmental Relations: Ensures that the continued planning and management of the Watershed is responsive to the needs and concerns of an informed public and to coordinate policies and programs of the local, state and federal government agencies to achieve consistency with the plan. A program consisting of three activities has been developed to carry out the District's policies. The components are: Education, Information, and Involvement. In practice, overlap will occur among these three components; all information is educational in nature, and education requires involvement.

Inventory Assessment and Monitoring Supports Watershed Management Plan revisions and amendments; budgets, priorities and implementation schedules. Watershed plan monitoring and evaluation is receiving greater emphasis, including through the Performance Review and Assistance Program (PRAP) process and the new planning rule (MR 8410). The research and data collection program purpose is to gather and analyze data that will result in increased efficiency and effectiveness of District programs. The research, monitoring and data collection program provides integrated resource information used in planning, evaluating and decision

making within the District. District planning, regulatory and project decision-making depends upon scientifically credible and accurate resource information. This data allows resource managers to make scientifically based management decisions, essential to effective resource management.

SIGNIFICANT EVENTS in 2015-16

Implementation of the 2013 – 2023 Comprehensive Watershed Management Plan

In 2016 the District received 184 applications, 82 projects were reviewed and approved as fully meeting the stormwater, water quality and conservation requirements of the District. Another 50 applications were for Technical Assistance

- New commercial development included 57 projects. Some examples are Shops at Andover, Harley Davidson and Invictus in Blaine, Mercy Hospital and Honda of Coon Rapids, BE&D Building in Fridley, DaVinci Academy, Jam Hops and Gromonics in Ham Lake, Emanuel Christian Center in Spring Lake Park
- New residential development included 60 projects including Grey Oaks 4th Addition, Shaws Glen 2nd Add, Gracie's Woods, Quail creek 10th Addition as well as individual homes and lot splits in all of the cities within the watershed.
- Approximately 45 road and other public works projects were also reviewed and approved including Bunker Lake Bld Side Walk Improvements, Hastings Street reconstruction in Blaine, Eveleth Street Reconstruction, numerous trails and a water tower.
- Another 20 applications were found to not need a permit either because they were exempt under the Wetland Conservation Act, their stormwater was already managed through existing stormwater infrastructure or there were no water or related resource issues.

Mission Goals

Goal: Preventing property damage from flooding, erosion or degraded water quality

- Reviewed and approved 144 projects involving 670 acres.
- Reviewed and approved 32 rate control ponds and 41 water quality ponds.
- Inspections and condition assessments were completed on all structures and 28 miles (20% of system) of public ditch.
- The non-routine/corrective maintenance program addressed 104 issues at a cost \$18,915.
- Conducted 3 routine repair and maintenance projects involving tree removal at a cost of \$131,600
- Completed the initial construction of a detailed XPSWMM hydrologic model that utilizing LiDAR and Atlas 14 and the District annual inspection program to accurately assess 100 year flood elevations within the watershed.
- Provided technical assistance to the City of Fridley and the Anoka Conservation District in completing the restoration and repair of Oak Glen Creek.
- Initiated 2 e-newsletters; one on establishing a temporary No-Wake zone and one on Blue-green algae alerts.
- Declared an 'emergency' on Ditch 44-3, repaired approximately 0.5 mile of public ditch, and lowered the culvert at Lexington Avenue 1.5 feet.
- Removed 11 beaver and dams which were obstructing flows and contributing to local flooding

- Diagnosed and began monitoring active landslide area adjacent to the Mississippi river involving 3 to 5 homes.

Goal: Ensuring balance between inflow, outflow and storage of water

- Completed the initial construction of a detailed XPSWMM hydrologic model that utilizes LiDAR, Atlas 14
- Reviewed and approved construction of 23 rate control ponds.

Goal: Protecting and enhancing water quality

- Reviewed and approved 78 projects involving 490 acres.
- Reviewed and approved construction of 35 water quality ponds.
- Constructed 11 rain gardens in the Sand Creek and Woodcrest Creek subwatersheds for approximately \$102,000
- Constructed three bank stabilization projects in Coon Rapids
- Provided training to approximately 50 public works employees and contractors on efficient winter salt use and turf management BMPs.
- Co-Hosted with the City of Andover training for approximately 50 contractors, public employees and consultants on Erosion Control products at a Minnesota Erosion Control Association Field workshop.
- Initiated 2 e-newsletters; one on CCWD updates for our municipal & agency partners, one specifically for Lake Issues. Newsletters were used to quickly get the word out about No-Wake zone and Blue-green algae alerts and also to broadcast grant & training opportunities to lake associations and the cities in which they reside.
- The District completed an identification of biotic stressors for Coon Creek, Sand Creek and Springbrook Creek as part of the Watershed Restoration Assessment and Plan (WRAP) funded through a grant from the Minnesota Pollution Control Agency.
- Monitored water quality on two lakes, seven wetlands and 16 stream locations in partnership with the Anoka Conservation District.
- Completed Storm Water Retrofit Assessments for three subwatersheds (Pleasure, Springbrook and Stoneybrook Creeks).

Goal: Provide for multiple beneficial uses including the safety and enjoyment of the watershed's residents

- Received a \$5,000 grant for an experimental forest thinning/Buck Thorn removal project in Erlandson Nature Center that focused on vegetative stabilization of creek banks
- Processed 154 applications for development and technical assistance compared to 145 in 2013 and 102 in 2012
- Reviewed and approved 78 projects involving 490 acres.
- Reviewed 18 residential projects involving 136 lots on approximately 150 acres
- Conducted 2 Coon Creek Cleanups with a service group, Blaine-Ham Lake Rotary. Picked up ~3000 lbs of trash.
- Assisted the Lake Associations and the cities of Andover, Coon Rapids and Ham Lake and in clarifying the process and evaluating the establishment of No-Wake zones on Crooked Lake and Ham Lake during the high water in the Spring.

- Initiated 2 e-newsletters; one on CCWD updates for our municipal & agency partners, one specifically for Lake Issues. Newsletters were used to quickly get the word out about No-Wake zone and Blue-green algae alerts and also to broadcast grant & training opportunities to lake associations and the cities in which they reside.

Goal: Preserving and enhancing wildlife habitat

- Completed a 5 year update (2014-2018) to the Crooked Lake Comprehensive Management Plan.
- Provided technical assistance on 44 wetland projects
- Reviewed 28 wetland delineations
- Initiated development of a Comprehensive Lake Management Plan for Ham Lake
- The District completed an identification of biotic stressors for Coon Creek, Sand Creek, Pleasure Creek and Springbrook Creek as a first step in addressing fishery concerns.
- Completed the first comprehensive watershed assessment which factored in aquatic habitat, flooding, water quality, wetlands, land use, biota, and soils.
- Required four biological assessments on properties potentially containing endangered or threatened species (1 animal, 8 plants).
- Assisted in redesign of Landscape Plan for the Catcher’s Creek development to promote Loggerheaded Shrike (*Lanius ludovicianus*) habitat.
- Assisted in the planning and construction of a Butterfly Garden for the Leonard Skipper (*Hesperia leonardus*) at Camilla Rose in Coon Rapids

Issue Goals

Goal: Minimizing the harmful ecological, economic and human health impacts of aquatic invasive species (AIS).

- Provided technical and limited administrative Assistance to the Crooked Lake Area Association in the treatment of Eurasian Water Milfoil and Curly Leaf Pond Weed
- Actively assisted the Ham Lake Lake Association in formulating their first chemical treatment to control Eurasian Water Milfoil and in the preparation of the Comprehensive Management Plan for the lake
- Assisted the Lake Associations and the cities of Andover, Coon Rapids and Ham Lake in the establishment of No-Wake zones on Crooked Lake and Ham Lake during the high water in the Spring.
- Assisted the Ham Lake Lake Association in formulating their first treatment for Eurasian Water Milfoil and in the preparation of the Comprehensive Management Plan for the lake
- Used e-newsletters to alert lakeshore owners on Ham Lake about a Blue-green algae bloom occurring in the lake.
- Involved in the planning and permitting of the Crooked Lake EWM treatment and in avoiding impact to a colony of White water lily (*Nymphaea odorata*) and Yellow water lily (*Nuphar lutea*).
- Involved in the preliminary assessment of the presence and extent of the newly discovered Eurasian Water Milfoil (*Myriophyllum spicatum*) infestation on Ham Lake.

Goal: Gathering and disseminating weather data and climatic information, and providing meteorological expertise in support of watershed water and related resource management decisions and weather related management activities.

- Published monthly and year-to-date “Water Watch”, which tracks precipitation and flood potential information within the watershed.
- The spring of 2014 was the wettest spring on record (140 years) leading to increased patrols and inspections, numerous issues relating to flooding and high water and at least one ‘emergency’ declaration.
- The year ended 26% over a normal of 31 inches per year.
- Atlas 14, the most current and accurate precipitation frequency estimates, is available through the District web site.

Goal: Managing surficial ground water resources for multiple-uses by balancing present and future resource use with domestic water supply needs.

- The Hydrogeologic Atlas portion of the County Geologic Atlas has been delayed at the MDNR for three years now. This delay has hindered the District ability to conduct a management analysis and develop a plan for managing the surficial groundwater that are a key water source for the District’s lakes and wetlands.
- Participated in development of the North and East Metro Groundwater Management Plan being spearheaded by the Minnesota Department of Natural Resources
- Reviewed and evaluated three long term dewatering permits and their probable impacts on adjacent water resources. Worked with the DNR and the applicant to modify the proposed volume and or time to minimize or eliminate the impact.

Influences on 2017 & 2018 Budget

Events/activities that occurred in 2016 and 2017 and that will influence 2018 operation of the District include:

1. Growth in population, households and related demands on district programs and services
2. Changes in the physical condition of the watershed.
3. Changes or additions of legislative directives and demands that affect the watershed or District operations

Taxable Market Value

The Anoka County Assessor taxable market value figures for the District are reflecting a 6.1 to 6.5%% increase in total taxable market value.

Growth in Population, Households and Related Demands on District Programs and Services

In 2016 the District received 184 applications, 82 projects were reviewed and permitted as fully meeting the stormwater, water quality and conservation requirements of the District. Another 50 applications were for Technical Assistance

- New commercial development included 57 projects. Some examples are Shops at Andover, Harley Davidson and Invictus in Blaine, Mercy Hospital and Honda of Coon Rapids, BE&D Building in Fridley, DaVinci Academy, Jam Hops and Gromomics in Ham Lake, Emanuel Christian Center in Spring Lake Park
- New residential development included 60 projects with a total estimated valuation of in excess of \$37 million. These projects included Grey Oaks 4th Addition, Shaw's Glen 2nd Add, Gracie's Woods, Quail Creek 10th Addition as well as individual homes and lot splits in all of the cities within the watershed.
- Approximately 45 road and other public works projects were also reviewed and approved including Bunker Lake Blvd Side Walk Improvements, Hastings Street reconstruction in Blaine, Eveleth Street Reconstruction, numerous trails and a water tower.
- Another 20 applications were found to not need a permit either because they were exempt under the Wetland Conservation Act, their stormwater was already managed through existing stormwater infrastructure or there were no water or related resource issues.

The growth within the last several years (approaching 29% in population and 10% for households) continues to produce a profound increase in demand for District services and has significantly added to the District's infrastructure and staffing needs. Consequently, this change will result in significant future operational and maintenance costs. The chart below illustrates the significant growth that has occurred since 1980.

Growth Factors	1980	1990	2000	2010	2016
Total Population	84,835	119,783	148,000	168,470	217,025
Total Households	24,375	38,553	50,750	61,007	66,897

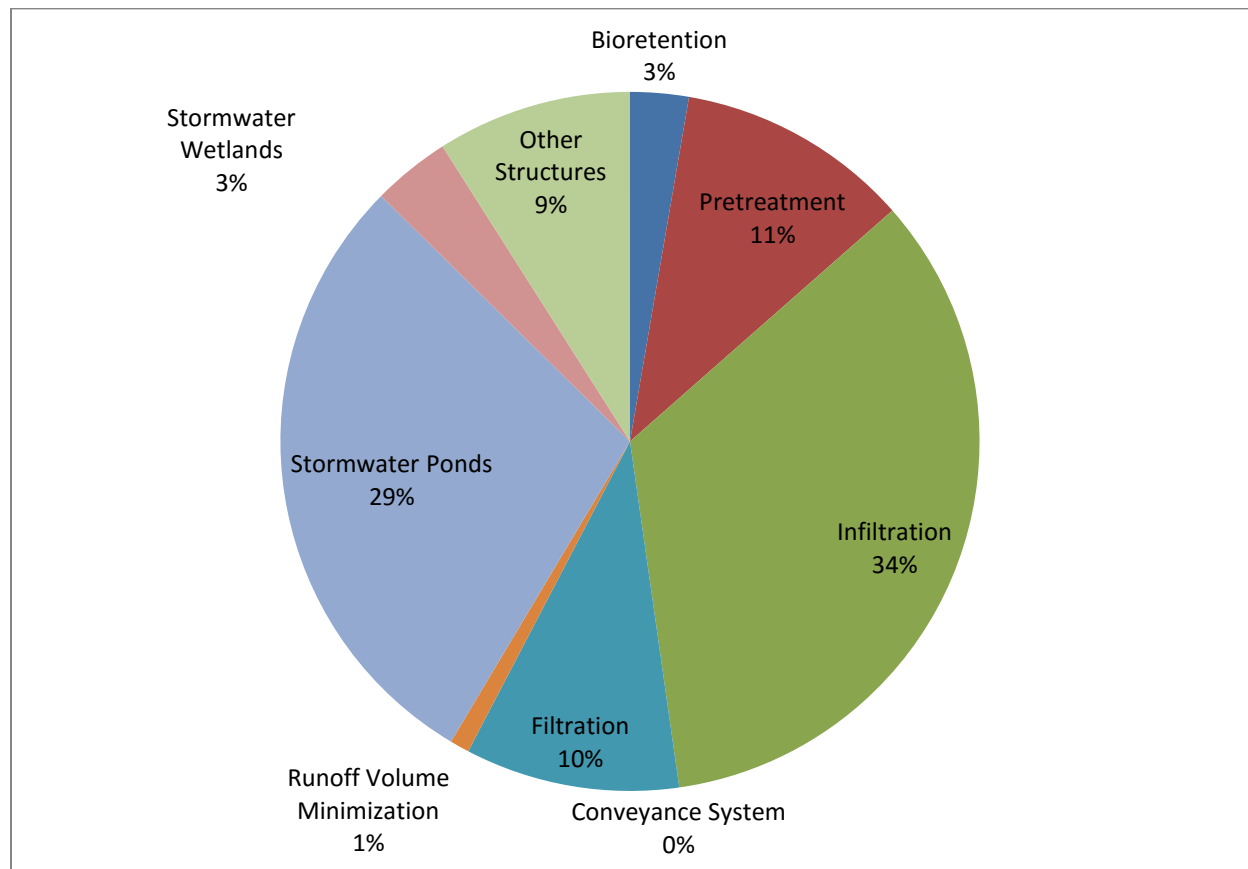
Growth Factors	1980	1990	2000	2010	2016
Legislative Requirements & Mandates	2	3	4	6	11
Annual					
Permit Applications	21	49	119	156	184
Inspections	17	39	95	167	190
Single Family Residential Applications	2	6	14	16	16
Additional Single Family Lots	18	41	101	122	125
Corrective Maintenance Issues	30	51	66	74	92
Aquatic Invasive Species		1	1	2	3
Enforcement Incidents	19	33	43	47	60
Wetland Evaluations & Review		44	101	117	139
Storm Water Assets					
Bioretention	0	0	0	10	13
Pretreatment	0	5	7	6	8
Infiltration	0	0	19	50	71
Filtration	0	0	11	29	38
Runoff volume minimization	0	5	7	7	8
Storm water ponds	10	17	23	23	113
Storm water wetlands	0	1	2	3	0
Other structures	12	21	27	29	38

Changes in the Physical Condition of the Watershed

The District has changed considerably since 2010. At the heart of these changes are changes to the base conditions of the Watershed District itself. The most significant change to base conditions is the result of the State mandated merger with the failed Six Cities WMO in 2012-13.

Growth Factors	1980	1990	2000	2010	2016
Watershed District Size (Sq Miles)	98	98	97	93	107
Total Public Ditch Miles	61	134	134	134	150
Total in-channel water control structures	0	3	5	5	10

Pursuing the District’s mandates, mission, and goals, involves applying management practices that meet the state and federal requirements for protecting, maintaining, restoring, or improving watershed conditions. In 2016 the District reviewed and approved the construction and installation of approximately 111 storm water treatment practices and ensured the future operation and maintenance of those facilities through permitted operations and maintenance agreements with private individuals or through the approved SWPPP of the MS4 involved. The disposition of best management practices were as follows:

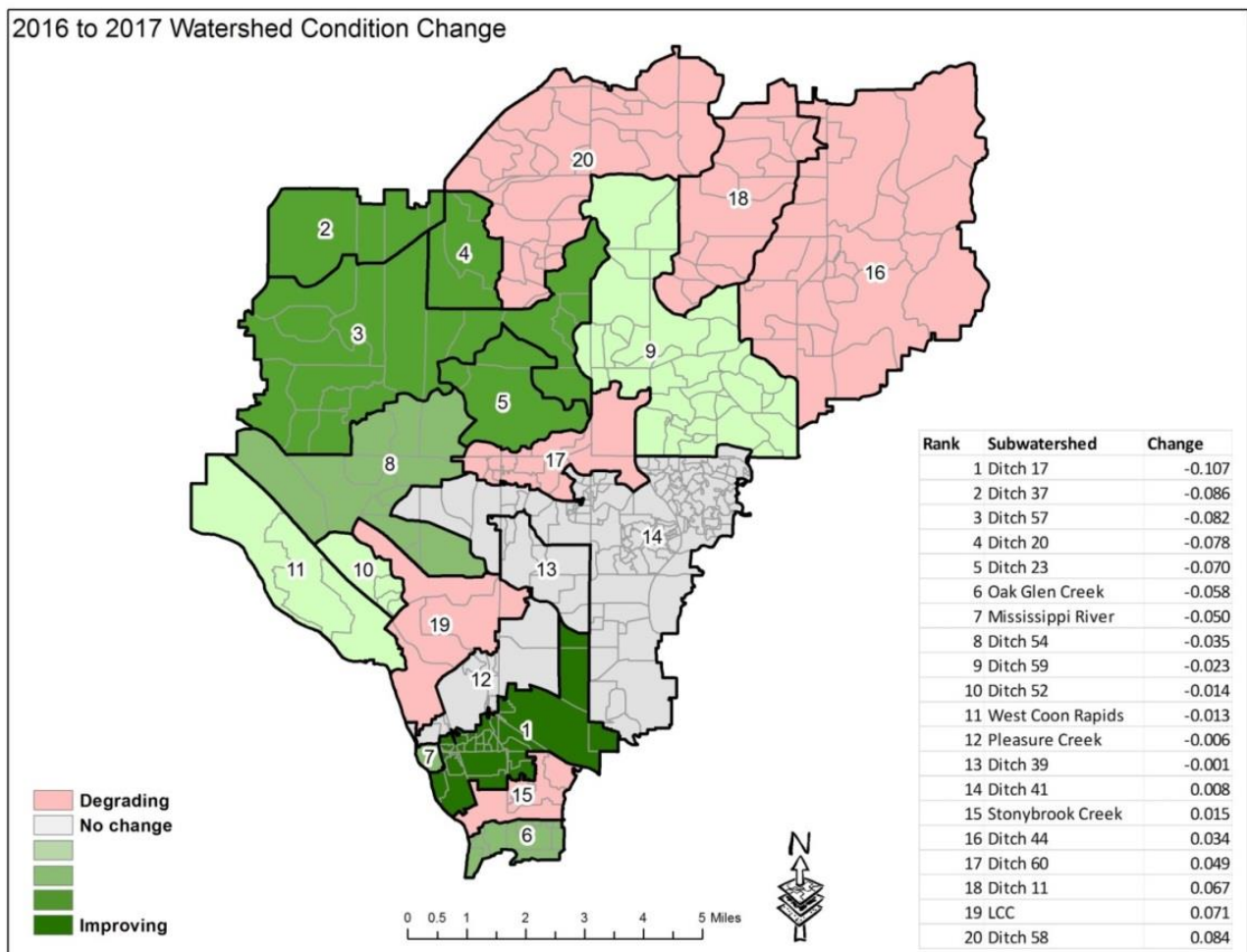


The overall condition of a watershed is based upon physical and biological characteristics and processes affecting hydrologic and soil functions (USDA, 2011). To assess those conditions the

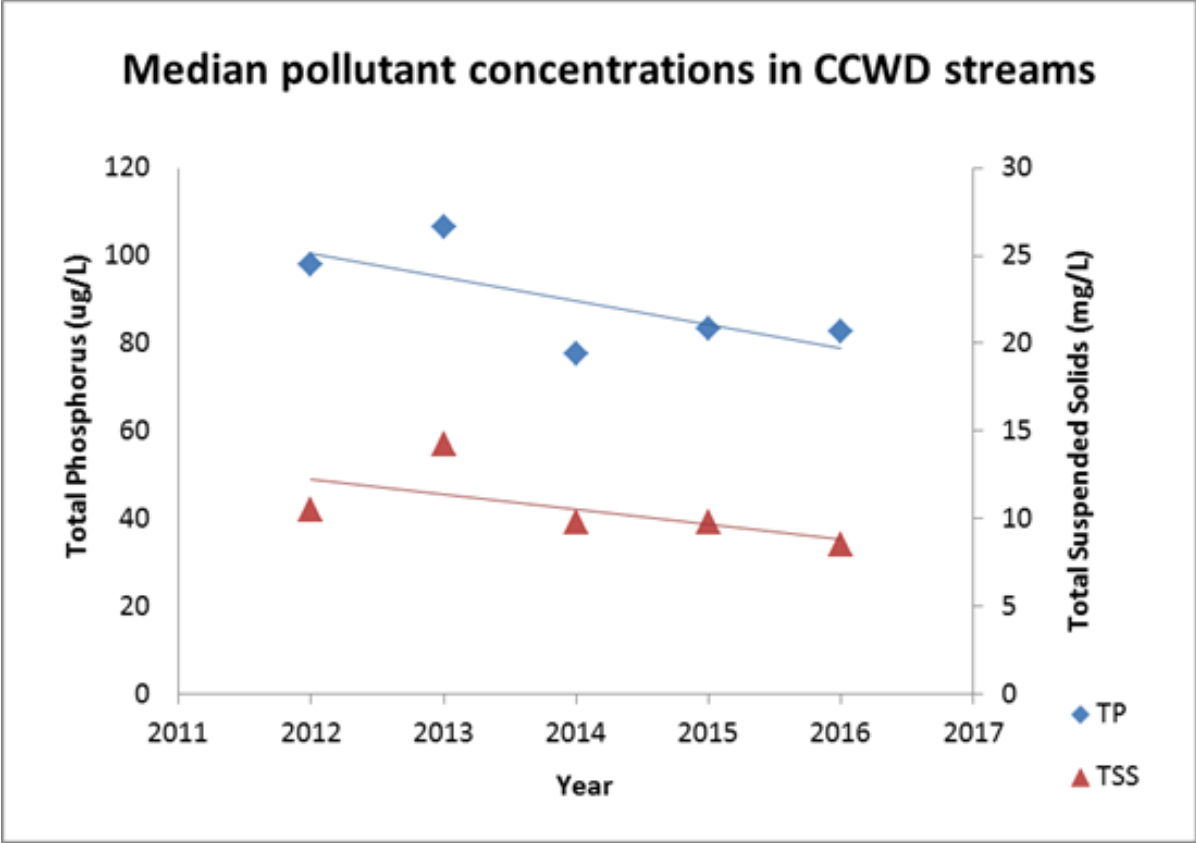
District uses a watershed condition framework at the sub-watershed level and compares sub-watersheds within the watershed district between themselves to determine relative condition. This annual assessment is used for establishing watershed wide priorities as well as assessing the potential threats and opportunities that exist on the ground.

As indicated below seven subwatersheds showed improvement largely because of District maintenance of key water resource features and regulatory activity involving the prescription and requirement of select BMPs.

The assessment also showed six subwatersheds degrading. This degradation was driven by flooding reports on farm fields and some structures as a result of the wet year and the September storm which hit the northern portion of Fridley and southern portion of Coon Rapids. Findings were also made as a result of changes in location of water quality monitoring as a result of completing the WRAP for the Coon Creek Watershed.

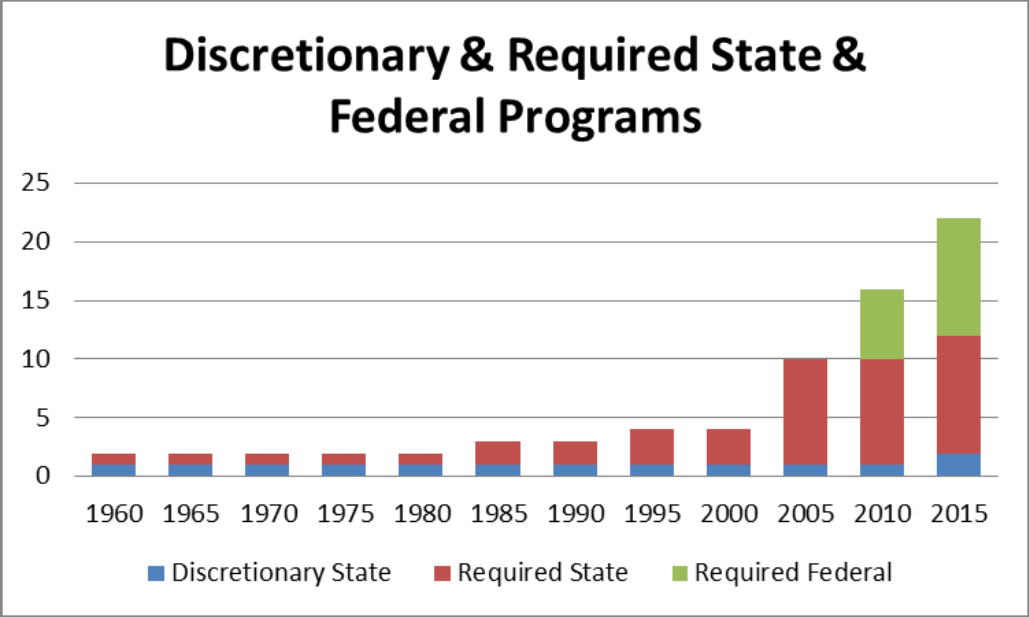


This being said, the median pollutant concentrations for Total Suspended Solids and Total Phosphorus show an improving trend across the watershed.



Changes in legislative directives and demands that affect the watershed or District operations

There have been considerable changes in the mandates and required focus of the Watershed District in the past several years.



Not reflected are the needs to develop and refine a TMDL implementation plan and the monitoring of several additional locations and BMPs within the watershed.

A synopsis of these changes:

- 24 years cleaning ditches (1959 to 1983) to ensure drainage and flood control on agricultural fields.
- 8 years (1983 to 1991) of cleaning ditches AND accounting for other water resources (water quality, lakes, flood control)
- 12 years (1991 to 2003) of cleaning ditches, accounting for other resources AND managing Wetlands
- 4 years (2003 to 2007) managing drainage, wetlands and the water quality AND flooding impacts of storm water
- 6 years (2007 to 2013) managing drainage, wetlands, storm water AND ensuring waters with impaired quality are not further degraded
- 3 years (2013 to 2016) managing drainage, wetlands, storm water, water quality AND crafting a standard unique to the different parts of the watershed (WRAPS & TMDL)
- 2 years (2016 to 2017) of managing drainage, wetlands, storm water, water quality, crafting TMDL standards unique to the different parts of the watershed AND monitoring the potential impact of the legislature's mandatory Buffer program.

In addition, the citizens of the District have become more involved in demanding and or expressing concerns about (in priority):

1. Protect drinking water
2. Prevent flooding
3. Protect or improve water quality
4. Provide & maintain drainage system
5. Storm Protection
6. Aquatic Life & Recreation
7. Irrigation
8. Livestock & Wildlife Watering
9. Aesthetics

And, to compliment and collaborate on existing efforts to keep overall costs down, the Cities within the District, are requesting, needing

1. Assist in Protecting Drinking Water
2. Floodplain modeling & Mgt
3. Collaboration in Water Quality Mgt & Total Maximum Daily Load (TMDL) implementation
4. Channel maintenance
5. Emergency response
6. Assist in Best Management Practice (BMP) Selection
7. Project review
8. Collaboration in Public Outreach and Information

Barriers to Achieving Long Term Results

There are two major barriers with the District's management program

1. We lack long-term outcome-based and efficiency measures for the performance of our management activities within the watershed or of more extensive water quality improvements over time.
2. Although annual performance accomplishments are collected for annual reports, the District lacks statistically valid water quality data for the newer (Six Cities) portion of the Watershed District, which reflects the effects of resource management activities.

Options and Alternatives for Improving Capabilities for Accomplishing Results and Removing Barriers

An objective of the District is to apply the most appropriate knowledge and technology in the management and utilization of the Water and related resources of the District. It is also an objective to participate, where appropriate, in programs designed to facilitate or stimulate the transfer and utilization of technology to local governments and to the private sector.

The District serves the water management community at large, including State agencies, academia, state and local government, industry, and the private sector, and shall match knowledge and technology needed by the District and the larger water management community with knowledge and technology that exist within the District and the larger water management community.

It is the policy of the District to:

1. Use appropriate existing technology, and procure or develop new technology whenever productivity can be improved, and it is economically feasible.
2. Establish and maintain work environments, which encourage the rapid exchange of useful information and the ready implementation of appropriate technology.
3. Share existing and new technology successes and failures and alternative solutions currently being studied.

Adjustments to Management Direction Needed to Reasonably Achievement the District's Mission and Strategic Goals.

The District has adopted an asset management approach to the inventory, planning and management of water and related resources within the watershed. The process involves identifying and constructing a water management asset hierarchy and the division of those assets into the following categories:

1. Hard
2. Soft
3. Natural

The approach allows for and facilitates a common language and understanding with other agencies, particularly City engineering and public works departments particularly when the subject is the role and functional capacity of natural assets such as wetlands, riparian lands and high infiltration area or loosing reaches that influence ground water quality.

Hard assets include the

- Conveyance system
- Structures
- Structural Best Management Practices

Soft assets are, for the most part, the programs, policies and perceptions involved in managing water resources. They include information and education, planning and zoning, street sweeping and other maintenance policies.

Natural assets include receiving waters, runoff/discharges, publicly owned parcels and multiple-habitat planning areas or open space.

Evaluation of District Management and Operations Needs

The Coon Creek Watershed District (District) is committed to collecting, reporting and making decisions based on “sound scientific principles” and the best data possible. This means ensuring that the data is accurate, reliable, complete, timely and valid in reflecting District goals and mission.

In addition to daily control over operations, deadlines and any other problems that may arise, the CCWD will perform periodic evaluations of the Comprehensive Plan implementation as a whole. These evaluations are needed to gauge the results obtained by each stage or aspect of implementation within the District physical, social and managerial context.

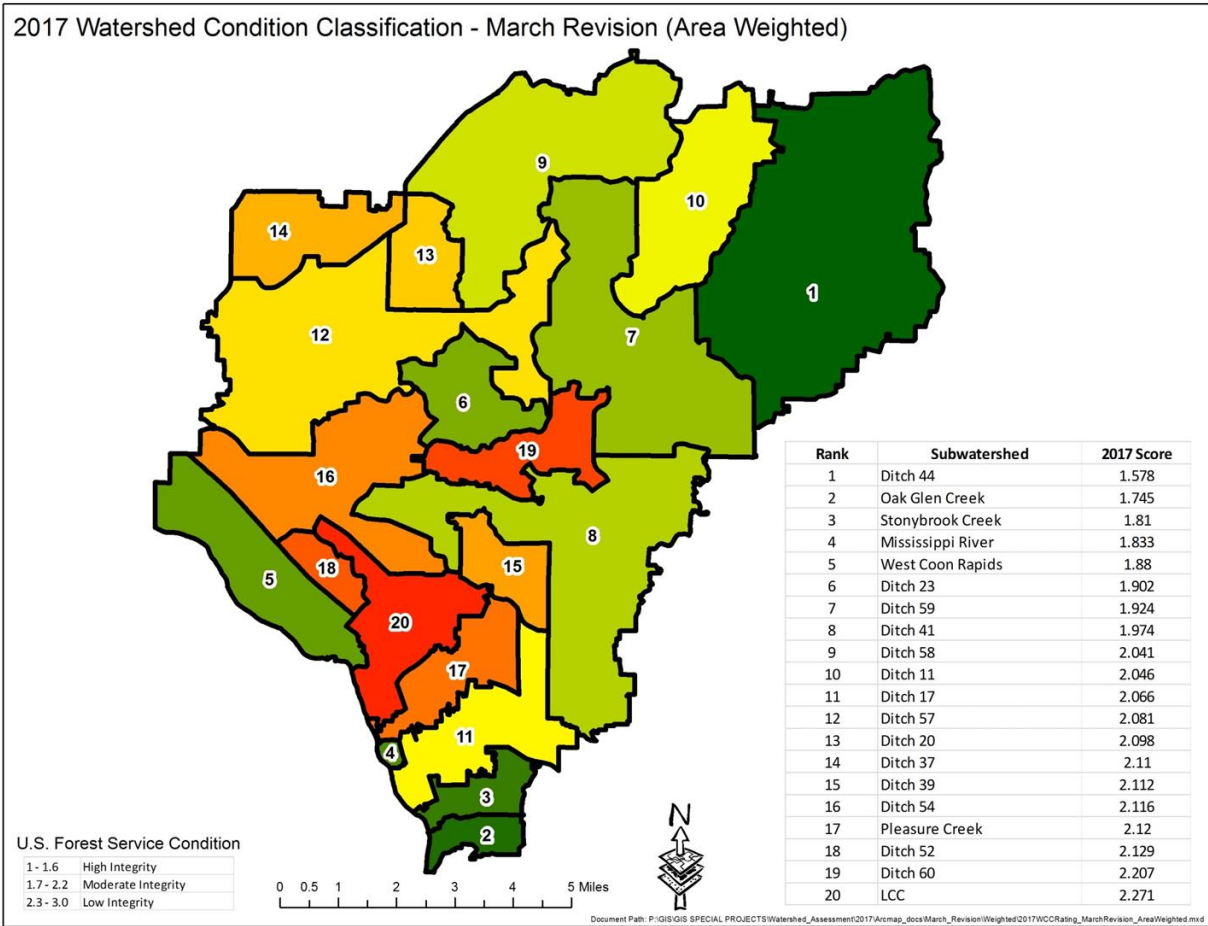
A system of indicators has been developed for evaluating progress in implementation. The indicators are divided into two sub-systems.

1. Reality Monitoring Indicators
2. Activities Undertaken and their Results

Indicators relative to ‘reality monitoring’ should therefore be focused on three orders of macro-phenomena:

- Physical Capacity
- Beneficial Uses and Needs
- Managerial Requirements and Capacity

Physical Capacity: This includes an assessment of the current condition of the watershed and the ability of the watershed to continue to produce the beneficial uses it is supplying.



Beneficial Uses and Needs:

“Beneficial uses” are the uses that water and related land resources provide for people. The U.S. Environmental Protection Agency (EPA), which administers the Clean Water Act, uses a related term “designated uses.” Seven beneficial uses are defined in Minn. Rule. 7050.0140.

The overall economic value of water is derived from the values associated with the services water and related land resources are expected to provide over time. These services can include any outcome that contributes to a generally accepted measure of human welfare. All public goods, water among them, are complex and highly integrated resources. It is often impossible to utilize one service or group of services without affecting other goods or services. In a paired comparison survey of perceived value and need, the citizens and water managers within the watershed identified the following preferred priorities.

Prioritized Beneficial Use	Need
Drinking water	<p>The District needs to</p> <ol style="list-style-type: none"> 1. Conduct an assessment of the potential impacts of long term infiltration and the recharge occurring in losing reaches of the system may have a long term influence on public drinking water supplies. 2. Identify watersheds contributing to community water during land management planning. 3. Consider managing all or portions of those contributing watersheds as designated source water protection areas under the SWDA.
Flood Control	<p>The District needs to:</p> <ol style="list-style-type: none"> 4. Continue to refine our XP-SWMM hydrologic model and assist the cities as floodplain elevations and flood insurance rates continue to change. 5. Collect more precise and accurate data on flows and flow duration for model calibration. 6. Continue maintenance of the public drainage system to ensure adequate drainage. 7. Determine appropriate level of service to balance changing demands on an aging infrastructure system.
Water Quality	<p>The District needs to:</p> <ol style="list-style-type: none"> 8. Begin to address the water quality impairments within the watershed through the development of a water quality models and projects focused on decreasing TSS, TP and E. coli loading and an increase in monitoring stations. 9. Increase the number of monitoring stations to accurately assess conditions across the watershed. 10. Continue to find, identify and address illicit

Prioritized Beneficial Use	Need
	discharges through the Illicit Discharge Detection and Elimination activities.
Groundwater Recharge	<p>The District needs to</p> <p>11. Refine its knowledge of locations suitable for infiltration as well as reevaluate, on a watershed basis, the needs, methods and standards most appropriate for the watershed.</p> <p>12. Begin estimating quantity and quality of groundwater resources as well as usage and recharge rates to determine mass balance and to facilitate future management decisions.</p>
Aquatic life and recreation	<p>The District is “Impaired” for aquatic life. The District needs to:</p> <p>13. Continue to include ‘habitat’ elements in our stream bank stabilization project and ditch maintenance activities.</p> <p>14. Consider other habitat encouraging BMPs that do not interfere with drainage or flood control.</p> <p>15. Continue to pursue decreases in TSS and TP</p>
Irrigation	<p>The District needs to:</p> <p>16. Continue to monitor precipitation events and flows</p> <p>17. Consider permanent installation of flash boards on culvert flared end sections in the lower portion of the District to ensure minimum flows but not interfere with higher flows.</p>
Wildlife	<p>The District should:</p> <p>18. Continue to manage animal damage within the Watershed District. These activities include actions to provide wildlife damage management through direct control, as well as technical assistance to achieve desired management objectives.</p> <p>19. Serve the people of the Watershed District by maintaining diverse and productive wildlife,</p>

Prioritized Beneficial Use	Need
	<p>fish, and sensitive plant habitats as an integral part of managing Watershed's ecosystems.</p> <p>20. Maintain a partnership with Minnesota DNR in habitat management efforts.</p> <p>21. Recognize the Minnesota DNR as responsible for the management of animals and the Watershed District as responsible for the management of habitat.</p> <p>22. Resolve habitat management issues, concerns, and opportunities as close to the local level as possible.</p> <p>23. Continue addressing threatened and endangered species concerns through the District development and regulation program.</p> <p>24. Continue working with interest groups to educate, monitor and respond to aquatic invasive species.</p>
Aesthetics	<p>The District should:</p> <p>25. Be aware that it has a strong implied responsibility and influence over the aesthetic natural resources within the watershed.</p>
Industrial use and cooling	na