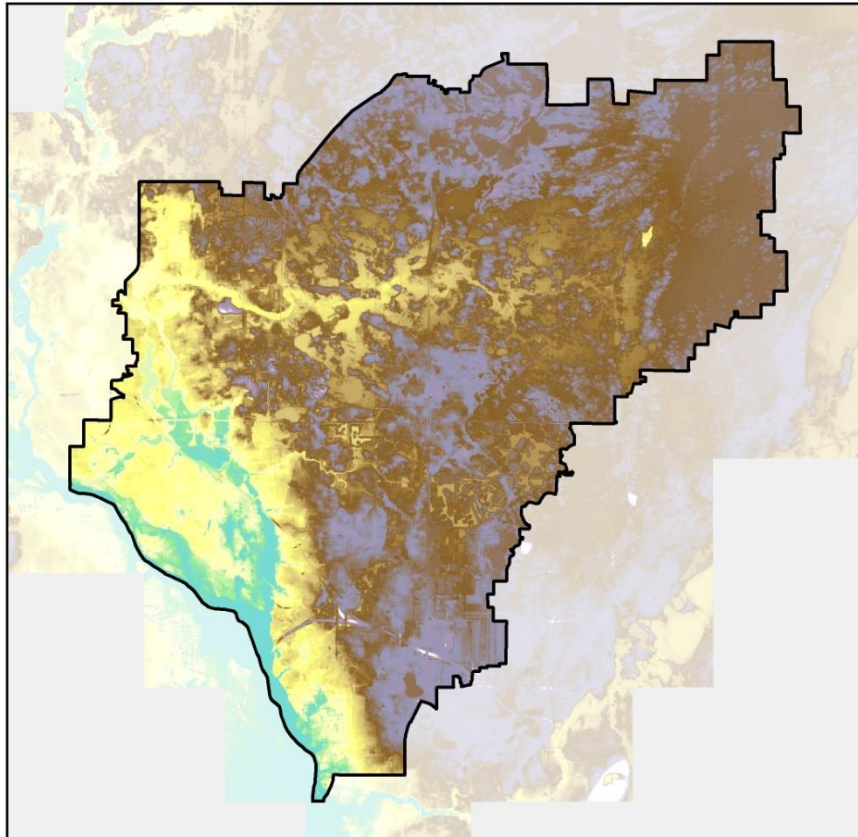


Draft

Watershed Management Plan

Coon Creek Watershed District

2013 to 2023



Coon Creek Watershed District

Board of Managers

| | |
|--------|----------|
| Scott | Bromley |
| Warren | Hoffman |
| Brad | Johnson |
| Bill | MacNally |
| Byron | Westlund |

Staff

| | |
|---------------------|--|
| Tim Kelly | District Administrator |
| Ed Matthiesen | District Engineer – Wenck & Associates |
| Michelle Ulrich | Attorney |
| Harold Sheff | Attorney |
| Diana Shonyo | Administrative Assistant |
| Dawn Doering | Information and Education Coord. |
| Tom Gile | Regulatory Affairs Coordinator |
| T.J. Helgeson | WRAPP Coordinator |
| Jon Janke | Operations & Maintenance Coord. |
| Justin Hawley March | GIS Specialist – Flat Rock Geographics |

Citizen Advisory Committee

| | |
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| Carol LeDoux | Anoka County |
| Jim Lindahl | Anoka Conservation District |
| Gary Nereson | Crooked Lake Area Assn |
| Jeff Simon | |
| Diana Perron | |
| Michael Von Wald | |
| Bill Kurdziel | |
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| Donna Bahls | |

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| Jim Hafner | Blaine |
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| Tim Himmer | Coon Rapids |
| Jim Kosluchar | Fridley |
| Tom Collins | Ham Lake |
| Phil Gravel, Stantec | Spring Lake Park |

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Executive Summary

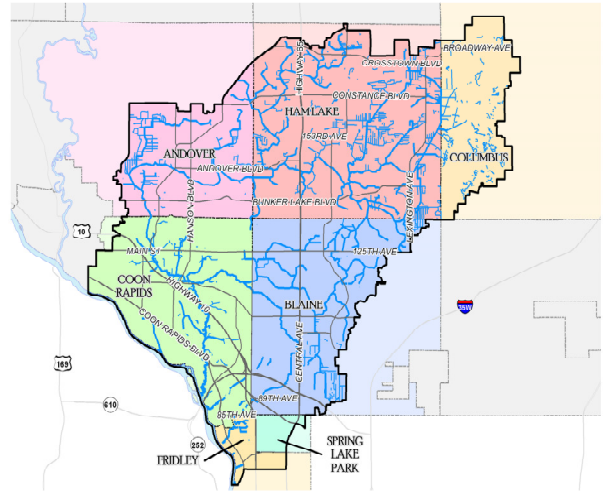
Coon Creek Watershed District 2013 to 2023 Comprehensive Watershed Management Plan

Background

The Coon Creek Watershed District is a special purpose unit of government created in 1959 pursuant to the Watershed Law (Minnesota Statutes 103D). This Comprehensive Watershed Management Plan is the third generation plan required by the Metropolitan Surface Water Management Act (M.S. 103B) and the 4th fourth required under the Watershed Act (M.S. 103D). The plan is the product of more than 25 meetings with citizens, elected and appointed officials and water resource professionals over a 24 month period.

The Coon Creek Watershed District (District) is 107 square miles in size and is located on the northern edge of the Twin Cities Metropolitan Area. The District is located entirely within Anoka County and includes parts of seven cities:

| City | Square Miles | % of District | % of City in CCWD |
|------------------|--------------|---------------|-------------------|
| Andover | 15 | 14% | 43% |
| Blaine | 22 | 21% | 64% |
| Columbus | 11 | 10% | 23% |
| Coon Rapids | 22 | 21% | 99% |
| Fridley | 2 | 2% | 21% |
| Ham Lake | 33 | 30% | 90% |
| Spring Lake Park | 2 | 2% | 68% |
| Total | 107 | 100% | |



District Mission

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

Mission Goals

Mission Goals are the primary focus of District programs and activities. They distill the various legislative mandates as they apply to the watershed. These goals, as drawn from the mission statement are:

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 ensure that water is protected from contamination.
4. To provide for a variety of beneficial uses including the safety and enjoyment of the watershed's residents.
5. To preserve and enhance wildlife.

Immediate Concerns

At this time, the District focus will be on:

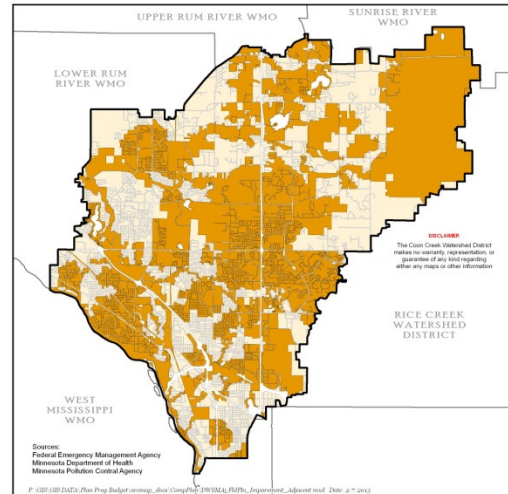
1. Preventing flooding
2. Improving water quality in impaired or impacted waters
3. Maintaining and enhancing water quality in waters that are not impaired.

Goal 1: To prevent property damage from flooding, erosion or degraded water quality

Three types of property damage are of concern to the District:

1. Damage to life and safety
2. Structural Damage
3. Functional or Operational Damage

In 2010 the watershed contained 21,943 acres of flood-prone land with a market value of \$3.6 to 2.7 billion dollars. In addition, the District includes approximately 1,000 parcels valued at \$283 million where the quality of the adjacent lake waters is critical to property values.



Goal 2: To ensure balance between inflow, outflow and the storage of water

Hydrologic balance involves accounting for the inflow to, outflow from, and storage in a hydrologic unit such as a drainage basin, aquifer, soil zone, lake or reservoir, the relationship between evaporation, precipitation, runoff, and the change in water storage. Water balance is used to help manage water supply and predict where there may be water shortages or flooding.

Within the Coon Creek Watershed emphasis has been placed on the components and characteristics of streamflow. This is because sources, quantity and distribution of streamflow and any changes that may result from future development have direct impacts on downstream water quality and quantity.

Nine variables influence the water balance of the watershed:

1. Drainage area
2. Disposition of land uses
3. Total precipitation
4. Total loss to evaporation
5. Total streamflow
6. Changes in soil moisture storage
7. Changes in groundwater storage

- 8. Changes in depression storage
- 9. Groundwater flux

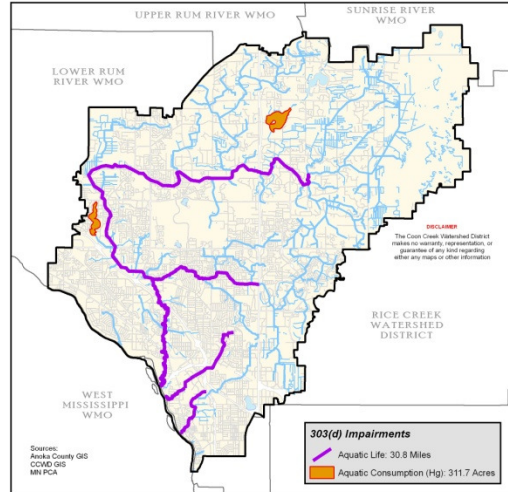
Goal 3: To ensure that water is protected from contamination

Runoff from various land uses and construction sites can carry sediment and other pollutants to water bodies within the District. Sediment and pollution can clog sewers and ditches and pollute creeks, streams and lakes. Pollutants can limit the use of water and waterways for beneficial purposes, promote the growth of undesirable aquatic life, and are difficult to remove.

Water quality goals and standards apply to a variety of water resources. Within the Coon Creek Watershed those resources and the amount within the watershed are:

| Resource | Amount | Unit |
|-----------------------------------|--------|-------|
| Streams and Ditches | 250 | Miles |
| Deep Lakes (>12 Ft) | 347 | Acres |
| Shallow Lakes & Wetlands (<12 Ft) | 15,508 | Acres |
| Trout Lakes | 29 | Acres |

In 2006 the Minnesota Pollution Control Agency (MPCA) listed Coon Creek, Sand Creek, Pleasure Creek and Springbrook Creek as biologically impaired and reported to the U.S. Environmental Protection Agency as required. In 2011, the MPCA monitored Coon Creek for bacteria and found that the creek exceeded the State standard of 126 organisms/100 ml. The sampling was conducted as part of the Upper Mississippi River Bacteria TMDL study.



GOAL 4: To provide for a variety of beneficial uses including the safety and enjoyment of the watershed's residents

“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.” Five ‘Beneficial Uses’ occur within the Coon Creek Watershed.

1. Drinking Water
2. Aquatic Life and Recreation
3. Industrial Consumption
4. Agriculture and Wildlife
5. Aesthetic Enjoyment And Navigation

The ability to provide a variety of beneficial uses depends on the quality and health of the watershed. Watershed health is the capacity of the landscape to sustain plant and animal productivity, maintain or enhance water quality and support human health and habitation.

The District approaches watershed health on a performance basis by seeking to ensure that changes in runoff rates and volumes and water quality do not interfere with established land uses or other beneficial uses

by exceeding the capacity of the system to convey water or assimilate pollutants.

Goal 5: To preserve and enhance wildlife

The District efforts to preserve and enhance wildlife will focus on wildlife habitat, endangered and threatened species, riparian lands and the control of animal damage.

Sustaining plant and animal habitat will focus on active management of vegetation. Preserving endangered and threatened species will involve coordination with the MDNR and the state rules governing those species.

Control of animal damage, primarily beaver and dam removal will remain an ongoing activity.

Issue Goals

There are three major issues facing water resource management in the Coon Creek Watershed:

1. Aquatic Invasive Species (AIS)
2. Changes in Precipitation
3. The decline in surficial Groundwater and the effect on Groundwater dependent resources

ISSUE: Aquatic Invasive Species

Issue Statement: There are many introduced species that can wreak havoc on the Watershed's environment and economy.

Vectors can include boats fishing and diving gear, bait, aquariums, wildlife, pets and water gardens.

Management efforts have begun to focus on vectors, rather than species. On a general

level, invasive species management involves five basic strategies, often in combination:

1. Prevention
2. Early Detection & Monitoring
3. Rapid Response & Eradication
4. Long-Term Control & Management
5. Education & Outreach

There are currently eight aquatic invasive species in the watershed. Some of these species are considered aquatic because they exist in wetlands.

Invasive Plant Species:

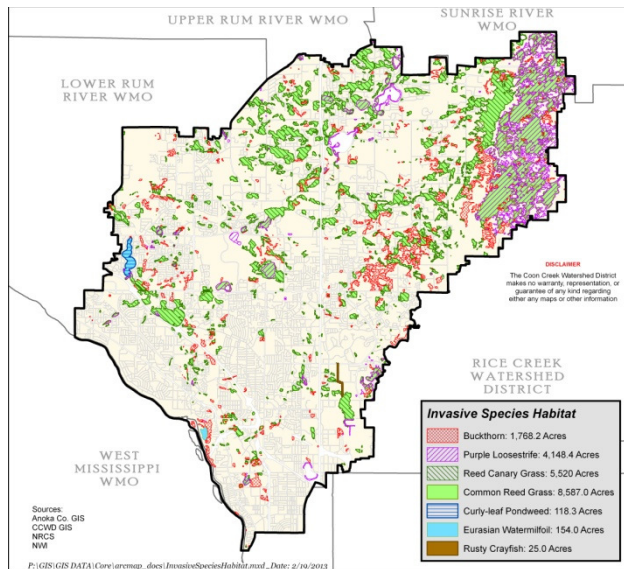
1. Eurasian watermilfoil (*Myriophyllum spicatum*)
2. Curly-leaf pondweed (*Potamogeton crispus*)
3. Flowering rush (*Butomus umbellatus*)
4. Reed Canary Grass (*Phalaris arundinacea*)
5. Purple loosestrife (*Lythrum salicaria*)
6. Buckthorn (*Rhamnus frangula*)
7. Common Reed grass (*Phragmites australis subsp. australis*)

Invasive Animal Species:

8. Rusty crayfish (*Orconectes rusticus*)

Invading Species of Concern

- Zebra Mussels (*Dreissena polymorpha*)



GOALS:

1. To minimize the harmful ecological, economic and human health impacts of aquatic invasive species (AIS).
2. 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.
3. Control the spread of AIS and minimize their impacts on native habitats and species.

ISSUE: Changes in Precipitation

Issue Statement: Weather extremes pose a challenge to water and related land management. Recent episodic events such as drought, high intensity mini-storms, and weather variations can damage soil, water, and lead to a general scarcity of water.

There are four critical issues regarding changes in precipitation:

1. How increasing hydrologic variability may affect water supply and demand and stormwater collection and treatment.
2. How changes in climatic patterns potentially may impact the watershed in the coming century.
3. How increasing hydrologic variability (e.g., wetter wet seasons and drier dry seasons) will pose challenges to the watershed.
4. How changes in precipitation frequency and/or intensity will affect local floodplain management programs and the operation, maintenance and performance of the stormwater treatment systems and best management practices.

GOALS:

1. To gather and disseminate weather data and climatic information, and provide meteorological expertise in support of Watershed District water and related resource management decisions and weather related management activities.
2. To ensure validity, integrity, and utility of weather information provided for Watershed use.
3. To provide precipitation frequency estimates for the Coon Creek Watershed

ISSUE: Declining Regional Surficial Groundwater and the Effect on Groundwater Dependent Resources

Issue Statement: Groundwater is a major contributor to base flow in the watershed and it strongly influences plant and animal species in riparian areas, lakes, and wetlands. It also provides drinking water to

individuals and communities within the watershed.

GOALS:

- 1. To manage Watershed water resources for multiple-uses by balancing present and future resource use with domestic water supply needs.**
- 2. 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.**

Implementation

Implementation priorities are:

1. Preventing flooding
2. Improving water quality in impaired or impacted waters
3. Maintaining and enhancing water quality in waters that are not impaired.

Implementation will use the adaptive management process. The process is a refinement to the annual strategic planning done as part of the budget process.



Implementation will involve five factors:

1. Funding
2. Means and Methods
3. Programs (Cost Centers)
4. Policies and Procedures
5. Partnerships and Collaboration

FUNDING

Implementation will rely on property taxes as the primary source of revenue. Revenues will be augmented through special assessments and grants where available and appropriate.

The direct financial burden on watershed residents has been moderated by securing grant or cost-share funds. The participation of volunteers in the District’s programs and projects also helps to reduce the levied costs.

Revenue sources will be evaluated according to the principles of:

1. Administrative efficiency,
2. Equity,
3. Fiscal balance.

MEANS AND METHODS

The district mission and operation is complex and requires a variety of knowledge, skills and abilities. The District will consider alternative ways of doing business using:

1. District Staff
2. Consultants
3. Volunteers
4. Contracts
5. Grants
6. Cooperative Agreements
7. New Equipment & Technology
8. Work Standards

PROGRAMS

The District operates six programs as the primary delivery mechanism for both allocating personnel and forecasting the knowledge skills and abilities of District staff and professional services. These programs are also the context within which the District evaluates its work methods and use of technology. The programs are:

1. **Administration**: implements the approved policies of the Board of Managers, administers the financial affairs of the Coon Creek Watershed District, ensures the accountability of public funds, and serves the District financial needs.
2. **Development Regulation and Issue Management**: evaluates, permits, and monitors plans and programs affecting the water and related land resources of the District in an orderly and informed fashion
3. **Operations and Maintenance**: plans, designs, constructs and maintains the public ditch system and water control structures, and preserves the location, character, and extent of the District ditch and conveyance system.
4. **Planning, Programming and Budgeting**: coordinates the planning, prioritizing, and financing of District programs and activities.
5. **Public and Governmental Relations**: ensures that the continuing planning and management of the Coon Creek 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.
6. **Research and Monitoring**: gathers and analyzes data that will result in increased efficiency and effectiveness of

watershed management and District programs.

POLICIES AND PROCEDURES

Implementation will emphasize the functioning of natural systems and landscape (biogeochemical) processes, especially the hydrologic system.

Management means preserving the capacity to function, yet allowing use compatible with that functioning.

Policies and Procedures have been developed for:

1. Ditches and Water Courses
2. Floodplains
3. Groundwater
4. Soils
5. Stormwater and Hydraulics
6. Water Quality, Soils & Erosion Control
7. Wetlands and Water Bodies
8. Wildlife – Areas of endangered/ threatened/ special concern plants and animals

Between 2013 and 2023, the District will evaluate policies and procedures for:

1. Aquatic Invasive Species
2. Climate and Precipitation Change
3. Groundwater dependent resources
4. Nuisance wildlife and animal damage such as beaver
5. Fishery Management
6. Aquatic Life
7. Bacteria
8. Total Suspended Solids
9. Storm Water Volume Management
10. Aesthetics
11. Irrigation

PARTNERSHIPS AND COLLABORATION

All projects and activities in this plan occur within one or more of the cities in the watershed. Efficiently and effectively accomplishing projects depends on partnerships and collaboration with the cities and Anoka County.

To integrate water resource management with other resource management in the Watershed, the District will:

- Actively coordinate its water resource protection, development, and improvement programs with other similar programs of local, state and Federal agencies.
- Seek to assess the effectiveness of water management efforts within the watershed in meeting legislative mandates, such as those pertaining to pollution control.
- Plan and execute a coordinated program of water resource development to maximize public benefits within the Watershed.

CAPITAL PROJECTS

The Comprehensive Plan proposes \$10.4 million in capital projects between 2013 and 2023. The Capital Improvement Program (CIP) follows the following policies:

1. A Capital Improvement Plan (CIP) will be developed for a period of ten (10) years
2. The most current year of the CIP will be incorporated into the current year operating budget
3. The CIP will be reviewed and updated annually. Years two through ten are for planning purposes only.
4. The District will seek to maintain physical assets to protect the District's capital investment and to minimize

future maintenance and replacement costs.

5. The District will provide maintenance and replacement from current revenues where possible.

CIP adoption involves a collaborative review by the Cities, Anoka County, the Citizen Advisory Committee and all interested citizens.

The major expenditure categories identified in the CIP include, but are not limited to:

1. New drainage, stormwater or water quality facilities
2. Ditch and Streambank Repair, Maintenance or Reconstruction
3. Capital Improvement or Retrofits to Existing Facilities
4. Capital Equipment (To be determined through normal budgetary process)
5. Studies and Special Area Management Plans

Plan Evaluation

Evaluation of plan implementation will be accomplished through

1. Daily control over operations,
2. Monthly (Staff) Activity Reports
3. Water Monitoring & Atlas System (WMAS)
4. Asset Knowledge/ Infrastructure Database
5. Annual Reporting to BWSR and MPCA on activities
6. Annual audit of financial affairs

Coon Creek Watershed District

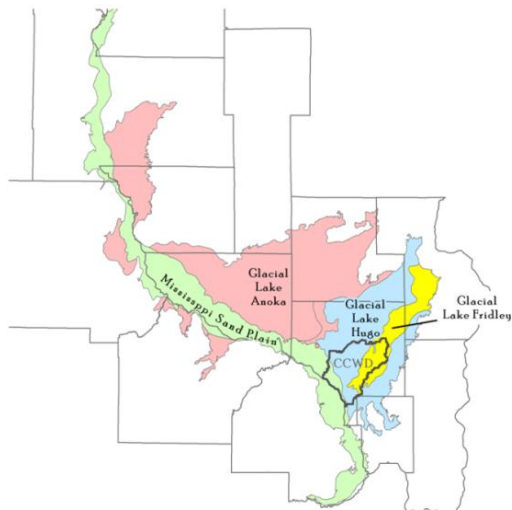
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Introduction

The Coon Creek Watershed District is a special purpose unit of government created in 1959 pursuant to the Watershed Law (Minnesota Statutes 103D). This Comprehensive Watershed Management Plan is the third generation plan required by the Metropolitan Surface Water Management Act (M.S. 103B) and the 4th fourth required under the Watershed Act (M.S. 103D) (Appendix D). The plan is the product of more than 25 meetings with citizens, elected and appointed officials and water resource professionals over a 24 month period (Appendix F).

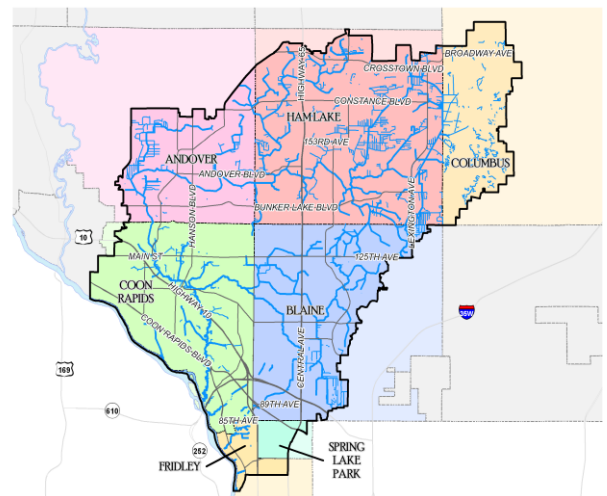
Background

Coon Creek Watershed is part of the Anoka Sand Plain region of central Minnesota. The Sand Plain is a nearly level to gently rolling lake plain formed by glacial melt water. A more detailed description is available in Appendix A.



The Coon Creek Watershed District (District) is 107 square miles in size located on the northern edge of the Twin Cities Metropolitan Area. The District is located entirely within Anoka County. The District includes parts of seven cities:

| City | Sq Miles | Pct of District | % of City in CCWD |
|-------------------------|----------|-----------------|-------------------|
| Andover | 15 | 14% | 43% |
| Blaine | 22 | 21% | 64% |
| Columbus | 11 | 10% | 23% |
| Coon Rapids | 22 | 21% | 99% |
| Fridley | 2 | 2% | 21% |
| Ham Lake | 33 | 30% | 90% |
| Spring Lake Park | 2 | 2% | 68% |
| Total | 107 | 100% | |



District programs and priorities take their direction, or are influenced by 13 separate

state laws and four sections of the Federal Clean Water Act (Appendix D). The most influential of those statutes and programs are:

- Drainage Law
- Watershed Law
- Metropolitan Surface Water Management Act
- Wetland Conservation Act
- Federal Clean Water Act

While the statutes above address most water resource features, they emphasize flood control, water quality, and the prevention of soil erosion. To this end, the District's basic responsibilities are:

1. To protect the public health and safety
2. To provide for the sustainable use of water and related resources
3. To prevent unacceptable damage to the water and related resources
4. To balance economic development with:
 - a. How the local hydrologic system performs
 - b. The well-being of present and future generations

Legislative Roles

The Coon Creek Watershed District serves the following specific legislative roles:

- Water Management Organization (WMO) under the Metropolitan Surface Water Management Act (M.S. 103B & MS 103D)
- Drainage Authority over all public drainage ditches within the watershed under M.S. 103E
- Local Governmental Unit (LGU) administering the Wetland Conservation Act (WCA)
- Municipal Separate Storm Sewer System (MS4) permittee under the Federal Clean Water Act NPDES program.

The Coon Creek Watershed District seeks to assist people and local units of government

in being or becoming good stewards of water and related land resources within the District.

Condition of the Water Resource

The Metropolitan Water Management Act requires an assessment of the watershed's water and natural resources every 10 years. The Coon Creek Watershed District will update that assessment at the 5-year mark. The most current assessment (Appendix B) identifies trends in resources and identifies implications and situations that are potentially acceptable, deteriorating or serious.

Potentially Acceptable Water Resource

Conditions are those where existing conditions and projected levels of use can be sustained with current and expected future levels of management:

- Drinking water
- Flood control
- Drainage
- Hunting
- Recreation
- Livestock and wildlife watering
- Aesthetics
- Industrial use and cooling

Potentially Deteriorating Water Resource

Conditions occur when projected future management and technology are not expected to keep pace with demands for resource uses, and /or water resource conditions will deteriorate in the future.

- Water Quality
- Flood control (Atlas 14)
- Groundwater Recharge
- Aquatic Life
- Fishery
- Irrigation

Potential Serious Water Resource

Conditions are those requiring immediate

attention because they present serious problems or because there is no known management strategy of technology for dealing with them.

- Aquatic Invasive Species
- Changes in Precipitation
- Loss of Groundwater Dependent Water Resources

Demand for Beneficial Uses of Water

In April and May 2011, citizens and engineers from the seven cities within the watershed and water professionals who are members of the ‘planning advisory committee’ were administered a survey of the beneficial uses of and the demands on water resources. The rank ordered preferences for beneficial uses of water within Coon Creek Watershed is as follows. The complete study is available (Appendix C).

1. Drinking water
2. Water Quality
3. Flood Control
4. Groundwater Recharge
5. Drainage
6. Aquatic life and recreation
7. Hunting and Fishing
8. Irrigation
9. Livestock and wildlife watering
10. Aesthetics
11. Industrial use and cooling

Partnerships and Coordination

Sustaining a healthy and diverse water resource concurrent with meeting the diverse demands of the Watersheds public cannot be done in a vacuum or along jurisdictional boundaries. With the watershed approach, decisions will be community-based, collaboratively designed and regional in scope. Coordination and collaboration has taken place with local, state and federal land management and

regulatory agencies, and will continue. Local and state governments, land owners and environmental and industry groups are also key partners in providing information and resources and seeking common ground.

District Mission

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

Mission Goals

Mission Goals are the primary focus of District programs and activities. They distill the various legislative mandates as they apply to the watershed. These goals, as drawn from the mission statement are:

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 ensure that water is protected from contamination.
4. To provide for a variety of beneficial uses including the safety and enjoyment of the watershed's residents.
5. To preserve and enhance wildlife

The Coon Creek Watershed District seeks to assist people and local units of government in being good stewards of water and related land resources within the watershed. For the period of 2013 to 2023 we have defined the following strategies. In the next ten years we will:

1. Seek to promote collaborative efforts to achieve water and related resource goals.
2. Provide information and assistance to encourage and enable locally led,

watershed, subwatershed and minor subwatershed scale management.

3. Facilitate the growth of performance based solutions that recognize the multi-scale nature of comprehensive water management.
4. Utilize an adaptive management process that allows the District to continually evaluate the performance of the resource and adjust its programs and activities to increase effectiveness

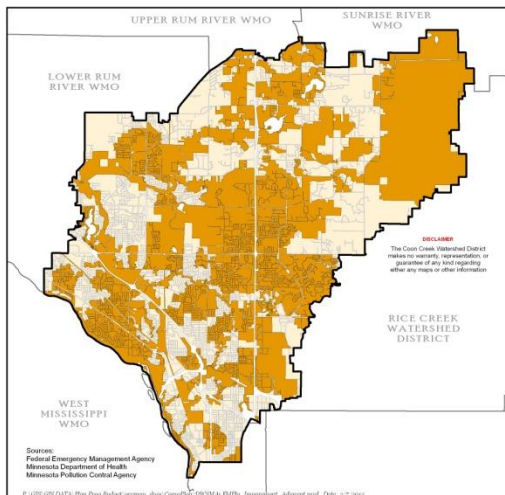
Goal 1: To prevent property damage from flooding, erosion or degraded water quality

Plan Reference: Tab 4

Three types of property damage are of concern to the watershed district:

1. Damage to life and safety
2. Structural Damage
3. Functional or Operational Damage

In 2010 the watershed contained 21,943 acres of flood prone land with a market value of \$3.6 to 2.7 billion dollars. In addition the District includes approximately 1,000 parcels valued at \$283 million where the quality of the adjacent lake waters is critical to property values.



To prevent property damage the District will pursue the following strategies and actions:

Development Regulation: The District will use its rules and enforcement authority, as well as its ability to comment on state permits and environmental documents, to require or encourage avoidance or minimization of impacts to the water resource and require the treatment and construction of water management practices to prevent or avoid flooding, prevent or discourage erosion and sedimentation and treat runoff to maintain or improve water quality.

Operations and Maintenance: Under this strategy, the District will use its authority to inspect, conduct routine and non-routine maintenance and repair and construct water management features to detect conditions (such as vegetation or sand bars) or occurrences (such as invasive species) that may result in flooding or degraded water quality. The District will also use its emergency and disaster response efforts as well as its nuisance animal control efforts to respond to issues which may threaten life or property.

Planning: The State and Federal requirements of the District to 'Plan' provide an opportunity to develop not only policies and procedures but to develop specific plans for lakes, floodplain and water quality. The District is already engaged in efforts with both the Minnesota DNR and PCA to evaluate flood potential and water quality in detail. In addition the District will continue its involvement in the development of individual lake management plans and water quality retrofit studies for select subwatersheds within the District.

Public and Governmental Relations: District information and education efforts will focus on raising awareness of nature of flooding, water quality and Invasive species on life

and safety, structures and the ability to operate infrastructure as well as property through increased newspaper and other media coverage. Involvement efforts will focus on developing and maintaining cooperative relations with other staffs and agencies involved in hydrology and water quality and coordinating Watershed District land management planning with water quality management planning by State and local agencies. Technical assistance will occur primarily in the form of modeling and providing information to other agencies on the hydrology and water quality within the watershed.

Research and Monitoring – The District’s monitoring efforts will continue to measure and track the nature, condition and trend of water quantity and quality in the watershed’s lakes, streams, and wetlands. The District will also ensure that the location of weather stations meets multiple-use management and/or research needs of the Watershed District and will coordinate weather data collection activities within the Watershed District and with cooperators. The focus will be the identification, and early warning if possible, of conditions or events that create damage and flooding.

Means: Most activities associated with this goal are performed by District staff in close coordination with the Cities and Anoka County. Operations and maintenance work is typically performed by contract labor. Monitoring has been performed by the Anoka Conservation District and augmented periodically by MPCA efforts

Performance Measures: The performance measures for the activities and tasks for this goal are primarily numerical counts of individual tasks

- Number of issues
- Number of comments

- Occurrence (eg. Report completion)

Milestones: The principle milestones of progress and accomplishment are:

1. Inclusion of activities in the annual budget and work plan;
2. Reported counts of outputs and occurrences in the monthly activity report (MAR) and annual report.
3. Presentation and analysis of the annual monitoring data collected, analyzed and reported in the County Water Atlas

Timeframe: On-going

Goal 2: To ensure balance between inflow, outflow and the storage of water and encourage a productive landscape

Plan Reference: Tab 5

Hydrologic balance involves accounting for the inflow to, outflow from, and storage in a hydrologic unit such as a drainage basin, aquifer, soil zone, lake or reservoir; the relationship between precipitation, evaporation, runoff, and the change in water storage. Water balance is used to help manage water supply and predict where there may be water shortages or flooding.

Within the Coon Creek Watershed emphasis has been placed on the components and characteristics of streamflow. This is because sources, quantity and distribution of streamflow and any changes that may result from future development have direct impacts on the water quality and quantity downstream.

Nine variables influence the water balance of the watershed:

1. Drainage area
2. Disposition of land uses
3. Total precipitation

4. Total loss to evaporation
5. Total streamflow
6. Changes in soil moisture storage
7. Changes in groundwater storage
8. Changes in depression storage
9. Groundwater flux

To ensure hydrologic balance within the watershed the District shall pursue the following strategies and actions:

Development Regulation – Regulatory efforts and standards will emphasize the need for applicant’s to submit proposals at the earliest possible “concept level” stage. Infiltration of the first 1 inch of precipitation will be required as will additional storage and rate control for land disturbance upstream from lands which require ‘drainage’ for their continued use of the land. Infiltration and Groundwater recharge will be strongly encouraged to reduce the volume of runoff and contribute to surficial Groundwater levels. Streamflows will be managed to encourage drainage away from lands that require it, but discourage drainage in areas of the District where low and minimum flows, fish habitat and aesthetics are concerns.

Operations and Maintenance: The public ditch system will be managed for both drainage and conveyance with an awareness of the system’s role in retaining or conveying water, and the water quality impacts and varying maintenance needs of both. Depending on overall hydrologic conditions the District will adjust or modify its maintenance priorities and methods to pursue balance.

Planning, Programming & Budgeting: The District will annually review screening and ranking process and use the uniform comparative method to make funding allocations. The District will also annually review operations and maintenance and contingency funds for emergency repair

caused by catastrophic events or similar circumstances.

Public and Governmental Relations: Information and education efforts for citizens and elected officials will focus on the specifics of the hydrologic cycle as it exists within the Coon Creek Watershed. Information on the various elements leading to hydrologic balance will be placed on the District website and an index for communicating overall hydrologic condition will be evaluated. The District will seek the involvement of the public, City and County staff, as well as State personnel in the development of innovative technologies that help achieve water resource management goals.

Research and Monitoring: The timing, amount and volume of precipitation events is a necessity in beginning to understand the water balance of the watershed and will be monitored closely. Water levels in lakes, streams, wetlands and surficial groundwater are also essential for understanding the capacity and behavior of water within the watershed.

Means: Most of the day to day work tasks and activities associated with this goal are performed by District and City Staff. Operations and maintenance work is typically performed by contract labor under direct supervision of District staff when work is being customized to convey or retain water and balance other factors as well. Monitoring of precipitation and stream levels is performed by the Anoka Conservation District and monitoring of lakes levels is coordinated by the ACD but is largely performed by volunteers. The analysis and determination of overall balance in the system is made by District staff, led by the District engineer and hydrologist in close consultation with City engineering staff.

Performance Measures: The performance measures for the activities and tasks for this goal are a mix of numerical outputs of individual tasks (eg. number of issues or comments) or measure of occurrence (eg. report completion)

Milestones: The principle milestones of progress and accomplishment are:

1. Annual report and evaluation relative to subsequent year program and project needs and priorities
2. Inclusion of activities in the annual budget and work plan

Timeframe: On-going

2013-2015: Special studies and maps analyzing differentiation in amount and occurrence of precipitation within the watershed.

Goal 3: To ensure that water is protected from contamination

Plan Reference: Tab 6

Runoff from various land uses and construction sites can carry sediment and other pollutants to water bodies within the District. Sediment and pollution can clog sewers and ditches and pollute creeks, streams and lakes. Pollutants can limit the use of water and waterways for beneficial purposes, promote the growth of undesirable aquatic life, and are difficult to remove.

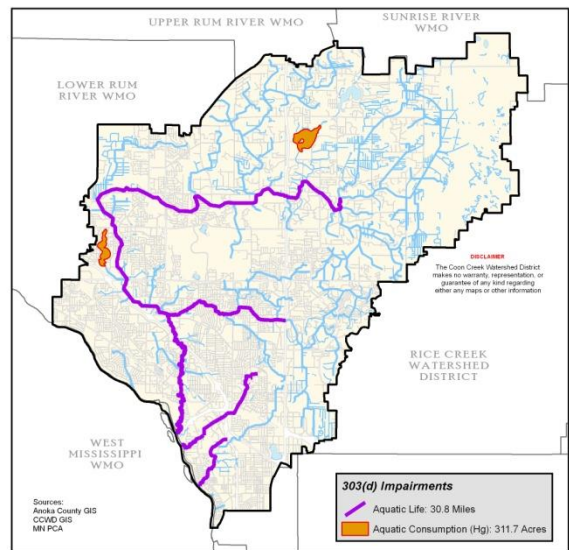
Water quality goals and standards apply to a variety of water resources. Within the Coon Creek Watershed those resources and the amount within the watershed are:

| Resource | Amount | Unit |
|-----------------------------------|--------|-------|
| Streams and Ditches | 250 | Miles |
| Deep Lakes (>12 Ft) | 347 | Acres |
| Shallow Lakes & Wetlands (<12 Ft) | 15,508 | Acres |

Trout Lakes

29 Acres

In 2006 the Minnesota Pollution Control Agency (MPCA) listed Coon Creek, Sand Creek, Pleasure Creek and Springbrook Creek as biologically impaired and listed these resources on the 303d list reported to the U.S. Environmental Protection Agency as required.



In 2011 the MPCA monitored Coon Creek at Vale Street in Coon Rapids for bacteria and found that Coon Creek exceeded the State standard of 126 organisms/100 ml. The sampling was conducted as part of the Upper Mississippi River Bacteria TMDL study.

To protect water quality within the watershed, the District shall pursue the following strategies and actions:

Development Regulation – Regulatory efforts concerning water quality will focus on and follow the lead provided by the NPDES requirements. Permit review will provide the key point for the proper choice and design of best management practices to address volume reduction, suspended sediments and phosphorus leaving a site. Regulatory and enforcement efforts will

emphasize the installation and maintenance of erosion and sediment control during construction and the proper design and maintenance of storm water and water quality facilities post-construction. Enforcement efforts will also emphasize regular inspection and rapid investigation and mediation of issues related to illicit discharge and violations of the Wetland Conservation Act.

Operations and Maintenance: Routine maintenance will center on annual inspection of 20% of the drainage system and all of the control structures and ponds under direct control of the District. The District's stream bank stabilization efforts will focus on protecting property and reducing or eliminating suspended solids from entering the system as a result of shearing and erosion of ditch banks.

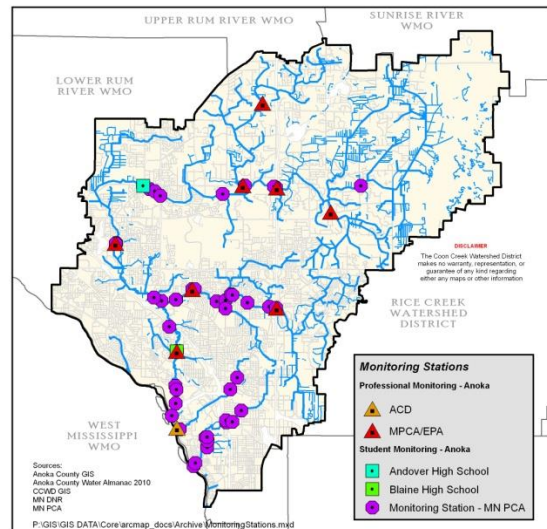
Planning, Programming & Budgeting: Water quality planning efforts will revolve around four efforts.

- First, the District will update its Storm Water Pollution Prevention Plan (SWPPP). During the scope of this Watershed Management Plan, Minnesota will go through three NPDES permit cycles and the District will need to update its SWPPP to ensure compliance with any permit changes promulgated by the MPCA.
- Second, the District will develop a Watershed Restoration and Protection Plan (WRAPP) with the goal of assessing the various water quality stressors and identifying load allocation for various pollutants in the watershed. The WRAPP is scheduled to begin in 2013.
- Third, the District will continue retrofitting select subwatersheds as described in the District's Capital Improvement Plan.

- Last, the District will amend the results of the WRAPP, the SWPPPs and the Retrofit analysis into the District Comprehensive Plan and Rule.

Public and Governmental Relations: First the District will develop and maintain cooperative relations with other staffs and agencies involved in hydrology and water quality. The District will oversee the policy and direction for the establishment and administration of strategic partnerships for the delivery of high-quality Information and Education Services. It will also coordinate District land management planning with water quality management planning by state and local agencies and citizens and groups.

Research and Monitoring: Water quality monitoring efforts will continue for lakes, streams and wetlands.



Water quality issues, standards and management efforts are organized around general groups of pollutants and concerns. The District will monitor, report (via Equis) and manage for the following:

- Sediment
- Nutrients
- Oxygen Demanding Substances
- Bacteria

- Chloride
- Water Volume
- Aquatic Habitat

Stream water quality monitoring will continue to include biomonitoring, and the overall water quality monitoring efforts for streams may be expanded to assess select subwatersheds, minor-subwatersheds and in some instances drainage catchments as part of the WRAPP.

Means: The day to day work tasks and activities associated with this goal are performed by District, ACD and city staff. Operations and maintenance work such as bank stabilizations are typically performed by contract labor under direct supervision of District staff. Monitoring of lake and stream quality is performed largely by the Anoka Conservation District. The City of Blaine monitors Sunrise Lake and its swimming beach. Monitoring of lakes levels is coordinated by the ACD but is largely performed by volunteers. The analysis and determination of overall compliance or exceedances of state standards and the flow or water level conditions of both is analyzed and reported by the ACD as well as MPCA.

Performance Measures: The performance measures for the activities and tasks associated with regulation, operations and maintenance, planning and public & governmental relations for this goal are a mix of numerical outputs of individual tasks (eg. number of issues or comments) or measure of occurrence (eg. report completion). Measures for monitoring, however, provide a major ‘reality check’ for progress as are the state water quality standards.

Milestones: The principle milestones of progress and accomplishment are:

- Completion of the WRAPS

- Completion of TMDL for biota
- Completion and execution of Implementation Plans for Impaired Waters
- Installation of the most beneficial retrofit projects identified in the Capital Improvement Plan as adopted and amended
- Annual Water Atlas Report
- Annual Coon Creek Report
- Annual filing of data to Equis

Timeframe: On-going

WRAPP: 2013-June, 2015

GOAL 4: To provide for a variety of beneficial uses including the safety and enjoyment of the watershed's residents

Plan Reference: Tab 7

“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.

Five ‘Beneficial Uses’ occur within the Coon Creek Watershed. Those uses are

1. Domestic Consumption – Drinking Water
2. Aquatic Life and Recreation
3. Industrial Consumption
4. Agriculture and Wildlife
5. Aesthetic Enjoyment And Navigation

The ability to provide a variety of beneficial uses depends on the quality and health of the watershed.

A healthy watershed begins with a healthy landscape and soils. Landscape quality is the capacity of the landscape to sustain plant

and animal productivity, maintain or enhance water quality and support human health and habitation. The dynamic nature of water and related land resources means that landscape quality is affected by management.

The 2000– 2010-Watershed Management Plan established uniform local policies and controls by requiring that the withdrawal of groundwater and the location and place of discharge thereof conform to the standards of the Minnesota Pollution Control Agency, the Department of Natural Resources, and the Department of Health. Uniform policies and controls are also achieved through the Wetland Conservation Act.

At present the District approaches the issue of landscape quality, and the uses it may support, on a performance basis by seeking to ensure that changes in runoff rates and volumes do not interfere with established land uses by either exceeding the capacity of the channel to convey water or the design capacity of the ditch to remove soil water to ensure agricultural drainage.

To provide for a variety of beneficial uses within the watershed the District shall pursue the following strategies and actions:

Development Regulation: The District’s regulatory and enforcement efforts will focus on addressing or supporting uses of water within the watershed which may not be under the direct responsibilities of the District other than their effect on the public health, safety and welfare or compliance with a state permit. Irrigation, infiltration and groundwater recharge, water conservation and drinking water, aquatic life and recreation and aesthetics are all uses addressed in the Watershed Act and the Metropolitan Surface Water Management Act but have not been historic priorities for District programs and activities. The District’s principles, standards and rules,

when amended, will seek to provide for development and management of sites consistent with the available natural resources to provide a safe, healthful, aesthetic atmosphere. Encourage water recreation opportunities that meet the public needs in ways that are appropriate to the Watershed District role and are within the capabilities of the resource base. To manage District water resources for multiple-uses by balancing present and future resource use with domestic water supply needs, and attain the highest possible quality of landscape aesthetics and scenery commensurate with other appropriate public uses, costs, and benefits.

Operations and Maintenance: Routine maintenance will largely involve inspection of 20% of the drainage system for sediment build up and significant changes from the ‘approved’ elevation of the ditch. It will also involve an annual effort to remove litter and debris from the channel. Non-routine maintenance efforts will involve the removal of trees which may be obstructing or deflecting flows and causing stream bank erosion where private property or public recreation facilities may be located.

Planning: The District will annually review the condition, trend and demand for the other beneficial uses of water within the watershed as part of its annual plan and its budget and plan process for the following year. The District will use these processes and input from its advisory committee to provide an early warning of needs to adjust the priorities and content of the District’s programs and activities. The District will continue its Lake Management Planning efforts, developing an assessment and plan for each of the principal lakes (Crooked, Ham, Netta and Sunrise) within the District that are wholly under the jurisdiction of a steward that is actively involved in their conservation and management. The District

will continue to support the County Geologic Atlas as it comes to completion and identify minor sub-watersheds providing water within the drinking water supply management areas of the Cities as defined by the City's well-head protection plan or 1 year travel time of municipal and other public wells and water supplies during land management planning. The District will also, near the end of this planning period conduct and document a scenery assessment for all activities conducted by the District.

Public & Governmental Relations: First, the District will increase local TV, radio and newspaper media coverage in an effort to inform the public and decision makers of the varying uses of water within the watershed. Second, the District will provide leadership during planning, development and management of parks and open space adjacent to public drainageways and waters. The District will also establish a training program to provide several levels of understanding and knowledge in landscape aesthetics and scenery management commensurate with the different land and resource management needs and the different levels of responsibility of managers and operational personnel. The District will encourage the use of renewable water supplies (Such as rain barrels, cisterns and use of ponds) instead of continued over-reliance on finite groundwater supplies. Decrease the waste of groundwater through sensor based drip or trickle irrigation technology plus mulching.

Research and Monitoring: Monitoring efforts will focus on lake and stream water quality and biomonitoring of streams to assess biota and the condition of Fish habitat.

Means: The day to day work tasks and activities associated with this goal are performed by District, ACD and city staff.

Routine maintenance work such as clearing litter and debris will be performed by contract labor under direct supervision of District staff. Lake plans and special studies will be conducted by District staff and coordinated with the Cities and County staffs. Monitoring of lake and stream quality is performed largely by the Anoka Conservation District. The City of Blaine monitors Sunrise Lake and its swimming beach.

Performance Measures: The performance measures for the activities and tasks associated with regulation, operations and maintenance, planning and public & governmental relations for this goal are a mix of numerical outputs of individual tasks (eg. number of issues or comments) or measure of occurrence (eg. report completion).

Milestones: The principle milestones of progress and planned dates of accomplishment are:

- Crooked Lake Management Plan 2013
- Ham Lake Management Plan 2015
- Lake Netta Management Plan 2017
- Sunrise Lake Management Plan 2019
- WRAPP: 2013-June, 2015
- Retrofit Studies: 2013-2018
- Mining Study & Plan: 2014-2016
- Effects of Surface Water on Drinking Water Study 2013-2022

Timeframe: On-going

Studies vary according to milestones

Goal 5: To preserve and enhance wildlife

Plan Reference: Tab 8

District efforts to preserve and enhance wildlife will focus on wildlife habitat,

endangered and threatened species, riparian lands and the control of animal damage.

Healthy plant and animal communities provide economic and aesthetic benefits and are essential to the quality of life within the watershed. Sustaining plant and animal communities cannot be achieved by focusing on individual species or isolated areas. Rather a web of interacting relationships between plant and animal species within a given ecosystem and their relationship to the physical features and processes of their environment must be sustained to maintain the health and vigor of the system.

Active management of vegetation is essential to maintaining healthy, diverse and resilient ecosystems. Preventing degradation requires careful planning and management, takes into consideration all resource issues for a site, and is more cost effective than correcting a problem after it has developed, especially during drought periods. Healthy and diverse plant communities are able to withstand drought and invasive species. Well managed lakes and wetlands are less susceptible to pests as well.

Protecting specific ecosystems and landscapes – including wetlands, floodplains and certain riparian habitats- can help support wildlife and aquatic species and provide benefits in the form of recreation, hunting and enjoyment.

Wetlands provide wildlife habitat, can protect and improve water quality, attenuate water flows associated with flooding and recharge or discharge groundwater.

Development Regulation: The District will conduct habitat examinations when proposed resource activities or uses would affect fish or wildlife habitat objectives. Manage riparian areas under the principles

of multiple-use, while emphasizing protection and improvement of soil, water, and vegetation, particularly because of their effects upon aquatic and wildlife resources. Avoid all adverse impacts on threatened and endangered species and their habitats, except when it is possible to compensate adverse effects totally through alternatives identified in a biological opinion rendered by the Department of Natural Resources. Identify and prescribe measures to prevent adverse modification or destruction of critical habitat and other habitats essential for the conservation of endangered, threatened, and proposed species. Protect individual organisms or populations from harm or harassment as appropriate.

Operations and Maintenance: Carry out direct habitat improvement projects to achieve wildlife and fisheries objectives. Evaluate animal damage management needs and conduct nuisance control in cooperation with the state agencies, and landowners. Generally rely upon a contracted expert to provide the expertise and conduct nuisance control within the watershed to determine property losses, and to determine methodology for animal damage management. Control damage caused by game and nongame animals and furbearers through hunting or trapping, where practicable, in cooperation and consultation with the State fish and wildlife agencies, where appropriate. Initiate consultation or conference with the MDNR Natural Heritage program when the District determines that proposed activities may have an effect on threatened or endangered species; are likely to jeopardize the continued existence of a proposed species; or result in the destruction or adverse modification of critical or proposed critical habitat.

Planning: Maintain processes for resolving habitat management issues of the District

and its cooperators. Integrate habitat planning into land management and project plans to meet District, and local objectives for wildlife and fish, including threatened, and endangered and sensitive animal and plant species. Coordinate with other uses and activities to accomplish habitat management objectives and to reduce detrimental effects on wildlife and fisheries. Consider a full range of methods, including physical barriers, repellents, habitat manipulation, biological controls, silvicultural methods (for example, fertilizing to improve soil fertility), pesticides, and hunting and trapping. Use licensed hunting, fishing, and trapping as a control technique where practicable.

Public & Governmental Relations:

Participate with and involve other agencies, organizations, and individuals in fostering support for natural resources management within the District. Coordinate with other uses and activities to accomplish habitat management objectives and to reduce detrimental effects on wildlife and fisheries. Cooperate with local, state and federal agencies, and private groups to plan and accomplish habitat management. Meet with responsible state agencies to cooperate where proposed nuisance control is needed to ensure coordination of District resources or activities within the watershed.

Research and Monitoring: Develop and use management indicators to address issues, concerns and opportunities for plants, wildlife, fish, and sensitive species habitats through all planning levels. Monitor management indicators to evaluate compliance of management activities with plan direction, effectiveness of erosion and sediment control prescribed management, and validity of information used in habitat evaluation and planning.

Means: The day to day work tasks and activities associated with this goal are performed by District and contractors. Maintenance work such as removal of nuisance animals or modification of repair work, to facilitate fisheries or wildlife habitat, will be performed by contract labor under direct supervision of District staff. Monitoring and biomonitoring of stream quality is performed largely by the Anoka Conservation District. Vegetative and fishery studies of the creek and the lakes will be performed by the DNR with the cooperation of Lake or Homeowner Association and the District.

Performance Measures: The performance measures for the activities and tasks associated with regulation, operations and maintenance, planning and public & governmental relations for this goal are a mix of numerical outputs of individual tasks (eg. number of issues or comments) or measure of occurrence (eg. report completion).

Milestones: The principal milestones of progress and accomplishment are:

Annual Report and Plan

WRAPP: 2013-June 2015

Timeframe: On-going

Studies vary

Issue Goals

Address water resource issues that are growing in importance as a result of current economic and demographic trends and in response to more recent legislative actions and mandates. The issues are presented in alphabetical order.

ISSUE: Aquatic Invasive Species

Plan Reference: Tab 10

Issue Statement: There are many introduced species that can wreak havoc on the watershed’s environment and economy. Those species that cause harm and spread quickly from their point of introduction are often called “invasive.” For these species, a single individual may produce thousands of seeds, masses of larvae or reproduce from nothing bigger than bits of stems, roots or leaves. Those that live in or near the water – aquatic invasive species – can be easily dispersed to distant water bodies or new ecosystems by currents, river flows, streams, floods and other water flows.

Introduction: Invasive species arrived in Coon Creek via ‘vectors’ – the means or agents that transport species from one place to the next. Vectors also refer to pathways, including fishing and recreational boats and gear, diving gear, bait, aquariums, wildlife, pets and water gardens.

Once a highly invasive species arrives, preventing its rapid spread can be difficult if not impossible. Plants can produce thousands of seeds, which may be carried by wind, water, animals or human activities to distant water bodies. Some aquatic plants can reproduce vegetatively with small bits of leaves, stems or roots resulting in new plants.

In the past, efforts to control such invasions have focused on managing individual problem species. More recently, however, the concept of focusing on vectors, rather than species, has begun to gain support as a more effective approach for addressing aquatic invaders.

On a general level, invasive species management involves five basic strategies, often in combination:

1. Prevention
2. Early Detection & Monitoring

3. Rapid Response & Eradication
4. Long-Term Control & Management
5. Education & Outreach

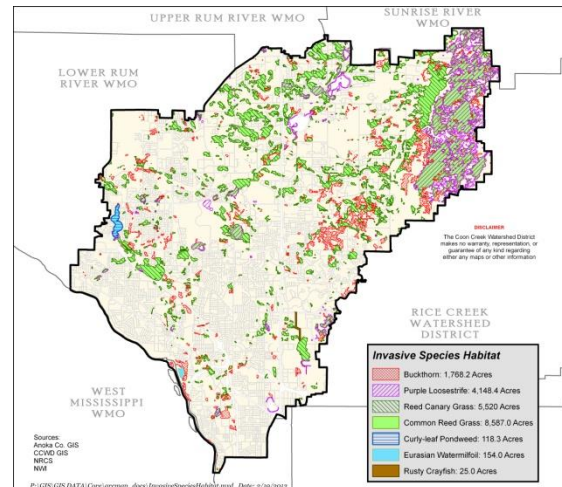
Current Situation: At present known occurrences of Invasive species within the Coon Creek Watershed District are as follows:

Invasive Plant Species:

- Eurasian watermilfoil (*Myriophyllum spicatum*)
- Curly-leaf pondweed (*Potamogeton crispus*)
- Flowering rush (*Butomus umbellatus*)
- Reed Canary Grass (*Phalaris arundinacea*)
- Purple loosestrife (*Lythrum salicaria*)
- Buckthorn (*Rhamnus frangula*)
- Common Reed grass (*Phragmites australis* subsp. *australis*)

Invasive Animal Species:

- Rusty crayfish (*Orconectes rusticus*)



Current efforts to manage aquatic invasive species within the watershed have involved chemicals. Mechanical removal, either by hand with a scythe or with the help of "saw boats" which shred plants with rotating blades has been discussed. Recently,

management approaches have changed and become more diverse to include everything from hyperspectral remote sensing, ozone treatment and K-12 education curricula to herbicides, electro-fishing, Internet sales precautions, PowerPoint presentations and equipment inspections.

Efforts to manage invaders living in and around water present a different set of challenges for containment and control and focus on preventing vectors from bringing in new species and on developing early detection networks.

In choosing management approaches within this framework, the nature of the invader itself comes into play. Some invaders such as the Asian carp, specifically bighead carp and silver carp, are increasing their range up the Mississippi River. While they may not have yet arrived in Coon Creek, a management response focused on monitoring, education and early detection would be the most appropriate.

Other invaders (such as curly leaf pond weed (*Potamogeton crispus*) and Eurasian watermilfoil (*Myriophyllum spicatum*)) are so well-established that eradication may be infeasible and ongoing chemical and/or mechanical removal is selected to minimize the harmful effects of the infestations.

Still others, such as Zebra mussels (*Dreissena polymorpha*) may present no management option whatsoever since there appears to be no environmentally acceptable way to treat or remove widespread benthic invertebrates in open waters at this time. Whatever the species, the possible human management responses generally narrow as any invasion progresses.

GOALS:

- 1. To minimize the harmful ecological, economic and human health impacts of aquatic invasive species.**
- 2. 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.**
- 3. Control the spread of AIS and minimize their impacts on native habitats and species.**

To pursue these goals, the Watershed District will:

Development Regulation: Seek to minimize and prevent the introduction and spread of AIS into and throughout the waters of the Coon Creek Watershed. Encourage cities in the District to develop a watercraft inspection program and guidelines for water access inspections.

Operations and Maintenance: Establish and manage a rapid response and eradication program in collaboration with the cities and Lake and Homeowner Associations. Continue support for existing control programs and evaluate the ecological soundness for increasing the percentage of treatment for each lake in the watershed with active boating or waterfowl activity.

Planning: Develop species and/or location-specific rapid response plans. Ensure that state laws and regulations promote the prevention and management of AIS introductions. Annually update the list of AIS as high risk for introduction. Every 5 years assess the effectiveness and gaps in state AIS programs and provide to elected officials and state agencies. Prioritize ecologically sensitive areas at risk for AIS impacts.

Public and Governmental Relations: The District's approach and involvement in AIS is addressed later in this plan and will be influenced greatly by any legislative action that may occur during the 2013 or 2014 legislative sessions. Improve coordination and collaboration among people, agencies, lake associations and activities involved with AIS. Use Citizen and Technical Advisory Committees for consultation process on actions concerning AIS. Provide technical assistance to cities, lake and homeowner associations. Facilitate installation of AIS warning and information signs in infested areas. Partner with stakeholders and interest groups to broaden education efforts.

Research and Monitoring: Lake monitoring will involve an increased awareness of aquatic invasive species (AIS). Develop and maintain a monitoring program that ensures early detection of new AIS and the monitoring of existing AIS. Support increased research on the baseline biology of AIS, the ecological and economic impacts of invasions, and control options to improve management. Assess current and long-term monitoring of the District's waters for early detection opportunities.

Means: The day to day work tasks and activities associated with this goal are performed by District, cities, Conservation District and State agencies and contractors. Maintenance work such as removal of Eurasian Watermilfoil will be performed by contract labor. Monitoring and early detection will be performed largely by the Anoka Conservation District and lake or homeowner associations.

Performance Measures: The performance measures for the activities and tasks associated with regulation, operations and maintenance, planning and public & governmental relations for this goal are a

mix of numerical outputs of individual tasks (eg. number of issues or comments) or measure of occurrence (eg. report completion).

The major reality check will be the trends in AIS occurrences within the watershed.

Milestones: The principal milestones of progress and accomplishment are:

1. Annual Eurasian Water Milfoil harvesting
2. Development of individual Lake Management plans:
 - Crooked Lake Management Plan 2013
 - Ham Lake Management Plan 2015
 - Lake Netta Management Plan 2017
 - Sunrise Lake Management Plan 2019

Timeframe: On-going

Depends on milestones

ISSUE: Changes in Precipitation

Plan Reference: Tab 11

Issue Statement: Weather extremes pose a challenge to water and related land management within the Coon Creek watershed. Recent episodic events such as drought, high intensity mini-storms, and weather variations can damage soil and water, and lead to a general scarcity of water. In addition, the pending publication of Atlas 14, Volume 8 that the larger less frequent storm events may be as much as 30% larger than originally thought and planned for when designing some stormwater infrastructure and that floodplains may be significantly larger than the original floodplain studies conducted in the 1970's had estimated.

From a local water management perspective there are four critical issues regarding climate and precipitation change:

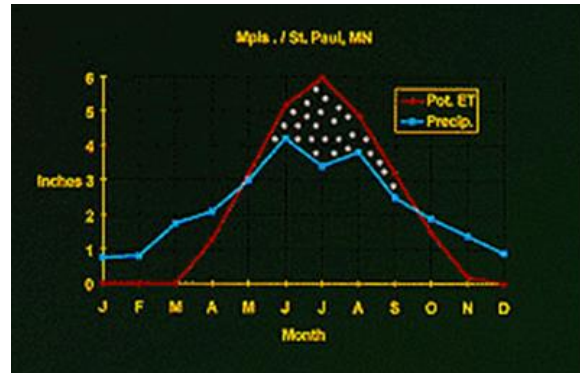
1. How increasing hydrologic variability may affect water supply and demand and stormwater collection and treatment.
2. How changes in the amounts and seasonal and spatial distribution of precipitation potentially may have large impacts on the watershed in next twenty years.
3. How increasing hydrologic variability (e.g., wetter wet seasons and drier dry seasons) will pose water availability challenges for Coon Creek since topography limits the ability to create artificial areas to store excess precipitation for use during anticipated dry periods.
4. How changes in precipitation frequency and/or intensity will affect local floodplain management programs and the operation, maintenance and performance of the stormwater treatment systems and best management practices.

Introduction: The principal impacts of climate change will manifest themselves through changing precipitation patterns that may result in more severe drought or floods and varying streamflow patterns and lake levels.

The uncertainty caused by climate change relative to its impacts on water resources can pose a daunting challenge for flood control, water quality management and water resources and stormwater professionals responsible for managing water resources in the watershed. Therefore, water management authorities must anticipate, plan for and adapt to the potential effects of climate change.

Current Situation: On average, the watershed receives approximately 30 inches

of precipitation per year. About 70 percent of the annual precipitation (22 inches) falls between April and September. An estimated 80% of total precipitation is lost to evapotranspiration.



During the past 10 years the watershed has experienced drought, receiving either annual precipitation of less than 27 inches or experiencing record breaking spring precipitation followed by record breaking drought (resulting in record breaking average years). Spring rainfall often occurs in highly localized, high intensity events, the precipitation often runs off or evaporates and is lost. Projections suggest that temperatures in Minnesota could increase by about 4°F (with a range of 2-7°F) in winter, spring, and fall, and by somewhat less in summer. Precipitation is projected to increase by around 15% in winter, summer, and fall, with little change projected for spring.

According to the 2003 report on climate change by the Soil and Water Conservation Society, total precipitation amounts in the Great Lakes region are also increasing, as are storm intensities. Precipitation records in the Twin Cities area indicate that the annual average precipitation has increased.

GOALS

1. **To gather and disseminate weather data and climatic information, and provide meteorological expertise in**

support of District water and related resource management decisions and weather related management activities.

- 2. To ensure validity, integrity, and utility of weather information provided for District use.**
- 3. To provide precipitation frequency estimates for the Coon Creek Watershed**

Strategies to help reduce the effects of unusual or prolonged environmental conditions include:

Development Regulation: Assist in the application of best management and best development practices that not only improve the resiliency of the resource but encourage its sustainability. Capture and retain maximum amounts of precipitation. Break up routing of stormwater to maximize retention and detention to benefit water quality, flood control, habitat and water supply. Adopt a ‘treatment train’ approach to the management and retention of storm water, where successive best management practices integrated into the local land use, from where the rain hits the surface of the earth to a receiving body of water, slow and remove pollutants.

Planning: Risk assessments must be done to understand the uncertainties associated with the effects of climate change. Address climate impacts on major subwatersheds. Conduct and promote subwatershed planning to address the sub-regional/sub-watershed nature of increasingly “localized” storm and environmental events or conditions. Continue to develop the District’s hydrologic model as a basis for supplying information and tools to lessen present and future impacts. Review all stormwater standards and sizing criteria and

evaluate performance in light of changes in precipitation.

Public & Governmental Relations: Provide assistance to cities, when needed in characterizing their water resources and how these resources could be affected by climate change. Provide leadership within the watershed on long-term issues related to protecting existing water supplies (including potential changes in state water policy).

Research and Monitoring: Support research to develop Sand Plain-specific climate change models in order to foster a sustainability/vulnerability analysis handbook on climate change impacts. Ensure that the location of weather stations meets multiple-use management and/or research needs of the District. Assure the transmission of information to MDNR within established standards and guidelines.

Means: The day to day work tasks and activities associated with these goals are performed by District and city staffs. Monitoring analysis will be performed largely by the Anoka Conservation District.

Performance Measures: The performance measures for the activities and tasks associated with regulation, planning and public & governmental relations for this goal are a mix of numerical outputs of individual tasks (eg. number of issues or comments) or measure of occurrence (eg. report completion).

Milestones: The principal milestones of progress and accomplishment are:

- Rule revisions
- Risk Assessments
- Revised hydrology model
- Sand Plain Specific Standards

Timeframe: On-going

- Rule revisions 2013-2014
- Risk Assessments 2014-2015
- Revised hydrology model 2013-2014
- Sand Plain Specific Standards 2015-2016

ISSUE: Declining Regional Surficial Groundwater and the Effect on Groundwater Dependent Resources

Plan Reference: Tab 12

Issue Statement: Groundwater within the watershed is a major contributor to base flow in Coon Creek, and has a strong influence on the plant and animal species in, riparian areas, lakes, and wetlands. It also provides drinking water to individuals and communities within the watershed.

Concerns about Groundwater resources in or adjacent to the watershed involve questions about reductions in streamflow, potential loss of Groundwater-dependent ecosystems such as lakes and wetlands and land subsidence.

Increasing attention by citizens, council members and legislators is being placed on how to manage Groundwater (and surface water) resources in a sustainable manner. The potential for Groundwater resources to become contaminated from human as well as natural sources is being assessed.

Declining surficial groundwater levels will affect not only the drinking water supplies, but also resources that may depend on groundwater, such as wetlands, lakes and streams.

This issue is further complicated by the fact that the dependency of these resources on groundwater is not well understood. In addition, the rates and methods of groundwater recharge are not well

understood either, and vary, depending on geologic conditions.

Introduction: Groundwater-dependent ecosystems are communities of plants, animals and other organisms whose extent and life processes depend on Groundwater. The following are examples of some ecosystems that may depend on Groundwater:

- Wetlands in areas of Groundwater discharge or shallow water table.
- Terrestrial vegetation and fauna, in areas with a shallow water table or in riparian zones.
- Aquatic ecosystems in Groundwater-fed streams and lakes.
- Aquifer systems.
- Springs and seeps.

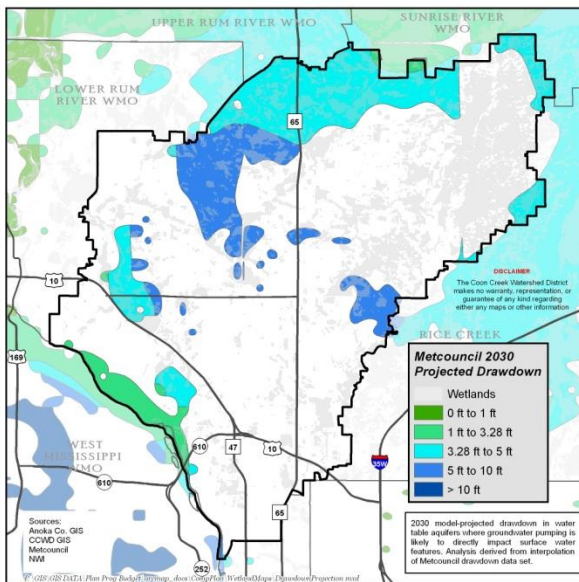
Groundwater-dependent ecosystems vary dramatically in how extensively they depend on Groundwater, from being entirely dependent to having occasional dependence. Unique ecosystems that depend on Groundwater (fens for example) can be entirely dependent on Groundwater, which makes them very vulnerable to local changes in Groundwater conditions. Groundwater extraction modifies the pre-existing hydrologic cycle. It can lower Groundwater levels and alter the natural variability of these levels. The result can be alteration of the timing, availability, and volume of Groundwater flow to dependent ecosystems.

Many of the outer suburbs of the Twin Cities area draw on groundwater aquifers for their primary drinking water supply. There is a growing concern that these aquifers are being depleted because water is being drawn out faster than the water can be recharged. The Master Water Supply Plan by the Metropolitan Council indicates the potential for a significant decline in aquifer water levels, up to a 50% decline by 2030.

Current Situation: Surficial Groundwater levels within the watershed have steadily fallen 10 to 15 feet in several areas over the past 15 years. The Metropolitan Council has projected a significant impact on surface water resources within areas of the watershed over the next 20 years due to declines in the surficial aquifer. If surficial groundwater levels continue to fall between 2013 and 2023, surficial water features, such as:

- Lakes (decline of 50% surface area)
- Wetlands (decline of 52%)
- Base Flow reductions (streams become intermittent)

Water and related resources will be difficult to protect and sustain in the areas shown below:



If the Metropolitan Council projections are correct, the watershed will experience a loss of almost 52% (8,400 acres) of surficial water and related land resources by 2030.

The District estimates that there will be an additional impact (either through conversion of wetland type or lower lake levels) to an additional 2,000 acres (approximately 12%)

GOALS

- 1. To manage District water resources for multiple-uses by balancing present and future resource use with domestic water supply needs.**
- 2. 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.**

Strategies to help reduce the effects of declining Groundwater levels as they affect Groundwater-dependent natural resources include:

Development Regulation: During review of permit applications and provision of technical assistance, the District will seek to maintain natural drainage patterns of recharge and discharge areas, and minimize disruption of Groundwater levels that are critical to groundwater dependent resources. Continue to require infiltration of the first 1 inch of a storm event. Give preferential consideration to Groundwater-dependent resources when conflicts among land-uses activities occur. Delineate and evaluate both Groundwater itself and Groundwater-dependent ecosystems before approving any project with the potential to adversely affect those resources. The District will also evaluate and seek to establish:

1. Maximum limits to which water levels can be drawn down as a specified distance from a Groundwater-dependent ecosystem in order to protect the character and function of that ecosystem
2. Minimum distance from a connected stream, wetland, lake or other Groundwater-dependent ecosystem from

which Groundwater withdrawal may be sited.

Planning: The District anticipates addressing this issue through Groundwater studies, particularly support of the County Geologic Atlas, both through those completed by the District and by others. As more information becomes available, the District may revise its rules to incorporate the new knowledge. The District will evaluate adopting a policy that, in all state and water management district funding programs, quantifiable water conservation best management practices are considered an “alternative water supply” and are equally as eligible as capital facility expansion projects for grants and financial assistance. Evaluate the minimum flows and levels needed to protect water supply needs of natural systems before determining the availability of surface water for water supply.

Research and Monitoring: Support research to develop Sand Plain-specific climate change models to foster a sustainability/vulnerability analysis handbook on climate change impacts.

Means: The day to day work tasks and activities associated with these goals are performed by District and city staff.

The Minnesota Departments of Natural Resources and Health are also involved issues of groundwater appropriation and public health, respectfully.

Performance Measures: The performance measures for the activities and tasks associated with regulation, planning and public & governmental relations for this goal are a mix of numerical outputs of individual tasks (eg. number of issues or comments) or measure of occurrence (eg. report completion).

Milestones: The principal milestones of progress and accomplishment are:

- District Rule revisions
- Performance Standards for draw down of water levels
- Safe distance for dewatering
- Minimum flow evaluation
- Sand Plain Specific Standards

Timeframe: On-going

- Rule revisions 2013-2014
- Performance Standards for draw down of water levels 2015-2016
- Minimum flow evaluation 2013-2015
- Sand Plain Specific Standards 2015-2016

Implementation

Plan Reference: Tab 13

The implementation plan focuses on those resource concerns that are of interest to and a priority for the District to address in the next 10 years. This may result in some resource issues and concerns not being identified as a key area of focus in this Plan. This may be due to the fact that other units of government may already address these areas or because the methods for management of these issues are not yet clear or they are not a priority resource concern at this time.

At this time, the District focus is on:

1. Preventing flooding
2. Improving water quality in impaired or impacted waters
3. Maintaining and enhancing water quality in waters that are not impaired.

The Coon Creek Watershed District is committed to delivering a range of natural

resource-based benefits to the people of the District based on the functional capacity of the watershed, the tastes and preferences of our stakeholders and the financial and technical abilities of our citizen's, civic leaders and staffs.

Implementation of the Plan will occur using the adaptive management process. This process (diagramed below) is described in depth in Section 4 of the plan. Adaptive management provides a refinement to the annual strategic planning the District has conducted as part of its budget process.



To pursue the mission and goals, the implementation of the Watershed Management plan will be organized around four categories:

1. Funding
2. Programs (Cost Centers)
3. Policies and Procedures
4. Partnerships and Collaboration
5. Capital Projects

Funding

Plan Reference: Tab 14

At present, the Coon Creek Watershed District obtains the majority of its funding for water resource programs and projects from property taxes through a watershed-

wide ad valorem levy. Other sources of funding include grants or cost share from other governmental bodies, expenditures by program/project partners, and permit fees. The direct financial burden on watershed residents has been moderated by the CCWD's success in securing grant or cost-share funds. The participation of volunteers in the District's programs and projects also helps to reduce the levied costs.

As the scope of District responsibilities and programs has expanded to include broader issues such as stormwater, water quality, erosion control, groundwater management and wetlands, identifying and quantifying integrated benefits is more difficult, time consuming and expensive and the cost of calculation and assigning benefits and costs to individual properties can easily exceed the benefits derived. Hence the uses and sources of revenues have become more generalized to keep costs down. While dedicated or special revenues may continue to be used for special purposes, there is a trend toward more general levies for broader and more integrated public ends and goals. However, there is a place for both approaches in the District's overall revenue structure. Whichever revenue source is chosen, it should be evaluated according to the principles of:

1. Administrative efficiency
2. Equity
3. Fiscal balance.

Details of the District financial goals, budget process and policies and funding strategy are available in Section 4 of the plan.

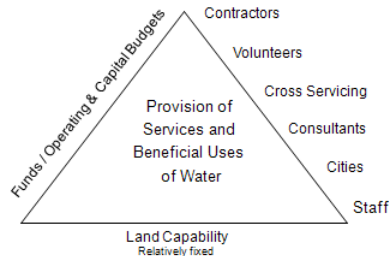
Means and Methods of Doing Business

Plan Reference: Tab 15

The District mission and operations are complex and require a variety of knowledge, skills and abilities. The District will consider

alternative ways of doing business that increases the effectiveness and/or efficiency of District operations. The District will promote a high level of consciousness about reducing costs while maintaining an acceptable level of quality of programs and service and conduct only essential activities.

Chosen methods will be a function of the objective to be achieved, the capability of the land and the resources that are available.



Programs and Activities

Plan Reference: Tab 16

To accomplish its mission, the Coon Creek Watershed District operates six programs. These programs are organized units with the responsibility for carrying out specific activities, tasks and services and are used for both allocating personnel and forecasting the knowledge skills and abilities of District staff and professional services. These programs are also the context within which the District evaluates its work methods and use of technology. The programs are:

1. Administration
2. Development Regulation and Issue Management
3. Operations and Maintenance

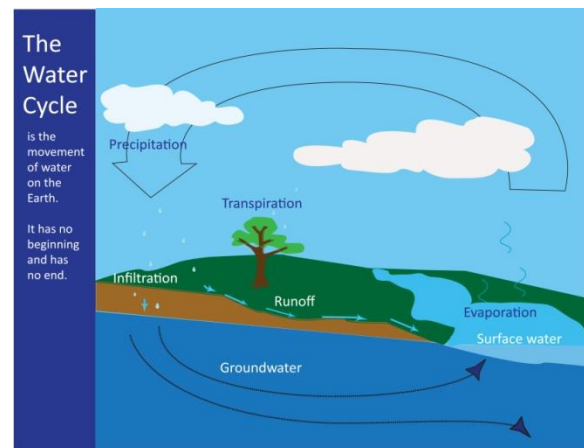
4. Planning, Programming and Budgeting
5. Public and Governmental Relations
6. Research and Monitoring

Policies and Procedures

Plan Reference: Tab 17

The approach taken in this plan does not intend to assert management strictly on the basis of an existing landscape feature but intends to emphasize the functioning of natural systems and landscape (biogeochemical) processes, especially the hydrologic system.

The watershed's environment is determined by a set of existing natural resources and processes. The primary determinant for management within the watershed is the hydrologic system.



Ditches and other watercourses, wetlands and other water bodies, floodplains and groundwater recharge are all integral parts of the hydrologic system of the watershed. Water quality, soils and wildlife are related in that they are affected by or affect the hydrologic system.

The management of these natural resources does not mean prohibiting their use. Rather, it means the wise use, while preserving the capacity to function, yet allowing development and use compatible with these

systems. In some instances, water and related land resources should be kept free of any landscape alteration. In other instances, natural resources can sustain certain types of alteration without detrimental impact, or additional degradation of natural processes, or their ecological function can be easily replaced or mitigated.

The objectives of maintaining the Policies and Procedures are to:

1. Identify direction essential for employees to administer and manage District programs and activities.
2. Classify and target needed direction to the appropriate employees.
3. Provide efficient means to supplement and revise current direction.
4. Maintain the currency of direction
5. Hold direction to the minimum necessary to fulfill the District's mission

Policies and Procedures have been developed for:

1. Ditches and Water Courses
2. Floodplains
3. Groundwater
4. Soils
5. Stormwater and Hydraulics
6. Water Quality, Soils & Erosion Control
7. Wetlands and Water Bodies
8. Wildlife – Areas of endangered/ threatened/ special concern plants and animals

Between 2013 and 2023, the District will evaluate Policies and Procedures for:

1. Aquatic Invasive Species
2. Changes in Precipitation
3. Groundwater dependent resources
4. Nuisance wildlife and animal damage such as beaver

5. Fishery management
6. Aquatic Life
7. Bacteria
8. Total Suspended Solids
9. Storm Water Volume Management

Partnerships and Collaboration

Plan Reference: Tab 18

The District has responsibilities over the development of water resource projects within the watershed. All of these projects occur within one or more of the cities that lie wholly or partially within the watershed. In addition, efficiently and effectively accomplishing these projects depends to the great degree on partnerships and collaboration with the cities and Anoka County.

To integrate water resource management with other land and resource management in the watershed, the District will:

- Actively coordinate its water resource protection, development, and improvement programs with similar programs of other local, state and federal agencies.
- Seek to assess the effectiveness of water management efforts within the watershed in meeting legislative mandates, such as those pertaining to pollution control and to the securing of favorable conditions of streamflow.
- Plan and execute a coordinated program of water resource development to maximize public benefits within the watershed.

Strategies to facilitate cooperative watershed management will include organized efforts focused on providing for the study, planning, and implementation of actions to achieve a pattern of land use that enhances

or conserves water and soil and that meets identified needs of people.

- The District will administer cooperative watershed programs in accordance with the laws rules and regulations governing the watershed and consistent with the goals and objectives of the District.
- The District will seek to provide leadership and technical assistance for the planning and implementation of the watershed and subwatershed aspects of the cooperative programs
- The District will give full attention to protecting and improving the ecological and environmental values of the water and related resources of the District where feasible and where measurable impacts can result.

The Watershed District will pursue the above goals and policies through the following activities:

- Cooperative Relations
- Cooperative Management
- Watershed Protection
- Subwatershed and Special Area Management Studies
- Flood Prevention
- Emergency Watershed Protection and Natural Disasters Response
- Interagency Programs and Projects
- Hydrologic Monitoring, Surveys and Analysis

Capital Projects

Plan Reference: Tab 19-23

The District currently plans \$10.4 million of capital projects across the following categories for the period 2013 to 2023.

| | |
|--|----------------------|
| Capital Equipment | \$ 183,416 |
| Ditch & Streambank Repair, Maintenance | \$ 3,210,766 |
| Retrofits to Existing Stormwater Infrastructure | \$ 6,068,265 |
| Stormwater Treatment Device Construct, Maintain, Rehab | \$ 3,500 |
| Studies and Special Area Management Plans | \$ 915,377 |
| Total | \$ 10,381,324 |

The Capital Improvement Program aligns with the following policies:

1. A Capital Improvement Plan (CIP) will be developed for a period of ten (10) years and included in the District’s Watershed Management Plan.
2. As resources are available, the most current year of the CIP will be incorporated into the current year operating budget as the Capital Improvement Budget (CIB). The CIP will be reviewed and updated annually. Years two through ten are for planning purposes only.
3. The District will seek to maintain physical assets in a manner, adequate to protect the District’s capital investment and to minimize future maintenance and replacement costs. The District will provide maintenance and replacement from current revenues where possible.

Coon Creek’s Capital Improvement Program is intended to provide the Board of Managers and District staff with a process for identifying and prioritizing capital projects in order to coordinate the financing and timing of these projects, which maximize the return to the public. The process will enable the District to evaluate long-term cost and benefits of projects being

adopted for the coming year against those projects planned between now and 2023.

The purpose of the District's Capital Improvement Plan (CIP) is to identify, prioritize and address watershed needs through careful long-term capital planning and balanced public investment in supporting physical infrastructure and knowledge. To ensure that this commitment is meaningful and achievable, appropriate capital improvement factors will be given significant consideration in developing a CIP that addresses watershed priorities over the next ten (10) years. The CIP will also provide a planning foundation for future needs assessments to ensure the District is appropriately responding to the critical infrastructure needs necessary for sustainable use of the resource and future growth. The CIP represents a beginning in terms of producing a Watershed Management Planning response to address changing capital needs by developing a project schedule that will lead to timely and cost-effective project completions.

A critical step in the plan adoption process is the collaborative nature of plan review that involves the Board of Managers, the input of appointed Advisory Committees and staff, and most importantly, affected residents of the watershed. Consequently, the strategic value of this plan lies in the acknowledgement of future needs by the District and the effective communication of those needs to the general public during project development stages.

The public process that supports the advancement of these projects from inception to completion is engendered in the CIP project development and authorization schedule. Formalizing the steps in the CIP project advancement process serves a number of purposes and ensures that the Board of Managers and public are kept well

informed regarding project purposes and desired outcomes, estimated project costs, funding sources, progress and final status.

Plan Evaluation

Plan Reference: Tab 24

The Coon Creek Watershed 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.

The Coon Creek Watershed District's Comprehensive Plan commits the agency to delivering a range of natural resource-based benefits to the people of the District based on the Plan's goals and objectives. Outcome information will be used to improve the effectiveness of the District's programs.

In addition to daily control over operations, deadlines and any other issues that may arise, the CCWD will perform annual evaluations of the Comprehensive Plan implementation. This evaluation will assess the need to adjust priorities or programs in preparation of the following year's budget.

Periodic evaluations of implementation and accomplishments of individual water and related resource programs and activities administered by the CCWD are a critical element of overall performance measurement. Findings of periodic and annual evaluations are used to refine the District's objectives and guide revisions to the District's Comprehensive Plan. A schedule of evaluations is provided in Section 5: Program Evaluation.

Due to the wide scope of programs and activities, the CCWD maintains several systems to track performance and provide management information on the

implementation of the Comprehensive Plan.
These include the following:

1. Monthly (Staff) Activity Reports
2. Water Monitoring & Atlas System (WMAS)
3. Asset Knowledge/ Infrastructure Database
4. Annual Reporting to BWSR and MPCA on activities
5. Annual audit of financial affairs

Plan Amendment Process

Plan Reference: Tab 21

The Board of Managers recognizes that it will be necessary to amend the local water plan from time to time, in light of changing conditions and as new information becomes available.

The CCWD Board of Managers each year during its annual budget process will discuss and consider the need for any potential amendments to this Plan.

Introduction

Introduction

The Coon Creek Watershed District was created in 1959 as a public body organized pursuant to the Watershed Law (Minnesota Statutes 103D). In response to new information and a greater understanding of the hydrologic systems (Appendix A & B) and social demands (Appendix C), the agency has evolved.

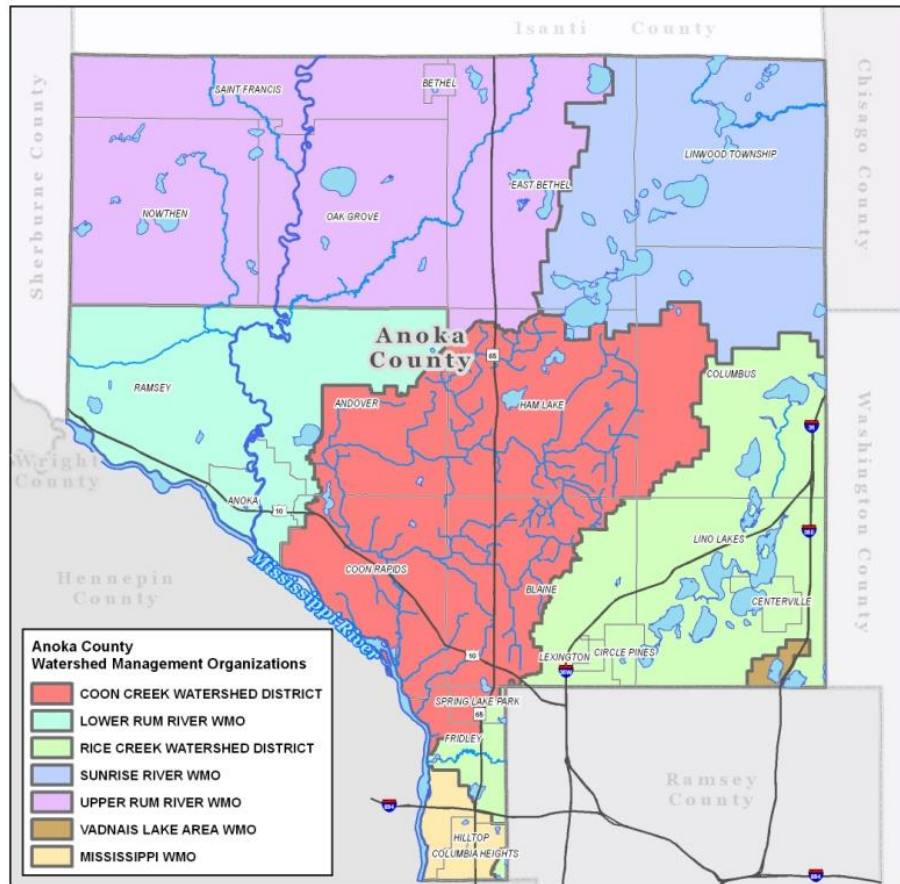
This plan is the third generation plan required by the Metropolitan Surface Water Management Act

Background

The Coon Creek Watershed District (District) is 107 square miles on the northern edge of the Twin Cities Metropolitan Area. The District is located entirely within Anoka County.

The District's statutory purpose is to develop and manage a uniform program for water and related land management within the drainage area of Coon Creek and amended areas.

Location of the Coon Creek Watershed District



Legislative Mandates

District programs and priorities take their direction, or are influenced by 13 separate state policies and four sections of the Federal Clean Water Act (Appendix D). The most influential of those statutes and programs on District are:

- **Drainage Law**: Specified the purposes and process by which public ditch and drainage systems can be established.
- **Watershed Law**: Authorizes the establishment of watershed district as a special purpose unit of government and defines the powers and authorities granted to them
- **Metropolitan Surface Water Management Act**: Directs the establishment of water management organizations within the seven county metropolitan area to comprehensively manage water and related resources for multiple uses and ends
- **Wetland Conservation Act**: Directs the policies and procedures by which local governmental units are to pursue the “No net loss of wetlands”
- **Federal Clean Water Act**: establishes a policy to restore and maintain the chemical, physical and biological integrity of the Nation’s waters through the National Pollution Discharge Elimination System Permit (NPDES)

District Responsibilities

As directed by the Minnesota legislature, the District will consider these policies as a whole in managing water for the overall public welfare. While the statutes above address most water resource features, they emphasize flood control, water quality, and the prevention of soil erosion. To this end, the basic District responsibilities are:

1. To protect the health and safety of the present and future generations of people who live and will live within the watershed.
2. To provide for opportunities and uses of the water and related natural resources of the watershed that are demanded and appropriate for the watershed’s water and related resources.
3. To prevent unacceptable damage to the water and related natural resources of the watershed.
4. To balance economic development with:
 - a. How water and related land resources perform
 - b. The well-being of present and future generations.

Mission & Roles

The Coon Creek Watershed District conducts programs and activities that enable wise use of surface and groundwater and related resources.

Mission Statement

To manage groundwater and the surface water drainage system to

- **prevent property damage**
- **maintain hydrologic balance**
- **protect water quality**

for

- **the safety and enjoyment of citizens, and**
- **the preservation and enhancement of wildlife habitat.**

District Roles

The Coon Creek Watershed District serves the following specific roles:

1. Water Management Organization (WMO) for Coon Creek Watershed under the Metropolitan Water Management Act (M.S. 103B & MS 103D)
2. Drainage Authority over all public drainage ditches within the watershed under M.S. 103E
3. Local Governmental Unit (LGU) administering the Wetland Conservation Act (WCA) except for the Cities of Coon Rapids, Fridley and 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.

Whom We Serve

The Coon Creek Watershed District either directly or indirectly serves all the people of the watershed as well as those people in the State of Minnesota and nation who may be affected by the increases or decreases in water or water quality resulting from our actions.

Communities and Boundaries

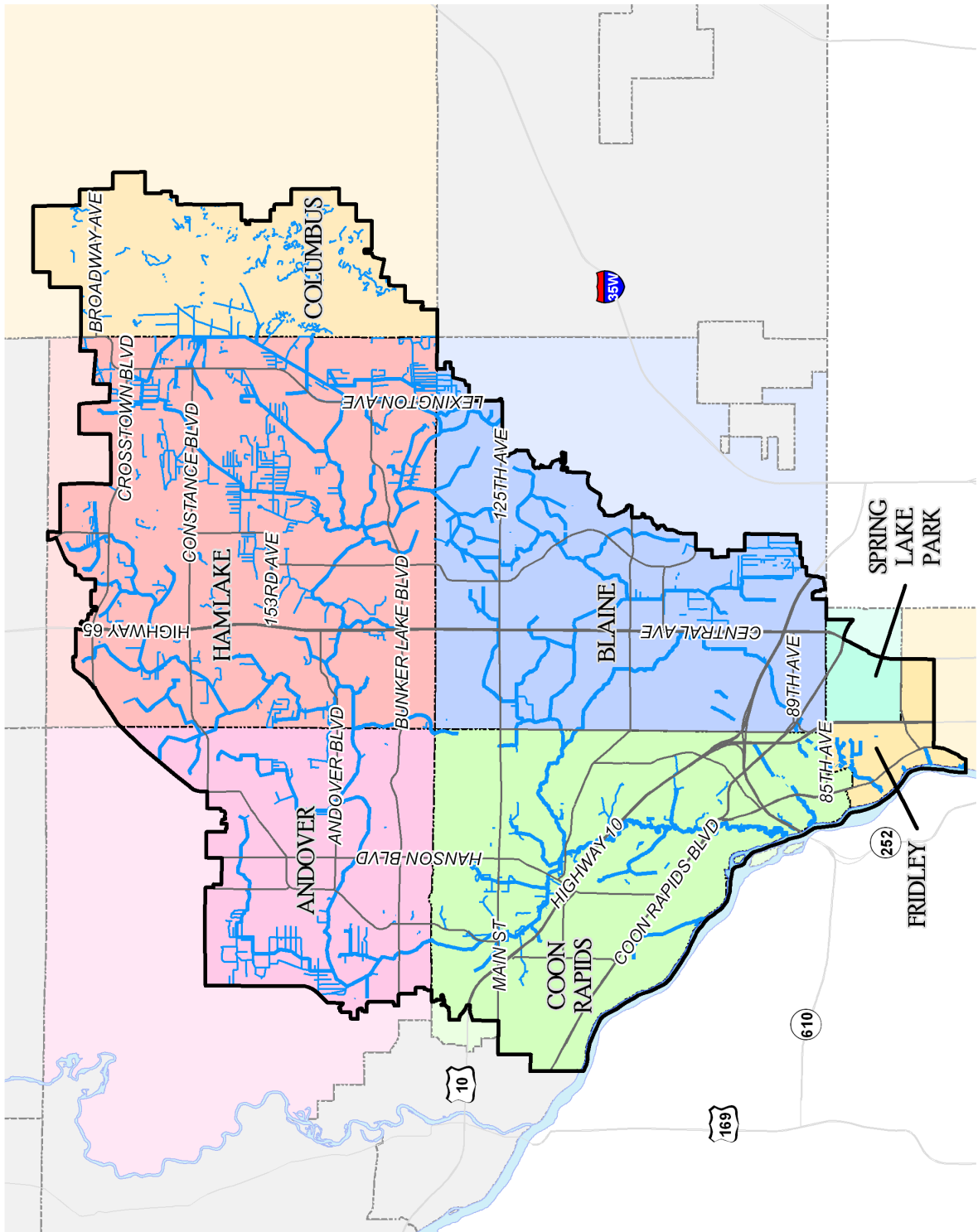
The Coon Creek Watershed District (CCWD) is located in Anoka County Minnesota. The legal boundary of the CCWD encompasses approximately 107 square miles of urban and rural land involving portions of seven cities:

Cities of the Coon Creek Watershed District

| City | Acres | Sq Miles | Pct of District | % of City in CCWD |
|-------------------------|--------|----------|-----------------|-------------------|
| Andover | 9,488 | 15 | 14% | 43% |
| Blaine | 13,931 | 22 | 21% | 64% |
| Columbus | 7,096 | 11 | 10% | 23% |
| Coon Rapids | 14,219 | 22 | 21% | 99% |
| Fridley | 1,374 | 2 | 2% | 21% |
| Ham Lake | 20,651 | 33 | 30% | 90% |
| Spring Lake Park | 890 | 2 | 2% | 68% |
| Total | 68,480 | 107 | 100% | |

The legal boundary of the CCWD and member cities is shown in **Figure 1-1**.

Figure 1.1



Primary Service Audiences

The people who make decisions about water and related resource use within the Coon Creek Watershed are our primary service audience.

We provide evidence-based technical and policy assistance as well as leadership to those individuals and entities who wish to act as stewards in making good decisions about their water and related resources.

Our primary service audiences are:

- Citizens** Individuals or groups that:
- Own or operate land that depends on drainage (removal of water from the soil profile) to produce or provide goods or services, **OR**
 - Influence or have an effect on the quantity or quality of water within the watershed through activities that affect the land and adjacent waters.

Councils, Boards & Commissions Public bodies that enact policy and allocate resources that pertain to the management of water and related land resources.

Water Resource Professionals Individuals who influence or have an effect on the quantity or quality of water within the watershed either through design, field determinations, or conduct of their work be they public or private.

These general groups ask for and require different products and services from the watershed and from the District. And, within each audience group there are segments with different needs.

Partnerships and Coordination

Achieving comprehensive water and related resource management concurrent with meeting the diverse needs of the District’s stakeholders cannot be done in a vacuum or along jurisdictional boundaries. With a watershed approach to management, future resource decisions will be more community based, collaboratively designed and regional in scope. Coordination has taken place with other water and land management agencies and will continue. State, county, and local governments, private landowners and environmental and industry groups are also key partners in providing information and seeking common ground.

Service Focus

The Coon Creek Watershed District seeks to assist people and local units of government in being or becoming good stewards of water and related land resources within the District.

Through District assistance and actions, people and communities are better able to conserve, maintain, and use water and related resources through effective management and stewardship that involves actions to:

- Maintain or Improve Conditions** Maintain the condition of water and related resources through continued good management where adequate conservation is already in place.
- Prevent Damage** Prevent damage or harm to water, land, or property where assessment of social, economic and environmental trends indicates potential for degradation of water or related resources.
- Enhance Use** Enhance land for further use or productivity and environmental health.
- Restore Damage** Restore water and related resources where damage to those resources has already occurred.

Guiding Principles

The following fundamental principles guide how the Coon Creek Watershed District (CCWD, District) conducts business and will continue to conduct business in the future.

Service

The citizens of the Coon Creek Watershed District are entitled to the best service the District can provide. We respect the dignity and worth of every person with whom we work, treat all individuals fairly and equitably, listen to their views, and respond with assistance that is tailored to their needs.

We believe that private and public water resource users will make responsible decisions when aware of how systems need to perform, the alternatives for pursuing their goals, and the consequences of alternatives.

Our appreciation of people's needs is as important to successful water management as is their understanding of the water and related resources of the Coon Creek Watershed District. We continually strive to anticipate public need and to improve our service. We measure our efforts against the highest professional standards.

Partnerships

The Watershed District believes that effective management of water and related resources can only be achieved through the cooperative and collaborative efforts of individuals, agencies, and organizations across the watershed.

The District values its relationships with the local, state and federal agencies that share our objectives, although our missions may differ.

We recognize that our traditional partners-Cities, Anoka County and Conservation District, BWSR, DNR, MPCA and USACE have been key to past successes and remain essential to future progress in managing water resources.

District commitment to land stewardship and public service is the framework within which water and related land resources will be managed. Implicit in this statement is collaboration with the public and other agencies as stewards of the watershed and its resources, especially the municipalities with lands within the watershed.

Evidence-Based Practice

Effective management of water resources depends on having evidence-based information and technology that are up to date, easily accessible, and designed to meet user needs.

The Coon Creek Watershed District satisfies a broad range of technology and information needs – from Best Management Practices (BMPs) and ‘how-to’s” for homeowners or builders to technical standards and tools for stormwater professionals.

The Watershed District designs operates and maintains water resource management practices that help private landowners and managers achieve production and conservations goals and meet federal, state and local expectations and standards.

Technical Excellence

District standards for rate control, infiltration, stormwater engineering and modeling, and other specialties are recognized and shared state-wide. Our Water Resource Inventory and Assessment of conditions and trends (Appendix A, B & C) has become vital to tailoring State and Federal water resource policy and programs to the Anoka Sand Plain geography of central Anoka County.

Coon Creek Watershed District’s contributions have depended largely on the technical expertise of its employees and upon their ability to work with the diverse audiences and constituencies within the watershed.

Performance/ Outcome Based Management

The people and water resources of the Coon Creek Watershed deserve effective water resource management. Performance or Outcome based management will be used to improve the effectiveness of the District’s programs.

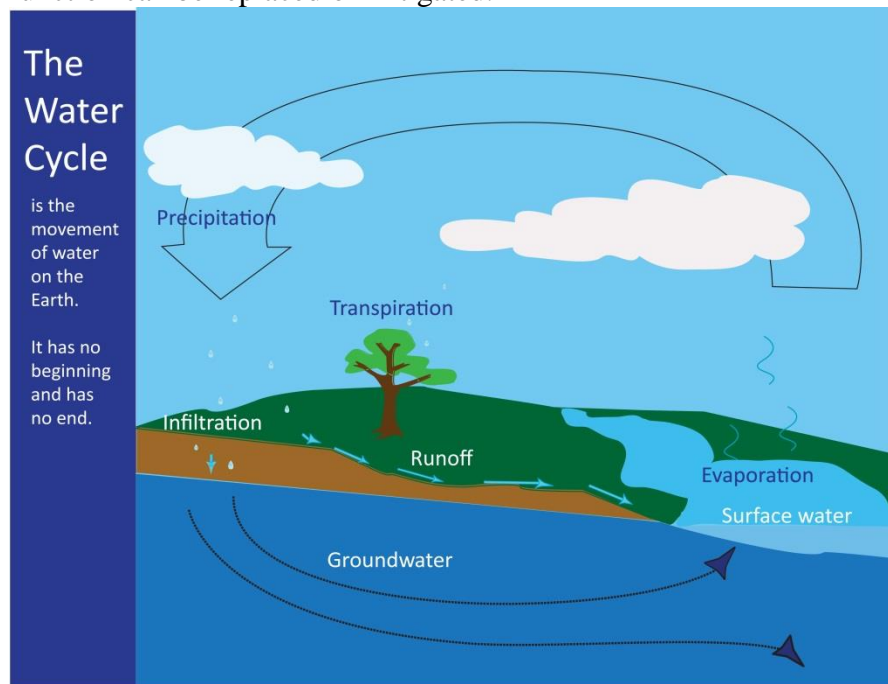
In addition, State agencies have begun to emphasize outcomes as a criterion for grants and program administration and have discussed the potential for reimbursements, compliance and delegations to be based on physical or social outcomes.

Performance based water management does not assert control strictly on the basis of an existing landscape feature. Instead, it emphasizes the functioning or operation of the natural systems and landscape processes within the watershed, especially hydrologic processes.

Hydrologic Processes The watershed environment is determined by a set of existing natural resources and processes. The primary determinant for management within the watershed is the hydrologic system. It is the process by which water is circulated and distributed on the surface of the land, through the soil and underlying rocks, and into the atmosphere.

The hydrologic cycle involves precipitation, runoff, groundwater movement, evaporation and transpiration. The hydrologic cycle is the unifying factor of the natural resource components identified earlier. Ditches and other watercourses, wetlands and other water bodies, floodplains and groundwater recharge are all integral parts of the hydrologic system of the watershed. Water quality, soils, and wildlife are related in that they are affected by or affect the hydrologic system.

The management of these natural resources does not mean prohibiting the use of these resources for other uses. Rather, it means the wise and managed use while protecting their capacity to function, allowing for development and uses compatible with these systems. In some instances, water and related land resources should be kept free of landscape alteration. In other instances, natural resources can sustain certain types of alteration or sustain additional utilization of natural processes without detrimental impact, or, their ecological function can be replaced or mitigated.



Programs and Activities

To implement its mission and pursue the goals mandates and permit requirements, the Watershed District operates six programs which oversee 45 basic activities, which in turn involve a considerable number of separate tasks.

Programs are groups of similar activities that District employees engage in with our service groups.

Activities are groups of related tasks conducted to achieve a specific objective or outcome.

The programs are:

1. Administration
2. Development Regulations and Issue Management
3. Operations and Maintenance
4. Planning, Programming and Budgeting
5. Public and Governmental Relations
6. Research and Data Collection

Administration

The administration program carries out 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's financial needs. The Administration Program consists of the following activities:

1. Board of Managers
2. Building maintenance
3. Contract administration
4. Financial management
5. Information
6. Legal
7. Personnel administration and training
8. Records management
9. Risk management

Development Regulations & Issue Management

The purpose of development regulation is to evaluate, permit, and monitor plans and programs affecting the water and related land resources of the District in an orderly and informed fashion. The Development Regulation and Issue Management Program consist of five activities:

1. Environmental Review (includes comments on DNR and Corps of Engineers permits)

2. Issues and Complaints
3. Pre-Application Meeting
4. Permit Review
5. Permit Issuance
6. Permit Inspection
7. Permit Enforcement & Illicit Discharge Detection & Elimination
8. Final Inspections, Project Close Outs & Escrow Returns

Operations and Maintenance

The purpose of the Operations and Maintenance program is the planning, design, construction and maintenance of the District ditch system and water control structures, and to preserve the location, character, and extent of the District ditch and conveyance system. The Operations & Maintenance program consists of the following activities

1. Routine Maintenance
 - a. Inspections
 - b. Litter & Debris Removal
 - c. Vegetation & Ground Cover Management
 - d. Access Management
2. Non-Routine Maintenance
 - a. Cleanout Tress and Sediment
 - b. Beaver Removal
 - c. Structural Repair
3. Repair and Rehabilitation
 - a. Ditch Channel
 - b. Earthworks such as embankments
 - c. Ditch/stream banks and side slopes
 - d. Weirs and Ditch plugs
 - e. Inflow and outflow devices
4. Construction Retrofit and Rehabilitation
 - a. New drainage, stormwater or water quality facilities

Planning, Programming and Budgeting

The purpose of the program is to coordinate the planning, prioritizing, and financing of District programs and activities. The Planning program consists following activities:

1. Annual Assessment, Reporting, and Planning
2. Budgeting and Program Planning
3. Watershed Management Planning
4. Modeling
5. Policy and Procedures
6. Legislation & State & Federal Policy Review
7. Special Studies & Reports

Public and Governmental Relations

The purpose of the public and governmental relation program is to ensure that the continuing planning and management of the Coon Creek 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 four activities has been developed to carry out District policies. The components are:

1. Education
2. Information
3. Involvement
4. Technical Assistance
5. Financial Assistance & Grants

Research and Monitoring

The purpose of the research, monitoring and data collection program is to gather and analyze data that will result in increased efficiency and effectiveness of watershed management and District programs. The research, monitoring, and data collection program provides integrated resource information used in planning, evaluating, and decision-making within the Coon Creek Watershed District.

Program activities include:

1. Precipitation Monitoring
2. Biomonitoring
3. Lake Level Monitoring
4. Lake Water Quality Monitoring
5. Reference Wetland Monitoring
6. Wetland Monitoring - Vegetation Transects
7. Riparian Lands Monitoring
8. Stream –
9. E coli Monitoring - Grab Samples
10. Stream Hydrology Monitoring - Continuous Stage Monitoring
11. Stream Hydrology Monitoring - Rating Curve Development
12. Stream Water Quality Monitoring - Grab Samples
13. Stream Water Quality Monitoring - Hydrolab Continuous Monitoring

Overarching Strategies

Coon Creek Watershed District activities are guided by broad, unifying strategies that are consistent with our Guiding Principles. For the period of 2013 to 2023 we have defined the following strategies. In the next ten years we will:

1. Seek to promote cooperative/collaborative efforts to achieve water and related resource goals.
2. Provide information and assistance to encourage and enable locally led, watershed, subwatershed and minor subwatershed scale management.
3. Facilitate the growth of performance based solutions that recognize the multi-scale nature of comprehensive water management.
- 4 Utilize an adaptive management process that allows the District to continually evaluate the performance of the resource and adjust its programs and activities to increase effectiveness.

Collaborative Management

The Coon Creek Watershed District is of the position that enduring conservation of water and related resources can only be achieved through cooperative and collaborative efforts of individuals, agencies and organizations operating within the watershed.

The Watershed District, Cities, Conservation District and State agencies represent a unique partnership dedicated to comprehensive water resource management. The one-on-one assistance and collaboration this partnership provides to landowners and developers forms a foundation for collaborative management.

Today, there is a growing need for the effectiveness of collaborative approaches that conserve and sustain water resources. To meet this need the District will seek to strengthen our efforts. Specifically we will:

- Increase our investment in developing the resource information system and analytical tools that collaborating agencies can use to reach consensus on water resource goals

and take action to achieve those goals.

- Expand our efforts to broaden our partnerships and build new alliances. We will continue to coordinate and collaborate with our Cities and Conservation District to develop strategies to make our joint actions more efficient.
- Enable strong local water resource leadership, working with partners who have responsibility for state and local long-range planning and local organizations that have a stake in water resource management.
- Improve the quality of cooperative and collaborative water resource management programs and projects by playing a more proactive role in providing technical advice in decision making arenas at all levels.
- Continue to commit the resources needed to enable staff to develop the necessary skills to serve as catalysts and coordinators at the local level. Collaborative management requires a significant investment of staff time to work with stakeholders to define conditions, foster communication among all parties, and inform people on the issues and options.
- Collaborate with the Cities and Conservation District as well as state agencies in program development, refinement and delivery and to accelerate cooperative and adaptive management at the local level.
- Pursue partnerships with varied interests, to strengthen and collaborate in research efforts and to encourage pilot and demonstration efforts in areas of stormwater and water quality management.

Watershed Approach

The Coon Creek Watershed District practices a watershed-based approach to water resource management. This approach is key to wisely using the water and related resources of the District.

Decisions about how to use and manage water resources are best made by focusing on the biogeochemical processes of natural systems within the landscape that is the drainage area of Coon Creek (Appendix A & B). Watersheds provide the context within which we can most meaningfully evaluate aquatic habitats and the movement of water, nutrients, sediment and energy through the landscape. They are universal, well-defined areas that provide a

common basis for discussion of water, related resources and landscape processes.

By using a collaborative, scientific-based watershed approach, the District hopes to ensure the most productive use of financial investments to address water quality, water supply, flooding and aquatic habitat conservation. Managing on a watershed level will provide a way to integrate District activities with other state and local programs and activities to achieve the greatest results.

Protecting watershed health and function begins with a local commitment to joint action to prevent or solve a resource problem of major community importance. Where local communities have developed a vision of their local watershed and reached consensus on priorities for action, the District can tailor assistance to meet those priority needs. In communities where a vision has not been developed, the District can promote the concept of water resource planning. When helping local leaders assess conditions and evaluate options, the Coon Creek Watershed District provides information about how the local watershed affects and is affected by conditions and events in other parts of the larger watershed of which it is part.

The Watershed District is committed to providing services on a watershed basis to enable people to assess their water resource conditions, evaluate alternatives, and implement solutions and measure success.

Providing assistance on a watershed basis requires that the District continue to improve our inventory and assessment and technology transfer services, and that we strengthen our capability to provide watershed planning assistance and technical assistance to communities and individuals. It does not require whole sale changes in the nature or structure of District operations.

To accomplish this, the District will:

- Continue to invest in employee development, technology development and data collection that will be needed to enable the watershed approach to succeed.
- Enhance District ability to provide data at a variety of watershed scales and assist in analyzing data. Watershed-scale planning requires data and analytical tools to help assess conditions, analyze options and develop consensus on solutions.

- Enable District staff to develop the necessary skills to serve as catalysts for watershed planning. Facilitating local efforts on a watershed basis requires a significant investment of time in working with cities and other stakeholders, as well as a high degree of expertise in a wide range of technical disciplines.
- Utilize a progressive and iterative approach to watershed planning. Planning assistance occurs along a continuum and can be provided at various levels of intensity, depending on scope and complexity of the water resource problems, the target audience, available technologies and local interest and commitment.
- Use rapid watershed assessments to evaluate water resource conditions and tailor the delivery of District services on a watershed basis. Technical and financial assistance may be available to develop water resource assessments. Watershed assessments will be used as a platform for conservation program delivery.
- Use the multi-disciplinary expertise of the District staff and partners to expand the local delivery system and initiate cross-agency collaboration for technology transfer, data access and development and technology development.
- Develop improved indices for watershed baseline conditions, and strengthen our ability to measure the effects of programs, activities and practices on the health and quality of the watershed.
- Collect data and document best management practices and program results by watershed and subwatershed boundaries.

Market- Based Approach

The Coon Creek Watershed District is of the position that a voluntary, incentive-based approach based on the function and performance of the watershed is the most effective method for achieving sound water resource management on all lands.

Minnesotan's and the residents of the Coon Creek Watershed value the natural resource (Appendix C). They want clean water, protection against flooding and healthy wildlife populations and they are willing to invest in protecting things they value.

Lack of reliable information about benefits and consequences produced by specific management actions hinders the development of market-based solutions. To ensure that District

programs provide the best return on taxpayers' investment in water resource management, the Watershed District and other natural resource agencies are seeking to quantify the effects of management practices and programs and comparing the benefits and costs of management options. Reliable information is not only improving the management of District programs but creating opportunities for markets to play a role in accelerating sound water management on private land.

Markets for some types of environmental credits already exist. Wetland banks and credit systems already exist for qualified projects. Opportunities for land owners to participate in pollutant credit trading for reduction of Total Maximum Daily Loads (TMDL) pollutants are expected to increase. In the future, individuals or organizations may be able to buy credits for clean water or wetlands.

This type of approach could also leverage stormwater utility payments, where they exist, from property owners, replacing the need for public program dollars. To this end the District will promote the use of environmental credit trading and reporting registries.

Credit trading, however, is only one way to introduce market principles into the basic public good of water resource management. The District will focus on developing and implementing innovative, market-based approaches within the context of existing programs and activities. Specifically the District will:

- Help provide information necessary for markets to function by increasing our investment in technology and research needed to evaluate and measure benefits and costs of conservation treatments. Consistent and reliable measurements of conservation benefits should encourage private investment.
- Support the Metro Association of Watershed District's and or League of Minnesota Cities' efforts to develop innovative technology that has not yet matured to the point that public funds should be invested.
- Work with Cities and others to identify and assess opportunities for private sector investment in community-based water resource management.

Ensure that a market-based approach is used to help determine the

proper level of public investment in any water resource management effort.

Adaptive Management

Implementation of the Watershed Management Plan will occur through adaptive management. This process will be the primary resource management process of the Coon Creek Watershed District and contains five distinct but interrelated phases

1. Annual Assessment & Evaluation
2. Planning
3. Annual Work Plan & Budget
4. Monthly Reports
5. Annual Report



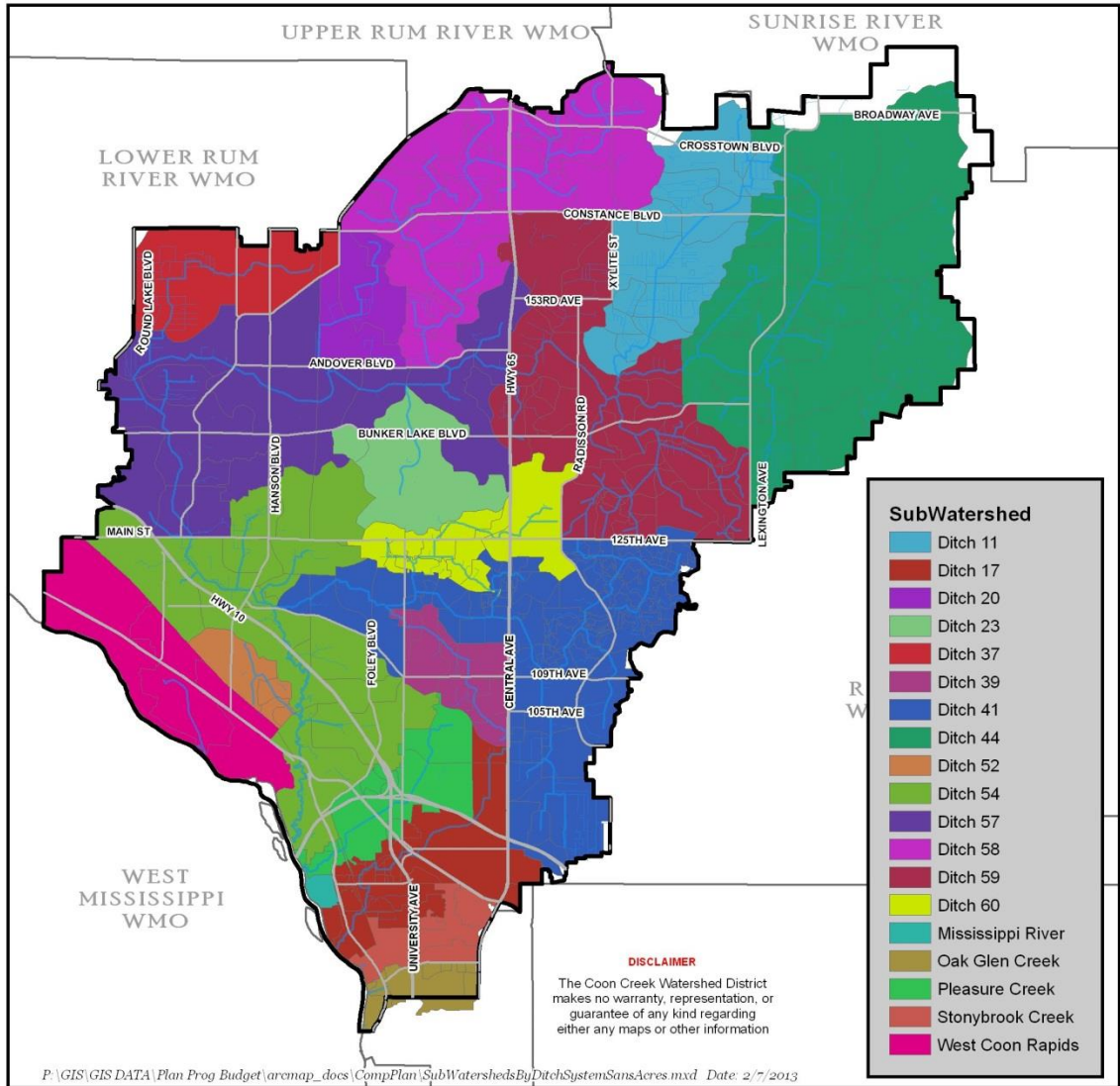
Management Areas & Subwatersheds

The Coon Creek Watershed District encompasses approximately 107 square miles. The watershed is characterized by three land type associations dissected and drained by 14 separate drainage and conveyance features.

These sub-watersheds are used to orient individuals working and living within the watershed when discussing resources, issues and management alternatives

The Subwatershed Management Areas within the District are:

| System | Acres | Square Miles |
|---------------------|---------------|-------------------------|
| Ditch 11 | 3,498 | 5.5 |
| Ditch 17 | 2,643 | 4.1 |
| Ditch 20 | 1,346 | 2.1 |
| Ditch 23 | 1,826 | 2.9 |
| Ditch 37 | 2,171 | 3.4 |
| Ditch 39 | 1,194 | 1.9 |
| Ditch 41 | 7,098 | 11.1 |
| Ditch 44 | 12,845 | 20.1 |
| Ditch 52 | 656 | 1.0 |
| Ditch 54 | 6,675 | 10.4 |
| Ditch 57 | 7,496 | 11.7 |
| Ditch 58 | 6,214 | 9.7 |
| Ditch 59 | 6,586 | 10.3 |
| Ditch 60 | 1,830 | 2.9 |
| Mississippi River | 116 | 0.2 |
| Oak Glen Creek | 655 | 1.0 |
| Pleasure Creek | 1,730 | 2.7 |
| Stonybrook Creek | 911 | 1.4 |
| West Coon Rapids | 2,992 | 4.7 |
| TOTAL: | 68,480 | 107.0 |



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Goals and Objectives

Background

Identifying clearly differentiated goals and objectives is essential to reaching agreement on the priorities of District programs.

Water resources do not exist independently in the landscape. Everything is connected to everything else. District staff assesses all components of the landscape and watershed- geology, soil, water, water quality, and plants- and encourage the development of a water resource management system that will protect the capacity of resource base to continue to supply goods and services while meeting economic objectives.

In this plan, Goals are grouped as:

| | Page | Tabs |
|---------------|-------------|-------------|
| Mission Goals | 25 - 68 | 4 - 8 |
| Issue Goals | 69 - 103 | 9 - 12 |

Mission Goals

The Watershed District Mission Goals are derived from the laws defining and regulating District activities. The Mission goals and objectives describe tangible progress towards achieving the District's mission through implementing water and related land resource programs and activities. They include goals for water and related land resource uses and concerns that have always been the primary focus of our programs and activities and continue to be the foundation of a healthy landscape.

Many of the outcome measures associated with particular objectives are still under development. The Coon Creek Watershed District is committed to integrating recognized measures of sustainable water management into appropriate agency goals and objectives. Until these outcome measures are more fully developed and evaluated by the District, progress towards achieving our goals and objectives will be measured using existing outcome or output indicators.

Issue Goals

Address water resource issues that are growing in importance as a result of current economic and demographic trends and in response to more recent legislative actions and mandates.

They may also address potentially serious resource conditions that may require immediate attention because the condition presents a serious problem on the current or future provision of a beneficial use or because there is no known management strategy or technology for dealing with the condition or situation.

Mission Goals

Introduction

Mission goals and water resource outcomes in this plan articulate in broad terms the benefits that the District expects to derive from our program and activities. Taken together, our Mission goals describe the landscape that the people of the Coon Creek Watershed want. This is a watershed in which water and related land resources are managed:

| | Tab | Page |
|---|------------|-------------|
| 1. To prevent property damage from flooding, erosion or degraded water quality | 4 | 27 |
| 2. To ensure balance between inflow, outflow and storage of water | 5 | 39 |
| To ensure that water is protected from contamination | 6 | 47 |
| 3. To efficiently serve many uses including the safety and enjoyment of the watershed's residents | 7 | 59 |
| 4. To preserve and enhance wildlife | 8 | 65 |

Mission Goals Our mission goals are not time-bound; they are not conditions to be achieved at a specific point in time. Rather, they define the essential water resource setting needed to sustain a high standard of living for a dynamic society.

Objectives The objectives for each water resource outcome in this plan relate to separate water resource conditions that authorizing legislation or permit directs our programs to address. Objectives define measurable targets against which our long-term effectiveness can be evaluated.

Outcome Statements Outcome statements expand on the mission goal. They represent an event, occurrence, or condition that is outside a program or activity itself and is directly important to District customers or the public.

Preventing Property Damage

Goal 1 To prevent property damage from flooding, erosion or degraded water quality

- Objectives**
- 1.1 To minimize public capital expenditures needed to correct flooding and water quality problems
 - 1.2 To conserve natural resources through land use planning, flood control and conservation projects
 - 1.3 To identify and evaluate damage-producing events causing threat to life or property, site deterioration, or water pollution; and to plan appropriate corrective actions on the affected watersheds.
 - 1.4 To respond quickly and effectively to alleviate the effects of natural disasters and reduce the threat to life, public health, and property

Introduction Property damage involves the injury to real or personal property through another's negligence, willful destruction, or by some act of nature. Property damage may include harm to an automobile, a fence, a tree, a home, or any other possession. The amount of recovery for property damage may be established by evidence of replacement value, cost of repairs, loss of use until repaired or replaced, or, in the case of personal items (e.g. trees or landscape features) by subjective testimony as to value.

Property Damage Concerns Three types of property damage are of concern to the watershed district:

Damage to life and safety People injured or killed by District or other water management facilities or actions.

Structural Damage Loss of property. Most efforts have focused on mitigation of damage to bridges and roads, houses, and crop land.

Functional or Operational Damage Loss of this component results in an interruption of service. Nonstructural damage will make it difficult or impossible to carry out the functions that were normally accomplished in a facility.

Current Situation In 2010 the watershed contained 21,943 acres of flood prone land with a market value of \$3.6 to 2.7 billion dollars. In addition, the District includes approximately 1,000 parcels valued at \$283 million where the

quality of the adjacent lake waters is critical to property values.

Property damage within the watershed is typically a result of:

- Flooding**
1. Slowly rising water level fluctuations resulting from
 - a. Heavy rainfall
 - b. Melting snow and ice
 - c. Complete or partial obstruction of an outlet or drainage system
 - d. Sediment buildup in the channel
 - e. Clogged storm drains
 - f. Rises in groundwater
 2. Rapidly rising water levels resulting from:
 - a. High intensity storms
 - b. Sudden release of water from an upstream impoundment
 - c. Ice jams within culverts during spring runoff
 - d. Beaver dams
 3. Strong currents associated with above two conditions
 4. Fallen trees and damaged structures

- Poor Water Quality**
1. Bacteria and other pathogens
 2. Loss of top soil
 3. Heaving or slumping of soil slopes or ditch banks
 4. Sedimentation restricting recreational use and aquatic life
 5. Degraded water quality of natural water bodies restricting recreational use, aquatic life or enjoyment
 6. Nitrate – Nitrogen endangering drinking water in groundwater recharge areas

- Natural Disasters**
1. Straight line winds
 2. Tornados
 3. Floods
 4. Drought

- Aquatic Invasive Species**
1. Eurasian water milfoil
 2. Curly leaf pond weed
 3. Zebra mussels – Not yet found within the watershed

Strategies to Achieve the Goal

To prevent property damage from flooding, erosion or degraded water quality the watershed District will:

Development Regulation

Continue to enforce erosion and sediment control rules to prevent the loss of top soil and sedimentation restricting recreational use and aquatic life of waters within the watershed.

Regulate the low floor and low entry point to structures to prevent flooding from ground water and flooding.

Protect the water and related land resources of the Coon Creek Watershed from the adverse effects resulting from poor or incompatible land use activities.

Regulate land-disturbing activities affecting the course, current, cross section and quality of ditches and water courses.

Regulate improvements by riparian property owners of the bed, banks, and shores of lakes, streams, and wetlands for preservation and beneficial use.

Regulate crossings of ditches and watercourses in the District to maintain channel profile stability and conveyance capacity.

Limit permit holder responsibility to that necessary for the intended use. Avoid assigning responsibility for major repair.

Avoid adverse impacts that may be associated with the occupancy and modification of floodplains and with the destruction, loss, or degradation of wetlands. Avoid filling of land within floodplains and wetlands wherever practicable.

Do not permit floodplain development and new construction in wetlands wherever there is a practicable alternative.

Promote nonstructural flood protection methods to reduce flood hazard and flood loss.

Preserve and, where needed and feasible both economically and technically, enhance the natural and beneficial function and values of wetlands.

Operations and Maintenance

| | |
|---------------------------------|---|
| AIS Detection & Control | Continue existing control programs |
| General | Promote nonstructural flood protection methods to reduce flood hazard and flood loss |
| Repairs | Continue bank stabilization & repair projects |
| Routine Maintenance-Inspections | <p>Access Management: Inspect and manage access to District infrastructure for maintenance and repair purposes.</p> <p>Annually inspect 20% of the drainage system for sediment build up and significant changes from the 'approved' elevation of the ditch.</p> <p>Annually inspect all structures owned and operated by the watershed district to determine structural condition and the chance of a sudden release of water that could cause property damage downstream.</p> <p>Develop an automated reporting system for ditch inspection results.</p> <p>Increased frequency of inspection in 'critical reaches' of the drainage system to ensure agricultural drainage. (2x per year)</p> <p>Perform surveys to evaluate flood hazards and storm damage occurrences and their hazards and to develop treatment programs where needed.</p> <p>The public ditch system needs to be managed for both drainage and conveyance with an awareness of the water quality impacts and varying maintenance needs of both.</p> <p>Maintain ditch and conveyance systems within the watershed to fulfill the role identified within the policies and procedures for drainage and conveyance and the drainage law.</p> <p>To respond quickly and effectively to alleviate the effects of natural disasters and reduce the threat to life, public health, and property.</p> <p>Corrective Maintenance: Steam jetting frozen or ice blocked culverts on public ditches.</p> <p>Remove beaver and Beaver Dams obstructing public ditches and creating flooding.</p> |

Remove trees from ditches and public channels that are obstructing or slowing flows.

Assist in preventing, treating and controlling aquatic invasive species where they have degraded the water quality of natural water bodies restricting recreational use, aquatic life or enjoyment.

Annually inspect 20% of the drainage system for sediment build up and significant changes from the 'approved' elevation of the ditch.

Annually inspect all structures owned and operated by the watershed district to determine structural condition and the chance of a sudden release of water that could cause property damage downstream.

Annually conduct an early spring inspection of the watershed to assess the snow pack, its water content and the depth of frost to assess flooding potential under various weather scenarios.

Maintain an issue log and map of the location and type water related issues, problems and concerns including but not limited to: Clogged storm drains; Ice jams within culverts during spring runoff; Falling trees and debris; Beaver dams.

Repair public ditches through the removal of sediment buildup in the channel.

Protect stream channels from degradation.

To maintain in operable condition all drainage and Stormwater improvements in the Watershed and other lands controlled by the Watershed District.

Where appropriate, assign through Stormwater permits or Stormwater agreements responsibility for Stormwater improvement maintenance to Stormwater permittee.

Assign current maintenance in annual operating plans.

Limit Watershed District responsibility for financing maintenance work to those instances in which the Stormwater permittee realizes no direct benefit or in limited, short term situations, such as natural disasters.

Investigate all significant disasters promptly, appraise their impacts upon goals and targets, and recommend program adjustments for consideration by the Operations and Maintenance Coordinator and District Engineer.

Perform surveys to evaluate flood hazards and storm damage occurrences and their hazards and to develop treatment programs where needed.

Promote nonstructural flood protection methods to reduce flood hazard and flood loss.

**Planning,
Programming &
Budgeting**

Budget & Annual
Program Plan

Completion of budget process

Invest in cost-effective drainage and stormwater improvements to achieve objectives established in water and resource management plans.

Review screening and ranking criteria. Document the screening and ranking process and use the uniform comparative method to make funding allocations.

Comprehensive Plan

Encourage compatibility between land use activities upstream and downstream.

Identify and map the private drainage systems within the watershed

Recognize floodplains and wetlands as specific areas

Inventory water quality on all Coon Creek Watershed System lands as needed for management of all District resources

Remain actively involved in the development of the Upper Mississippi River Bacteria TMDL.

Recognize floodplains and wetlands as specific areas

Work collaboratively with the MPCA in the development of a Watershed Restoration and Prevention Plan (WRAPP) for

1. Biota
2. Sediment & Turbidity
3. Total Phosphorus
4. E. coli & Bacteria
5. Flow Alteration & Volume
6. Fishery

Plan for Critical events (high intensity storms that cause flooding and/or

lead to a disruption of public services).

Continue Watershed Management Planning for ‘Drinking Water Watersheds’ with an eye on Nitrate – Nitrogen endangering drinking water in groundwater recharge areas.

Plan and coordinate with Cities and Anoka County to prevent catastrophes and natural disasters that could result in the sudden release of water upstream from flood prone property.

Manage Watershed District water resources for multiple-uses by balancing present and future resource use with domestic water supply needs.

Identify minor sub-watersheds providing water within the drinking water supply Management Area as defined in the City’s well-head protection plan or 1 year travel time of municipal and other public wells and water supplies during land management planning.

Encourage compatibility between land use activities upstream and downstream.

Develop prescriptions on a case-by-case basis to ensure desired multiple-use outputs while recognizing domestic water supply needs.

To plan and execute a coordinated program of water resource development to maximize public benefits within the Watershed.

Coordinate flood and other natural disaster surveys with resource planning among Cities, and with similar efforts of other Federal, State, and area wide agencies.

Analyze environmental impacts.

Ensure District participation in State and local early flood warning systems.

Cooperate and participate to the extent feasible in Federal and State developed flood forecasting and flood warning systems. When Watershed District participation is requested, execute a written agreement with the agency involved and state the kind and extent of assistance the Watershed District will furnish, and the manner in which it will be provided.

Policy and Identify and map areas where easements presently exist or are needed.

Procedures

Review Policy & Procedures

Standard Operating Procedure (SOP): Data & Monitoring - Develop quality assurance and control procedures and standards for weather data collection and storage

Standard Operating Procedure (SOP): Develop and implement standard operating procedures and policies for inspections and minor repairs to be reviewed and updated every 5 years

Standard Operating Procedure (SOP): Development Regulation & Enforcement

Standard Operating Procedure (SOP): Operations & Maintenance

Standard Operating Procedure (SOP): Public & Governmental Relations- develop methods to assess public knowledge, awareness, and attitudes

Update Policy & Procedures

Update District Rule

Public and Governmental Relations

Education Provide for the placement of appropriate signs to enhance public awareness of and knowledge about flood hazards.

Enhance public awareness and knowledge of flood hazards by placing appropriate signs or other means of conspicuous delineation showing the highest past flood level and probable 100-year flood heights in identified flood hazard areas and in public use areas which have suffered flood damage. Place priority on those areas within the Watershed District where the probability of rapid rises of water level (flash floods) is greatest, where flood warning time is minimal, or where critical structures and facilities are involved.

Information Prioritize the review and replacement of Information and Education exhibits and media, and submit proposals for permanent, wayside, temporary and traveling exhibits.

Increase local TV, radio and newspaper media coverage.

Prepare public service announcements to be used during flood events, cautioning against strong currents and under tows that may exist in the

watershed during times of high water.

Although there may be no formal agreements for flood warning, program coordinators should notify individuals and communities of potential flood situations when such conditions are known.

Notify affected local agencies when the survey shows the possibility that a flood hazard exists.

Directly alert home and property owners occupying possible flood paths.

Involvement Cooperate with other agencies to the extent feasible to secure water measurement data.

Work with the engineering and public works departments of the Cities within the watershed to identify danger areas during flood events and the need to identify special target audiences.

To integrate water resource management with Watershed District land and resource management planning and to coordinate Watershed District water resource protection, development, and improvement programs with similar programs of other Federal, State, and local agencies.

Execute an Interagency Agreement specifying actions and other terms of agreement, when water measurement data is furnished to another agency on a regular schedule.

When other agencies request studies or data, in addition to that normally provided, request equitable reimbursement for additional studies.

Provide opportunity for early public review of plans or proposals for actions in floodplains.

Provide technical assistance to local floodplain and wetland programs.

**Research and
Monitoring**

AIS Monitoring Assess current and long-term monitoring of the District's waters for early detection opportunities.

Monitor locations with a high invasion rate.

Support increased research on the baseline biology of AIS, the ecological and economic impacts of invasions, and control options to improve management.

Continue to assist in monitoring for the presence of aquatic invasive species.

Lake Water Quality
Monitoring

Continue to monitor lake water quality.

Precipitation
Monitoring

Continue to monitor frequency and duration of precipitation events to track the effect of heavy rainfalls.

Identify critical events and conditions that lead to local flooding and water quality problems.

Continue to monitor precipitation intensity throughout the watershed to assess the rates and volumes that contribute to local flooding and water quality problems.

Identify critical events and conditions that lead to local flooding and water quality problems.

Arrange for obtaining quantitative precipitation forecasts and assisting with timely flood or high water warnings to expedite damage control activities.

Stream Water
Quality Monitoring

Continue to collect water quality samples at select locations within the watershed.

Ensuring Hydrologic Balance

Goal 2 **To ensure balance between inflow, outflow and the storage of water and encourage a productive landscape**

Objectives

2.1 To protect, preserve and use natural surface and groundwater storage and retention systems.

2.2 To promote Groundwater recharge.

2.3 To gather and disseminate weather data and climatic information, and provide meteorological expertise in support of Watershed District land and resource management decisions and weather related management activities.

Introduction Hydrologic balance involves accounting for the inflow to, outflow from, and storage in a hydrologic unit such as a drainage basin, aquifer, soil zone, lake or reservoir; the relationship between evaporation, precipitation, runoff, and the change in water storage.

General water balance is represented by the equation:

$$P = ET + R + \Delta SMS + \Delta GMS + \Delta DS + GWF$$

Where,

| Variable | Definition |
|-----------------|--|
| P | Total precipitation input |
| ET | Total evapotranspiration loss |
| R | Total stream flow |
| ΔSMS | Change in soil moisture storage |
| ΔGMS | Change in groundwater storage |
| ΔDS | Change in depression storage |
| GWF | Groundwater flux (groundwater flow into or out of the drainage basin). |

Water balance is used to help manage water supply and predict where there may be water shortages or flooding. It is also used in:

- Irrigation
- Runoff assessment (e.g. Through the runoff models),
- Flood control
- Pollution control
- Design of drainage systems.

Within the Coon Creek Watershed emphasis has been placed on the

components and characteristics of stream flow. This is because sources, quantity and distribution of stream flow and any changes that may result from future development have direct impacts on the water quality and quantity downstream.

Current Situation

Nine key indicators influence the balance between the inflow, outflow and storage of water within the watershed:

1. Drainage area
2. Disposition of land uses
3. Total precipitation
4. Total loss to evaporation
5. Total stream flow
6. Changes in soil moisture storage
7. Changes in groundwater storage
8. Changes in depression storage
9. Groundwater flux.

Drainage Area Over the past ten years the drainage area of Coon Creek has increased 134 square miles to a total size of 1076 square miles. With the addition of lands once part of the Six Cities Watershed Management Organization, Coon Creek has inherited many more subwatersheds and minor subwatersheds draining directly to the Mississippi river and more water on average to manage.

Disposition of Land Uses At present the watershed contains more intensive land uses in the southwestern and downstream portions of the watershed and less intensive land uses in the northeastern portion of the watershed.

Within the less intensive land use areas, land use is expected to become more diverse with intensive land uses existing upstream from less intensive, drainage sensitive land uses like agriculture.

Hydrologic balance within these areas involves an awareness of the effects of the rapid runoff from more intense land uses on agricultural land, and more so the cumulative effect of multiple intensive land uses discharging into a drainage ditch that also provides agricultural drainage. If not analyzed and regulated carefully, the cumulative peak discharges will occur at an elevation and for a duration that will slow or prevent the drainage of crop land. It can also occur at a volume that will trigger or facilitate soil erosion and stream bank failure.

Total Precipitation Ensuring hydrologic balance depends on knowing the critical duration and frequency of various precipitation events that can create “imbalance” in the system and result in either flooding, non-performance of

stormwater infrastructure or erosion.

During the period of 2000 to 2010, annual precipitation has generally decreased from an annual average of 30 inches to approximately 27 inches per year causing drought conditions.

While annual precipitation has generally been below the normal, annual fluctuation and the droughty conditions are among the driest on record, however, the occurrence of below normal precipitation has not altered the frequency, duration and intensity of precipitation for this area of the state. In fact, shorter duration, higher intensity storms appear to be occurring with increased frequency.

Loss to Evapotranspiration Ensuring hydrologic balance involves recognizing that 80% of all precipitation falling on the watershed is lost to evapotranspiration.

| Month | Average Precip. (in) | (PET) Potential Evapotranspiration (in.) | Avg. Precip. minus PET (in) |
|--------------|----------------------|--|-----------------------------|
| January | 1.13 | 0.00 | 1.13 |
| February | 0.81 | 0.00 | 0.81 |
| March | 1.73 | 0.00 | 1.73 |
| April | 2.62 | 1.34 | 1.28 |
| May | 3.57 | 3.55 | 0.02 |
| June | 4.29 | 4.89 | -0.60 |
| July | 3.99 | 5.70 | -1.71 |
| August | 4.04 | 4.94 | -0.90 |
| September | 3.04 | 3.07 | -0.03 |
| October | 2.38 | 1.48 | 0.90 |
| November | 1.92 | 0.00 | 1.92 |
| December | 1.06 | 0.00 | 1.06 |
| Total | 30.58 | 24.98 (80%) | 5.61 |

Stream Flow Ensuring hydrologic balance in drainage sensitive and flood prone area means ensuring stream flow. In other areas, excessive stream flow can result in illegal drainage of wetlands or contribute to flooding downstream.

Lower portions of the watershed (Drainage area below U.S. 10) have become increasingly flashy over the past 20 years. This condition is a result of:

The Age of the Neighborhoods: The subwatersheds that contribute directly to lower coon creek were fully developed and have been long before any of the current stormwater or water quality management programs. Most of the development in this portion of the watershed was built in the 1950's, 60's and early 70's when the stormwater paradigm

was to prevent flooding by getting water off the land. Consequently the stormwater infrastructure focuses on collection and conveyance

Coon Creek Flood Control Strategy: The flood control strategy for Coon Creek in Coon Rapids has relied upon Coon Rapids below Main Street to discharge first. This strategy was designed to accommodate increased volumes of water arriving in Coon Rapids from the then agricultural lands upstream. This strategy is well entrenched in the infrastructure and policies developed within the Coon Creek Watershed and remains a successful and prudent strategy to this day.

Higher intensity, shorter duration rain falls: If we apply the changes discussed in the discussion on precipitation to the lower Coon Creek Watershed we see higher quicker peak discharges for these areas and greater chance of flash flooding.

Changes in Soil Moisture Storage Ensuring hydrologic balance through maintenance of soil moisture involves keeping organic soils saturated to prevent them from becoming hydrophobic or compensating for the fact that large areas may have been converted to a “well drained” condition, transferring water at a rate and volume which may involve mitigation through stormwater practices.

Changes in Groundwater Storage & Flux As surficial groundwater declines there is more groundwater storage available. Given the soils over most of the watershed, infiltration will be very difficult to prevent (i.e. groundwater recharge should be easy to accomplish). If surficial groundwater levels continue to fall between 2013 and 2023, the watershed will experience a decline in surficial water features, such as

- a. Lakes (decline of 50% surface area)
- b. Wetlands (8,375 acres)

Changes in Depression Storage Depression storage plays a key role in maintaining hydrologic balance. On average, over the last 10 years, there has been a 3.5 day increase in time it takes for the system to return to base flow after a two inch rainfall across the watershed. The increased duration is likely from the ponding constructed during development over the past ten years. The exception is the headwaters of Coon Creek, where little development has occurred.

Peak flows have decreased an estimated 44% across the system. The greatest decrease has occurred on Sand Creek at Central Avenue where peak flows have decrease 80% to 35 cfs. Ditch 58 has seen a 20 cfs increase in peak flows.

| | |
|--|--|
| Strategies to Achieve the Goal | <p>The Coon Creek Watershed District will pursue five strategies and related actions to pursue hydrologic balance:</p> <ol style="list-style-type: none"> 1. Development Regulation: Regulation of land disturbing activities and enforcement of the district rules 2. Operations and Maintenance 3. Planning, Programming and Budgeting 4. Public and Governmental Relations 5. Research and Monitoring |
| Development Regulation | <p>Coon Creek will encourage the utilization of all appropriate best management practices for erosion and sediment control and storm water management.</p> <p>To ensure compliance with permit requirements and the goals, objectives and rules of the District.</p> <p>To prevent unacceptable damage to the water and related natural resources of the watershed.</p> <p>To exercise control over proposed developments or activities, only to the extent necessary, to insure the hydrologic balance, the public health, safety and enjoyment; the preservation and enhancement of wildlife; and the conveyance and disposal of stormwater runoff.</p> <p>To monitor, evaluate and permit plans and programs affecting the water and related land resources of the District.</p> <p>To regulate land-disturbing activities affecting the quality, course, current or cross section of ditches and watercourses.</p> |
| Operations and Maintenance | <p>Conduct an annual inspection of 20% of the drainage system.</p> <p>Maintain ditch and conveyance systems.</p> |
| Planning, Programming and Budgeting | <p>Use meteorological data in resource management decisions.</p> <p>Establish formal weather program leadership and management at the sub-watershed level.</p> <p>Ensure that the location of weather stations meets multiple-use management and/or research needs of the Watershed District.</p> |
| Public & Governmental | <p>Provide materials to educate and opportunities to involve citizenry in improving water quality.</p> |

Relations

Keep citizenry and local units of governments informed of high water tables that may result in potential flood conditions.

Provide any materials requested or needed to aid in an informed citizenry.

Outlet informational materials through local media and governments.

Cooperate to the extent feasible with local state and federal agencies to secure water measurement data.

Execute an Interagency Agreement specifying actions and other terms of agreement, when water measurement data is furnished to another agency on a regular schedule.

Research and Monitoring

Install, operate, and maintain Watershed District weather stations in accordance with standards issued in this chapter and related directives unless those standards would conflict with the primary objective of a station operated for research purposes.

Locate year-round Watershed District weather stations to optimize the multidisciplinary needs for real-time weather and climatological data when consistent with the primary objective of the station.

Coordinate weather data collection activities within the Watershed District and with cooperators.

Maintain a Watershed District Weather Database.

Design, coordinate, and maintain a weather information management system that will meet land and resource management needs of the Watershed District.

Monitor water quality and condition of lakes within the watershed.

Monitor water quality at the outlet to the watershed for signs of potential impairment.

Model the hydrology of surface water flows within the watershed.

Assess the overall hydrology of the Watershed every 5 years.

To monitor the actual rate of infiltration on various sites within the watershed.

Monitor lake levels.

Monitor water quality and condition of lakes within the watershed.

Monitor water quality at the outlet to the watershed for signs of potential impairment.

Collect continuous precipitation data.

Monitor stream levels.

Monitor wetland hydrology on the edge of known wetlands.

Secure basic information necessary for modeling and forecasting runoff.

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Ensuring Water Quality

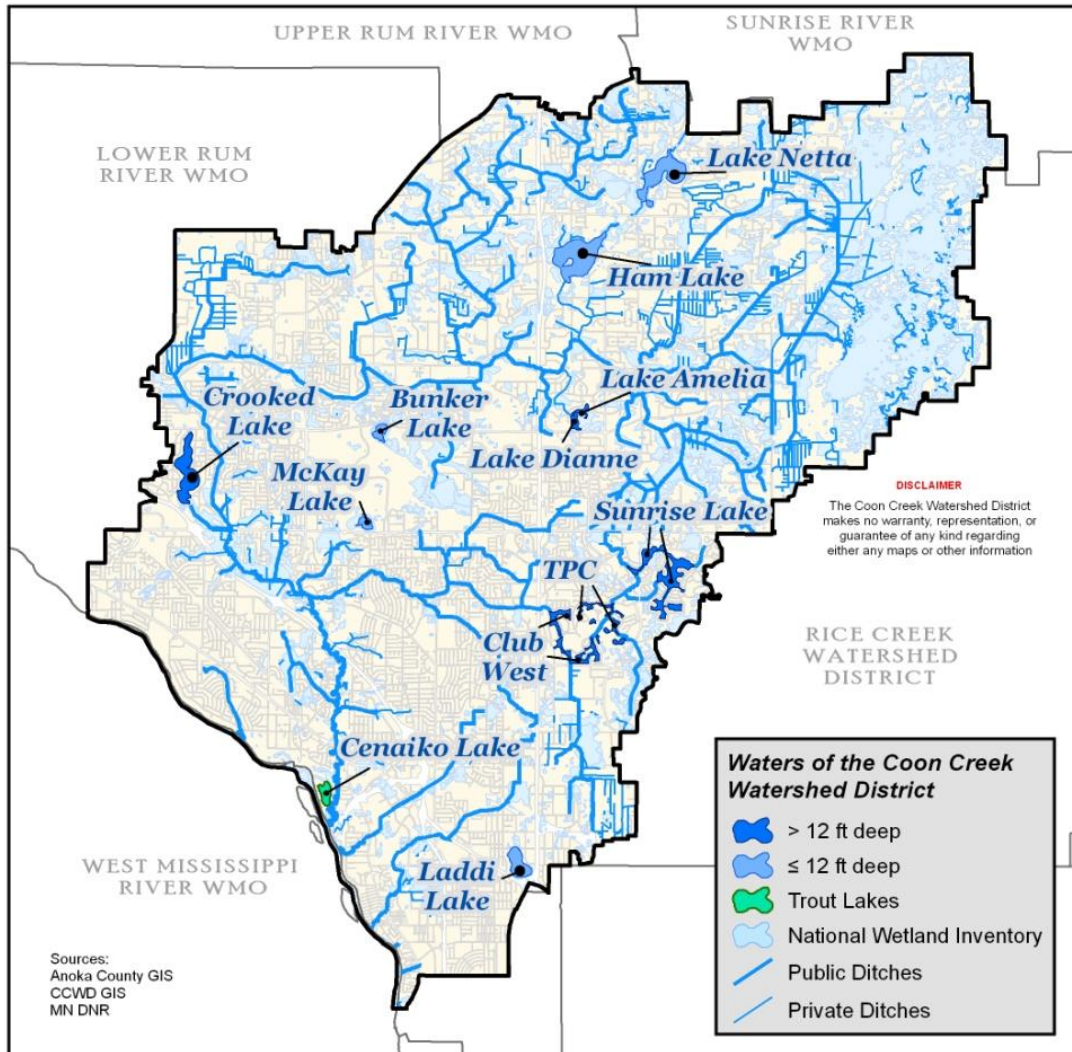
- Goal 3** **To ensure that water is protected from contamination**
- Objectives**
- 3.1 To identify and plan for means to effectively protect and improve surface and groundwater quality**
- 3.2 To prevent soil erosion into surface water systems**
- 3.3 To protect and, where needed, improve the physical, chemical, biological, and aesthetic quality of the water resource consistent with the purposes of the Coon Creek Watershed District and State and National Water quality goals.**

Introduction Runoff from various land uses and construction sites can carry sediment and other pollutants to water bodies within the District. Sediment and pollution can clog sewers and ditches and pollute creeks, streams and lakes. Pollutants can limit the use of water and waterways for beneficial purposes, promote the growth of undesirable aquatic life and is difficult to remove.

Water quality goals and standards apply to a variety of water resources. Within the Coon Creek Watershed those resources and the amount within the watershed are:

| Resource | Amount | Unit |
|-----------------------------------|---------------|-------------|
| Streams and Ditches | 250 | Miles |
| Deep Lakes (>12 Ft) | 347 | Acres |
| Shallow Lakes & Wetlands (<12 Ft) | 15,508 | Acres |
| Trout Lakes | 29 | Acres |

Water Resources within the Watershed



Current Situation

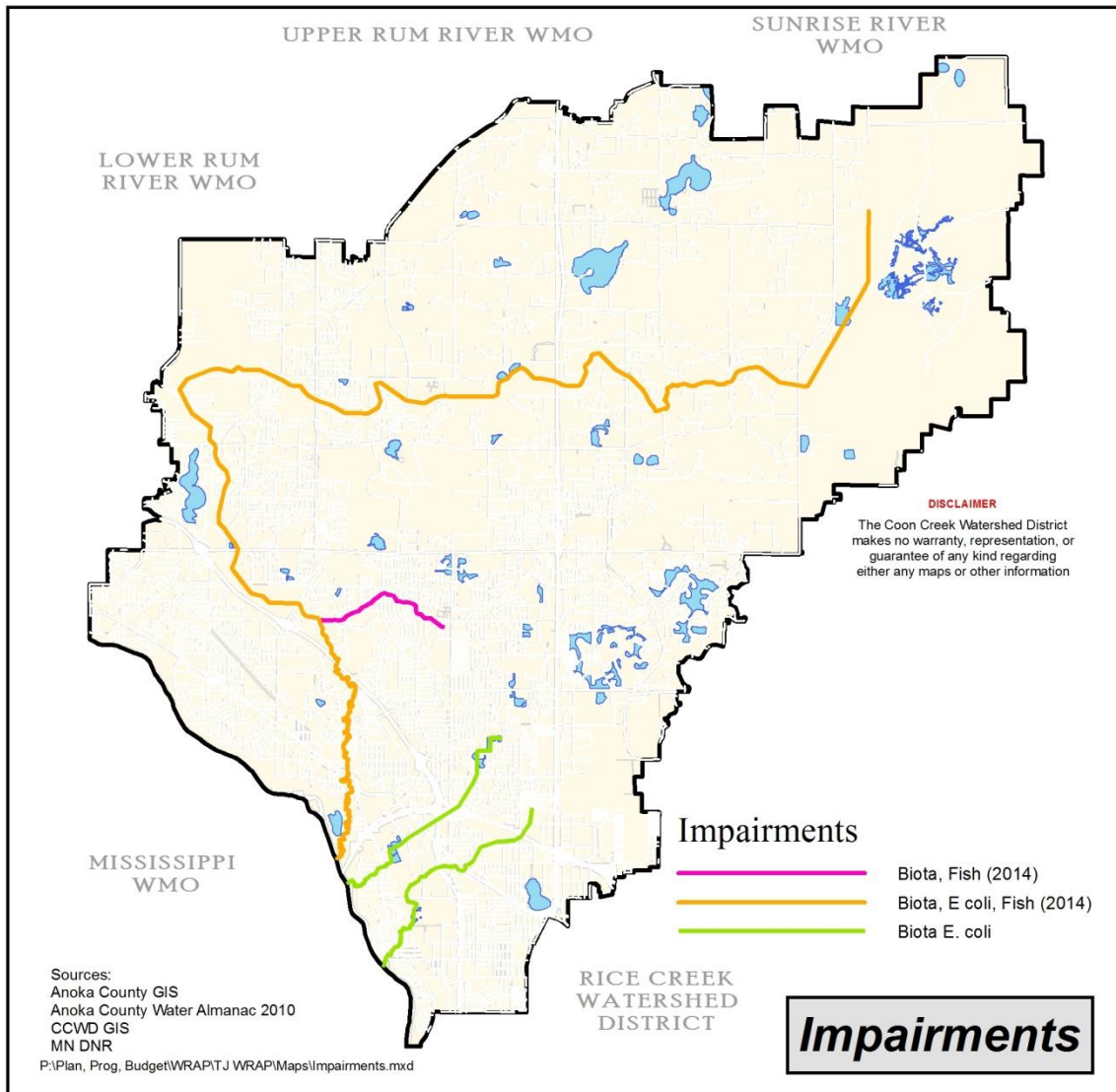
In 2006 the Minnesota Pollution Control Agency (MPCA) listed Coon Creek, Sand Creek, Pleasure Creek and Springbrook Creek as biologically impaired and listed these resources on the 303d list reported to the U.S. Environmental Protection Agency as required.

The Impairment is listed as a Category 5C, meaning the water quality standard is not attained due to “suspected” natural conditions. Further, the water is impaired for one or more designated uses by a pollutant(s) and may require development of a Total Maximum Daily Load (TMDL) to bring the pollutant under control. Water Quality Standards for these waters may be re-evaluated due to the presence of natural conditions.

In 2011 the MPCA Monitored Coon Creek at Vail Street in Coon Rapids for Bacteria. The sampling was conducted as part of the Upper Mississippi River Bacteria TMDL study.

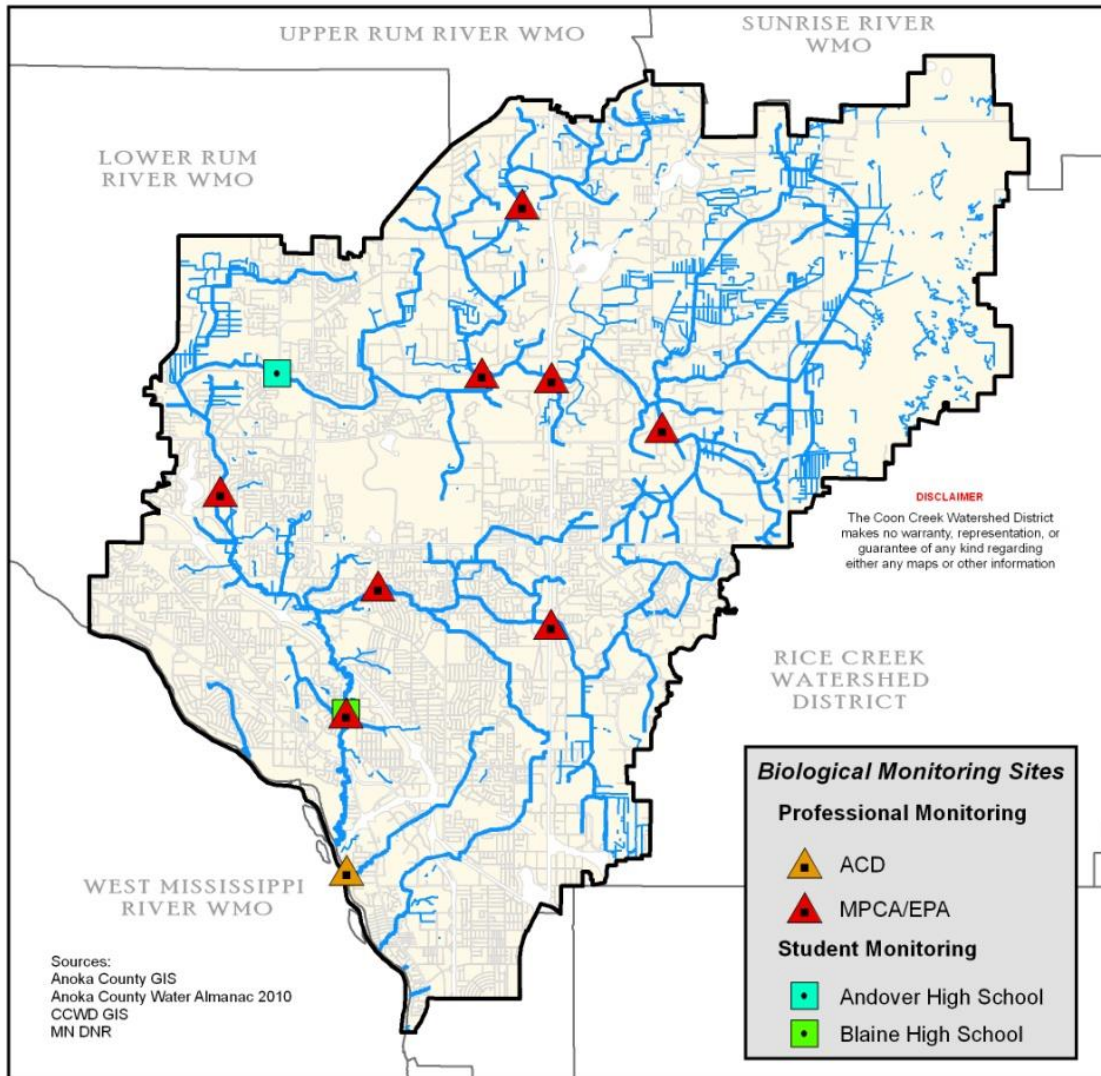
303(d) Listing Information

| Reach name | Year Listed | Affected use | Pollutant or stressor |
|----------------------------|--------------------|---------------------|--|
| Coon Creek | 2006 | Aquatic life/Biota | Aquatic macroinvertebrate bioassessments |
| Pleasure Creek | 2006 | Aquatic life/Biota | Aquatic macroinvertebrate bioassessments |
| Sand Creek | 2006 | Aquatic life/Biota | Aquatic macroinvertebrate bioassessments |
| Spring Brook Creek (CD 17) | 2006 | Aquatic life/Biota | Aquatic macroinvertebrate bioassessments |
| Crooked Lake | 2008 | Aquatic Consumption | Mercury in Fish Tissue |
| Ham Lake | 2008 | Aquatic Consumption | Mercury in Fish Tissue |



Biomonitoring

Portions of Coon Creek have been monitored for biota every year since 2000 (ACD Water Atlases). The invertebrate community suggests Coon Creek’s health is average compared to other nearby streams. The stream’s habitat is relatively sparse, due mostly to excavations performed to repair and maintain the County Ditch function of most of the drainage system within the watershed.

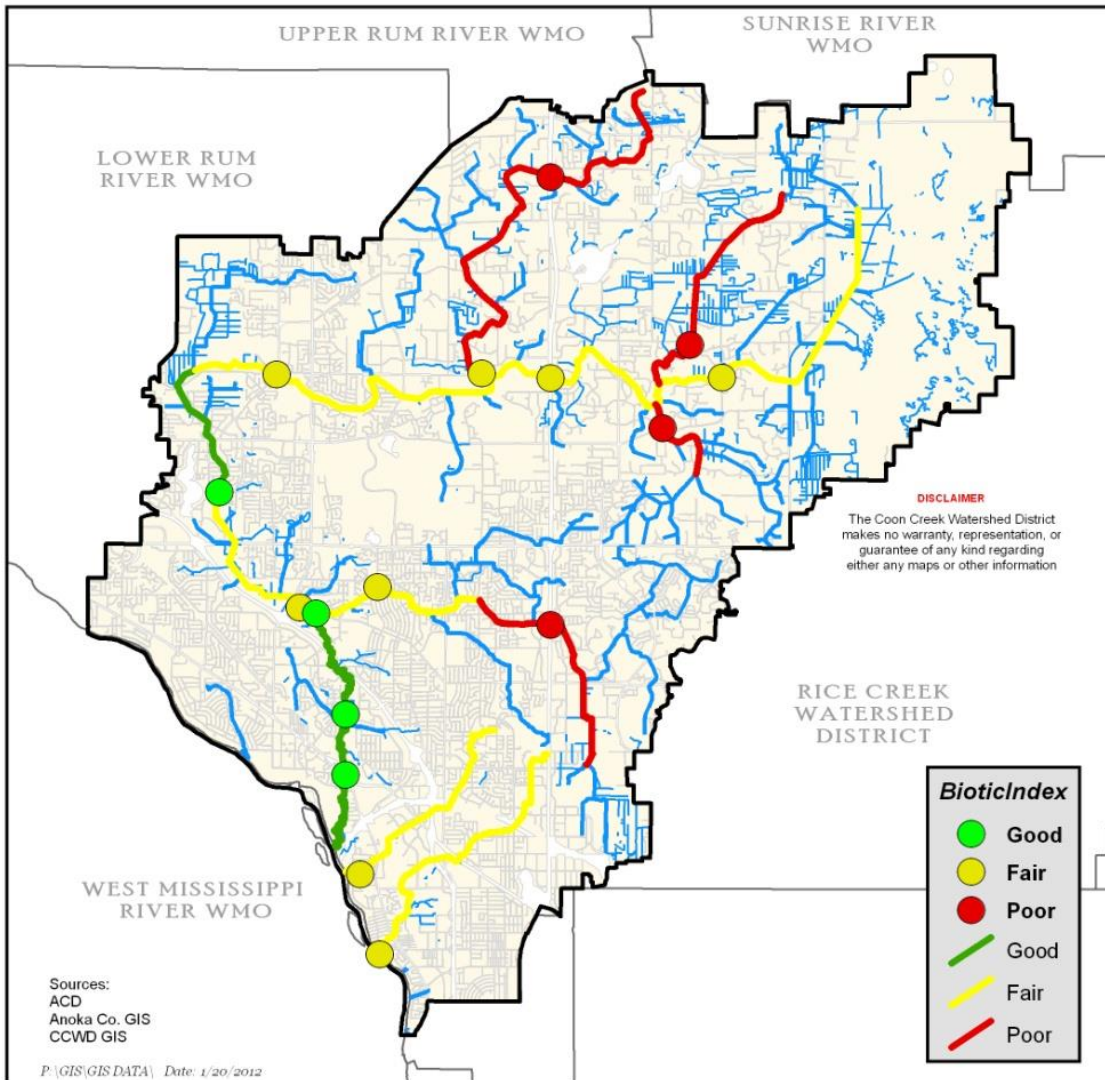


the average for Anoka County streams, despite the good quality habitat. Family Biotic Index (FBI) has been consistently higher than the county average, but the number of families and number of pollution sensitive families (EPT) has been similar to county averages.

The invertebrate community suggests Coon Creek’s health is average compared to other nearby streams. This is unexpected because habitat at the Egret Street site is much better, including riffles, pools, snags, and forested areas around the stream.

At Crosstown Boulevard the creek has been ditched so there are no riffles or pools, there is no rocky habitat, few snags, and adjacent habitat is grassy. One possible explanation is that the biotic community at Egret Street is limited by poorer water quality despite the better habitat. Chemical monitoring has found that Coon Creek’s water quality declines from upstream to downstream. This corresponds with an increase in urbanization. Future monitoring will provide insight.

Current Biotic Condition



Sediment & Turbidity

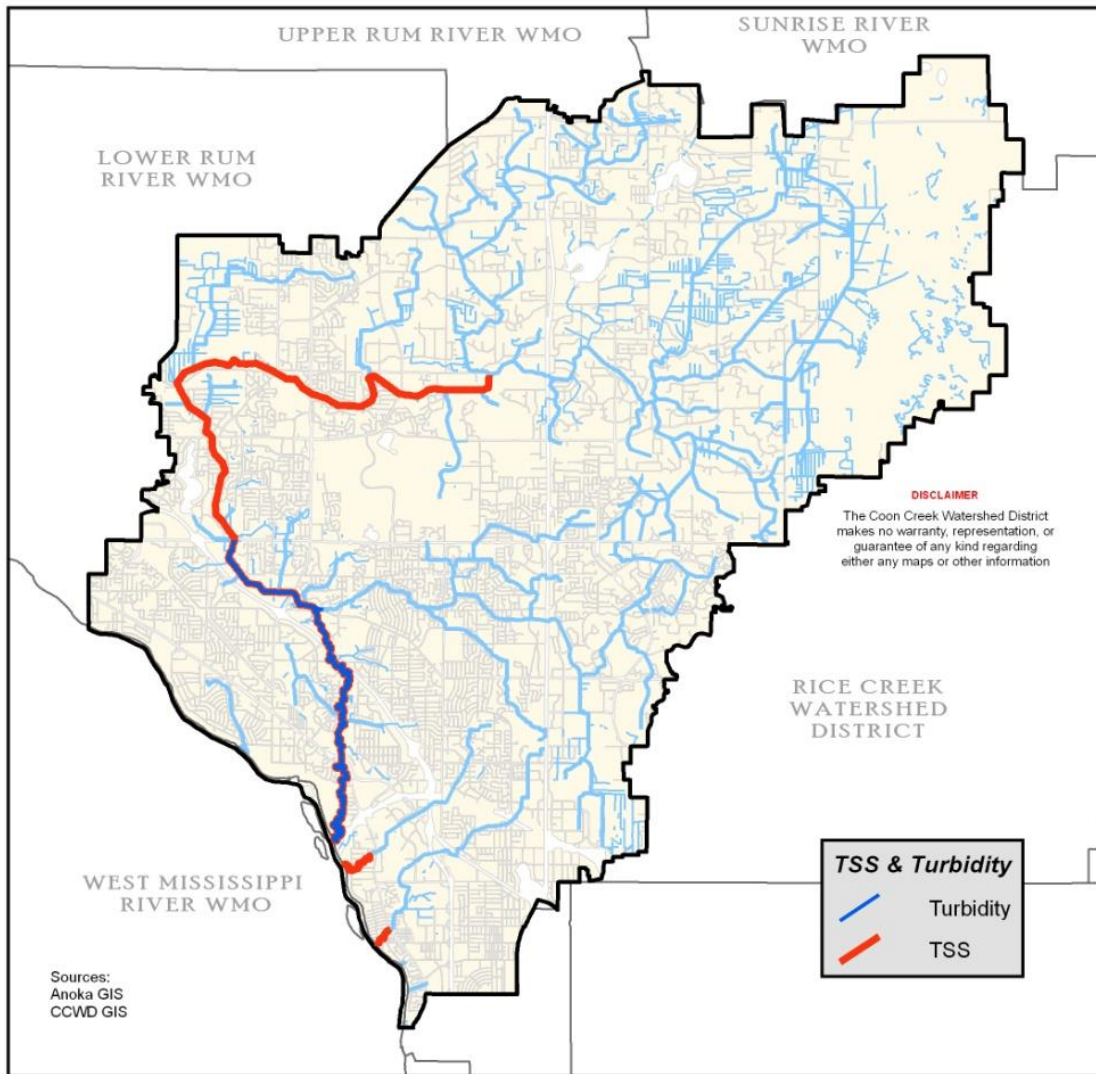
In Coon Creek and Sand Creek TSS and turbidity are low upstream and during baseflow, but increase dramatically during storms and in downstream reaches. The stream appears to exceed state water quality standards for turbidity, though it has not yet been listed as impaired by the MPCA. Suspended solids in Pleasure Creek are low, except in downstream reaches during storms.

Turbidity and TSS problems are most severe in downstream reaches.

Readings in downstream areas are typically two-times higher than those from upstream areas.

| Location (Upstream to Downstream) | Median storm turbidity (NTUs) | Median storm TSS (mg/L) |
|-----------------------------------|-------------------------------|-------------------------|
| Standard | 25 | 14 |
| Shadowbrook | 13 | 19 |
| Lions Park | 30 | 20 |
| Vale Street | 39 | 46 |

Turbidity and Sediment Exceedences

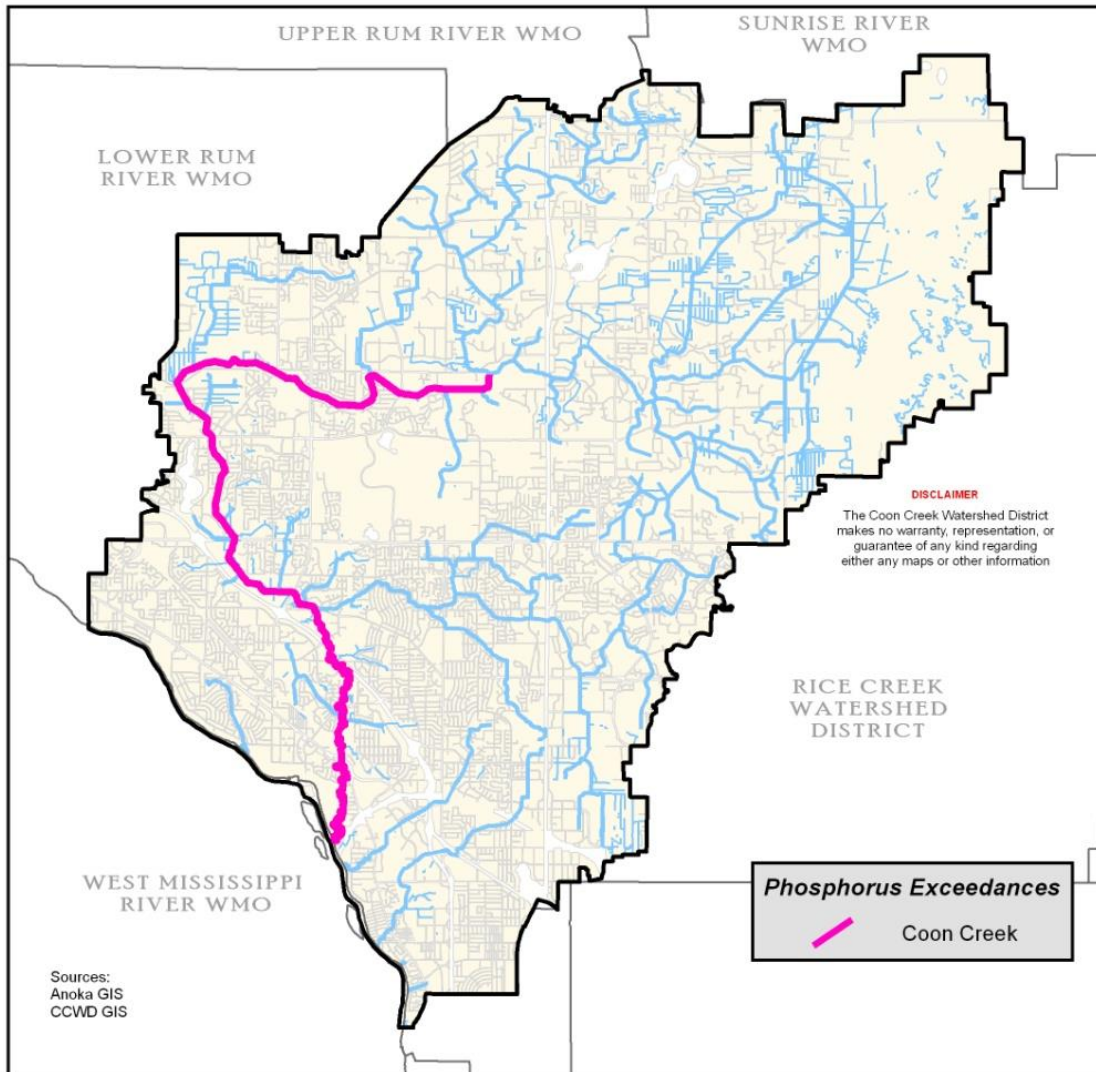


Total Phosphorus Total phosphorus (TP) in Coon Creek was consistently low during baseflow conditions, but more than doubled during storms.

During storms TP is higher, and sometimes much higher. Median TP during storms was 2.5 times the median for baseflow at each site. Storms

also had much greater variability. The standard deviation for storm readings were 99 mg/L at Shadowbrook, 102 at Lions Park, and 159 at Vale Street. By contrast, the standard deviations during baseflow were 22, 34, and 33 mg/L, respectively. Variation in the timing, magnitude, and intensity of the storm is likely responsible for the greater variability in TP during storms compared to baseflow.

| Site | County Median | Coon Ck | Sand Ck | Pleasure Ck |
|--------------------|---------------|---------|---------|-------------|
| St Standard | 130 | | | |
| Shadowbrook | 126 | 174 | | |
| Lions Pk | | 194 | | |
| Vail St | | 192 | | |
| Xeon St | | | 94 | |
| Mississippi R | | | | 69 |



Bacteria

E. coli, a bacteria found in the feces of warm blooded animals, is unacceptably high in Pleasure Creek. E. coli is an easily testable indicator of all pathogens that are associated with fecal contamination. The Minnesota Pollution Control Agency sets E. coli standards for contact recreation (swimming, etc).

The creek has not yet been listed as “impaired” by the State because of confusion about whether the analytical methods used for testing were state-approved, but a water quality problem exists regardless.

Sources of the bacteria likely include:

1. Headwater storm water ponds
2. Storm water runoff from throughout the watershed.

There is some evidence that E. coli is not associated with nutrient-rich sources such as wastewater. Phosphorus in Pleasure Creek is low, especially for an urban stream (see 2009 ACD report). If wastewater or other nutrient rich sources were significant, phosphorus would be higher.



Volume/Rate

The District has begun to see a change in both the volume and rate of stormwater. While considerable work remains to be done, the District's drainage sensitive use, ponding and infiltration policies as well as the District's retrofit efforts remain the building blocks for holding the line and beginning to decrease volume.

Strategies to Achieve the Goal

The Coon Creek Watershed District will pursue five strategies and related actions to pursue hydrologic balance:

1. Monitoring
2. Operations and Maintenance
3. Planning
4. Public and Governmental Relations
5. Regulation: Regulation of land disturbing activities and enforcement of the district rules

| | |
|--|--|
| Development Regulation | <p>Promote and apply approved best management practices to all management activities as the method for control of non-point sources of water pollution, and for compliance with established state or national water quality goals.</p> <p>Include a water quality evaluation for all environmental analyses.</p> <p>Identify the water quality implications of proposed and alternative land management practices.</p> |
| Environmental Review | Review and comment on plans, permits, and studies issued by Federal, state and local units of government. |
| Operations and Maintenance | <p>To solve local streambank erosion problems in a manner that minimizes the effect on stream behavior and impacts on affected property owners.</p> <p>To construct, modify or retrofit stormwater treatment devices to increase their ability to treat for water quality.</p> <p>To investigate, evaluate and resolve or mediate issues.</p> |
| Planning, Programming and Budgeting | <p>Include a water quality evaluation for all environmental analyses.</p> <p>Establish objectives for managing the quality of the water resource in land and resource management plans.</p> |
| Public & Governmental Relations | Consider water quality needs of local, regional, and national public interests both on and off the Watershed District in determining appropriate water quality management activities. |
| Erosion and Sediment Control | To support the Regulatory and Operations and Maintenance programs with appropriate communications and educational materials. |
| Phosphorus and sediment pollution prevention | To support the Regulatory and Operations and Maintenance programs with appropriate communications and educational materials. |
| Phosphorus and sediment pollution prevention at construction sites | To support the Regulatory Program with appropriate communications and educational materials. |
| Stormwater pollution prevention | To provide customized information & education materials on Stormwater Pollution Prevention BMPs. |
| Water Conservation, | To provide customized information & education materials on water conservation and Pollution Prevention BMPs. |

Pollution
Prevention
Water Conservation

To provide customized information & education materials on water conservation BMPs.

**Research and
Monitoring**

Monitor all water provided for public domestic purposes and primary contact water sports, to ensure public health and safety. Design monitoring systems consistent with applicable State or Federal regulations for the specific water use.

Use the Minnesota Pollution Control Agency's (MPCA) STORET/Equis system as the primary depository for stream and lake water quality data. Ensure that all water quality data placed on the STORET/Equis system is:

1. Collected and analyzed by procedures recognized as standard methods or
2. Entered with descriptive qualifiers which specify the method of collection or analysis.

To monitor water quality and condition of lakes within the watershed. The CCWD will review and begin the process to monitor for Chloride on the lakes within the District.

To monitor water quality at the outlet to the watershed for signs of potential impairment.

For potable water, all water quality testing laboratories owned or used by the Watershed District shall be certified by either the State and/or EPA.

Specify the accuracy, precision and threshold limits of detection for each parameter or test conducted by water quality analytical laboratories used by the Watershed District.

Conduct water quality data collection activities within the guidelines of an inventory or monitoring plan.

Evaluate the data collection activities of other agencies before additional water quality inventories or monitoring efforts are undertaken.

Provide for Beneficial Uses of Water and Related Resources

- Goal 4** **To efficiently serve many uses including the safety and enjoyment of the watershed's residents.**
- Objectives**
- 4.1 To establish uniform local policies and controls for surface and groundwater management.**
 - 4.2 To secure the other benefits associated with the proper management of surface and ground water.**
 - 4.3 To use sound scientific principles for the protection of public health and welfare and the provident use of natural resources.**

Introduction

Conversion of crop land, grazing land and forest land to other uses can fragment landscapes and diminish their values for agriculture and forest uses, water management, wildlife habitat and aesthetic purposes.

The rate of development and land conversion accelerated from 532 acres per year between 1990 and 2000 to 840 acres per year between 2000 and 2006 to approximately 465 acres per year between 2006 and 2010.

As the watershed shifted from predominantly agriculture towards a mixed urban/suburban landscape, land values escalated, and management of water and related resources became more challenging.

A healthy watershed begins with a healthy landscape and soils. Landscape quality is the capacity of the landscape to sustain plant and animal productivity, maintain or enhance water quality and support human health and habitation. A high quality landscape is the foundation of productive cropland, forest land and development.

The dynamic nature of water and related land resources means that landscape quality is affected by management. Controlling erosion, minimizing soil disturbance, compaction or oxidation, and managing plants and soil organic matter are all essential to maximizing watershed quality and function for agriculture, development and other beneficial uses.

Current Situation

Urban development within the watershed is continuing albeit at a much slower pace. More isolated large-lot housing development is project to occur beyond the MUSA. If recent development patterns continue, there will be larger homes, on larger lots, farther from the older fully developed portions of the watershed.

The 2000 – 2010 Comprehensive Plan established uniform local policies and controls by requiring that the withdrawal of ground water and the location and place of discharge thereof conform to the standards of the Minnesota Pollution Control Agency, the Department of Natural Resources, and the Department of Health code (1.13, Subd. 1).

Uniform policies and controls are also achieved through the Wetland Conservation Act.

Because of many water resource issues such as flooding across municipal boundaries, cities have looked to or rely upon the Watershed District for development plan reviews, particularly when public ditches and wetlands are involved.

Changes in land use typically result in increases in the volume of runoff and shortens the period in which runoff occurs. In low gradient systems, such as Coon Creek, this can contribute to flooding both upstream and downstream from the land use change by exceeding the capacity of the original water conveyance system to handle the additional water.

At present the District approaches the issue of compatibility on a performance basis by seeking to ensure that changes in runoff rates and volumes do not interfere with established land uses by either exceeding the capacity of the channel to convey water or the design capacity of the ditch to remove soil water to ensure agricultural drainage.

Strategies to Achieve the Goal

Development Regulation

Apply scenery management principles in all Watershed District activities where appropriate and practicable.

To provide for development and management of sites consistent with the available natural resources to provide a safe, healthful, aesthetic atmosphere.

Encourage water recreation opportunities that meet the public needs in ways that are appropriate to the Watershed District role and are within the capabilities of the resource base.

Manage riparian areas under the principles of multiple-use, while emphasizing protection and improvement of soil, water, and vegetation, particularly because of their effects upon aquatic and wildlife resources.

Give preferential consideration to riparian dependent resources when conflicts among land use activities occur.

Determine the effects of fluctuations in water levels, quantities, and timing of flow in relation to habitat of fish, waterfowl, mammals, and aquatic organisms, and to maintenance of phreatophytes and other riparian vegetation.

Do not rely on management practices to provide pure drinking water. Use only proven techniques in management prescriptions for municipal supply watersheds.

Include use restriction clauses in all permits, or other documents authorizing use within the watershed.

Manage the reclamation of lands disturbed by mineral and associated activities in order to:

1. Minimize the environmental impacts resulting from mining.
2. Ensure that disturbed lands are returned to a use that is consistent with long-term water and related resource management

Conduct a study of the surficial groundwater within the watershed that addresses aquifer productivity, aquifer drawdown on the annual and seasonal basis, losses due to evapotranspiration and their relation to the water balance of the area.

Reclamation shall be an integral part of Plans of Operation that propose surface disturbance.

All lands disturbed by mineral activities shall be reclaimed to a condition that is consistent with water and resource management plans, including applicable State air and water quality requirements.

All reclamation requirements included in a Plan of Operations shall include measurable performance standards. Reclamation requirements shall be those reasonable, practicable, and necessary to attain standards.

Reclamation shall be undertaken in a timely fashion and occur sequentially with on-going mineral activities.

Reclamation bonds, sureties, or other financial guarantees shall ordinarily

be required for all mineral activities that require a Plan of Operations; dollar amounts of such guarantees shall be sufficient enough to cover the full cost of reclamation.

To the extent practicable, reclaimed land shall be free of long-term maintenance requirements.

Operations and Maintenance Apply scenery management principles in all Watershed District activities where appropriate and practicable.

Manage riparian areas under the principles of multiple-use, while emphasizing protection and improvement of soil, water, and vegetation, particularly because of their effects upon aquatic and wildlife resources.

Give preferential consideration to riparian dependent resources when conflicts among land use activities occur.

Drinking Water Do not rely on management practices to provide pure drinking water. Use only proven techniques in management prescriptions for municipal supply watersheds.

Planning, Programming and Budgeting Inventory, evaluate, manage, and, where necessary, restore scenery as a fully integrated part of the ecosystems of the Watershed District and of the land and resource management and planning process.

Aesthetics Employ a systematic, interdisciplinary approach to scenery management to ensure the integrated use of the natural and social sciences and environmental design.

Apply scenery management principles in all Watershed District activities where appropriate and practicable.

Recreation To ensure safe water quality for designated primary contact recreation areas.

Develop prescriptions on a case-by-case basis to ensure desired multiple-use outputs while recognizing domestic water supply needs.

Drinking Water Manage Watershed District water resources for multiple-uses by balancing present and future resource use with domestic water supply needs.

Identify minor sub-watersheds providing water within the drinking water supply Management Area as defined in the City's well-head protection plan or 1 year travel time of municipal and other public wells and water supplies during land management planning.

Develop prescriptions on a case-by-case basis to ensure desired multiple-use outputs while recognizing domestic water supply needs.

Do not rely on management practices to provide pure drinking water. Use only proven techniques in management prescriptions for municipal supply watersheds.

Determine increased costs of any unusually restrictive practices required to meet state-approved Best Management Practices for protection of drinking water; identify any revenue losses from applying such restrictions.

Support the development of the County Geologic Atlas and encourage digitizing the data associated with the Atlas.

Show municipal water supply areas as 'special management areas' in the Comprehensive plan when management intensity and timing differs from other areas.

Mitigate the impacts of groundwater overdraft, including subsidence and increased power costs for pumping water from greater depths through a conservation pricing strategy.

Estimate Groundwater Storage and Supply within the Watershed.

**Public &
Governmental
Relations**

Provide for recreation-related opportunities for responsible use of water and related resources within the District.

Provide for opportunities for a variety of recreational pursuits, with emphasis on activities that harmonize with water and related natural environment and are consistent with the applicable land uses.

Mitigate adverse impacts of recreational uses on water and related resources through education, and on-the-ground management, including rule enforcement.

Inform the public of use restrictions that may be imposed on municipal water supply and reasons for restrictions.

Designate restricted municipal water supply areas on maps prepared for public use.

Encourage the use of renewable water supplies instead of continued over-reliance on finite groundwater supplies.

Decrease the waste of groundwater through sensor based drip or trickle

irrigation technology plus mulching.

Support Proper Abandonment of Unused Wells.

Preservation and Enhancement of Wildlife

Goal 5 To preserve and enhance wildlife

Objectives

Habitat

5.1 Improve and manage habitat to benefit at-risk and declining species and discourage invasive species.

5.2 To maintain and improve wildlife and fish habitat.

5.3 To cooperate with other agencies, conservation organizations, concerned landowners, and individuals in all appropriate aspects of wildlife, fish, and threatened, endangered, and sensitive species habitat management.

Riparian Lands

5.4 To protect, manage, and improve riparian areas while implementing land and resource management activities.

5.5 To manage riparian areas in the context of the environment in which they are located, recognizing their unique values.

Animal Damage

5.6 To protect Watershed District resources from animal damage.

5.7 To protect activities taking place within the watershed and to reduce threats to human health and safety from animal damage.

Introduction

Healthy plant and animal communities provide economic and aesthetic benefits and are essential to the quality of life within the watershed. Sustaining plant and animal communities cannot be achieved by focusing on individual species or isolated areas. Rather a web of interacting relationships between plant and animal species within a given ecosystem and their relationship to the physical features and processes of their environment must be sustained to maintain the health and vigor of the system.

Current Situation

Permanent Healthy vigorous plant communities in our streams lakes and wetlands

Vegetation Resources help protect soil and substrate quality, prevent erosion, and provide sustainable cover and forage for wildlife, improve water quality, provide diverse habitat for wildlife.

Active science-based management of vegetation is essential to maintaining healthy, diverse and resilient ecosystems. Preventing degradation requires careful planning and management, takes in to consideration all resource issues for a site, and is more cost effective than correcting a problem after it has developed, especially during droughty periods. Healthy and diverse plant communities are able to withstand drought and invasive species. Well managed lakes and wetlands are less susceptible to pests as well.

Invasive Species Invasive species are a major concern in lakes, streams and wetlands. An “invasive species” is one that is introduced into an ecosystem where it is not native. Invasive plants may crowd out native plants, make areas more susceptible to catastrophic fire, degrade habitat quality for native fish and wildlife, and may harm economic, environmental or human health. For example, Eurasian water milfoil has achieved nuisance levels making recreational navigation in some lakes difficult to impossible and Reed canary grass has affected local hydrology, altered soils and affected native plants and animals.

Fish and Wildlife Habitat Privately owned and other non-public lands provide habitat for much of the District’s wildlife. When people use land, they change the quantity and quality of the habitat to land provides to the wildlife and, therefore, the number and types of wildlife that can live there. The use and condition of the land affects aquatic habitat as well.

Fragmentation and loss of habitat resulting from urban and suburban development and from intensive agricultural uses have contributed to declines in populations of many terrestrial and aquatic species. Invasive species are second only to habitat destruction as the cause of native species decline.

Protecting specific ecosystems and landscapes – including wetlands, floodplains and certain riparian habitats- can help support wildlife and aquatic species and provide benefits in the form of recreation, hunting and enjoyment. Improving habitat for declining and at-risk species is key to preventing further declines and ensuring the continued survival of those species and the overall health of the ecosystems of which they are part.

Wetlands Wetlands provide wildlife habitat, can protect and improve water quality, attenuate water flows associated with flooding and recharge or discharge groundwater. Land use changes and drainage led to the alteration or loss of approximately 40% of wetlands. Increased knowledge of wetland

functions influenced State policy and moved Minnesota toward protecting wetlands.

In 1991, the State's focus was on "no net loss" of wetland acreage with the passage of the Wetland Conservation Act. However, modeling conducted by the MDNR and the Metropolitan Council and a separate analysis done by District staff for this plan indicate that with the use and resultant fall of surficial ground water levels surface water resources may be at great risk of drainage or loss due to removal of hydrology.

Strategies to Achieve the Goals Development Regulation

Evaluate the cumulative effects of proposed management activities on habitat capability for management indicators.

Mitigate the negative effects of other resource projects upon wildlife and fish habitat.

Conduct habitat examinations when proposed resource activities or uses would affect fish or wildlife habitat objectives.

Manage riparian areas in relation to various legal mandates, including, but not limited to, those associated with floodplains, wetlands, water quality, dredged and fill material, endangered species, and cultural resources.

Manage riparian areas under the principles of multiple-use and sustained-yield, while emphasizing protection and improvement of soil, water, and vegetation, particularly because of their effects upon aquatic and wildlife resources. Give preferential consideration to riparian dependent resources when conflicts among land use activities occur.

Delineate and evaluate riparian areas prior to implementing any project activity. Determine geographic boundaries of riparian areas by onsite characteristics of water, soil, and vegetation.

Avoid all adverse impacts on threatened and endangered species and their habitats, except when it is possible to compensate adverse effects totally through alternatives identified in a biological opinion rendered by the Department of Natural Resources.

When an exemption has been granted under the Endangered species act; or when the MDNR recognizes an incidental taking. Avoid adverse impacts on species proposed for listing during the conference period and while their E&T status is being determined.

Initiate consultation or conference with the MDNR Natural Heritage program when the Watershed District determines that proposed activities may have an effect on threatened or endangered species; are likely to jeopardize the continued existence of a proposed species; or result in the destruction or adverse modification of critical or proposed critical habitat.

Identify and prescribe measures to prevent adverse modification or destruction of critical habitat and other habitats essential for the conservation of endangered, threatened, and proposed species. Protect individual organisms or populations from harm or harassment as appropriate.

Analyze, if impacts cannot be avoided, the significance of potential adverse effects on the population or its habitat within the area of concern and on the species as a whole.

Operations and Maintenance

Specify in watershed plans and project plans the standards, guidelines, and prescriptions needed to meet identified habitat goals and objectives for wildlife and fish, including endangered, threatened, and sensitive animal and plant species.

Carry out direct habitat improvement projects to achieve wildlife and fisheries objectives. This also may include conservation drainage, when such design approaches facilitate the hydrologic performance for that segment of ditch, provided the cost can be adequately addressed.

Mitigate the negative effects of other resource projects upon wildlife and fish habitat. This may include wetland restoration where there is a reasonable chance of the restoration succeeding and able to be sustained.

Include opportunities to accomplish fish and wildlife habitat objectives in all resource project proposals. This also may include conservation drainage, when such design approaches facilitate the hydrologic performance for that segment of ditch, provided the cost can be adequately addressed.

Delineate and evaluate riparian areas prior to implementing any project activity. Determine geographic boundaries of riparian areas by onsite characteristics of water, soil, and vegetation.

Generally rely upon a contracted expert to provide the expertise and conduct nuisance control within the Watershed District to determine property losses, and to determine methodology for animal damage management.

Use an integrated approach to the prevention of animal damage and management of animal damage control programs.

Watershed District animal damage management activities are related to the management of watershed resources. Examples of Watershed District initiated activities include, but are not limited to, removing beavers that are damaging roads.

Evaluate animal damage management needs and conduct nuisance control in cooperation with the state agencies, and landowners.

Develop and update animal damage management work plans in cooperation with interested publics.

Control damage caused by game animals and furbearers through hunting or trapping, where practicable, in cooperation and consultation with the State fish and wildlife agencies, where appropriate.

Control damage caused by nongame species within the Watershed District in close cooperation with the State fish and wildlife agencies, or other involved state or federal agencies.

Initiate consultation or conference with the MDNR Natural Heritage program when the Watershed District determines that proposed activities may have an effect on threatened or endangered species; are likely to jeopardize the continued existence of a proposed species; or result in the destruction or adverse modification of critical or proposed critical habitat.

Determine whether proposed control measures conducted by the Watershed District are likely to have an effect on, threatened, endangered, or sensitive species.

Ensuring appropriate environmental analysis requirements are met for proposed non-nuisance control activities conducted by the Watershed District and ensuring consistency with Watershed plan direction.

States or other responsible agencies have the authority to control undesirable fish and aquatic animals in Watershed District waters. The Watershed District is responsible for coordinating with the responsible agencies to develop a work plan to ensure control activities are consistent with direction provided in the Comprehensive Plan. Control activities conducted by the Watershed District must meet appropriate environmental analysis requirements and be consistent with Watershed plan direction.

Develop and implement management practices to ensure that species do not become threatened or endangered because of Watershed District

actions.

Develop and implement management objectives for populations and/or habitat of sensitive species.

Place top priority on conservation and recovery of endangered, threatened, and proposed species and their habitats through relevant Watershed District, State and Private land management, and Research and Development activities and programs.

Establish, through the comprehensive planning process, objectives for habitat management and/or recovery of populations, in cooperation with the Minnesota DNR and Anoka County Parks.

Review, through the Natural Heritage Inventory, actions and programs authorized, funded, or carried out by the Watershed District to determine their potential for effect on threatened and endangered species and species proposed for listing.

**Planning,
Programming and
Budgeting**

Recognize the Minnesota Department of Natural Resources Division of fish and wildlife as the public agency with management responsibilities for wildlife within the Coon Creek Watershed District and include them as partners in planning and implementation of activities that effect wildlife and fish.

Maintain processes for resolving habitat management issues of the Watershed District and its cooperators.

Integrate habitat planning into land management and project plans to meet Watershed, and local objectives for wildlife and fish, including threatened, and endangered and sensitive animal and plant species.

Provide a sound base of information to support management decision-making affecting wildlife and fish, including endangered, threatened, and sensitive animal and plant species, and their habitats.

Identify opportunities and management strategies to maintain and improve habitats throughout the Watershed District. This may include wetland restoration where there is a reasonable chance of the restoration succeeding and able to be sustained.

Coordinate watershed planning for wildlife and fish with State comprehensive planning.

Achieve District-wide consistency in how habitats of wildlife, fish, sensitive, and threatened and endangered species are evaluated and considered in land and resource management planning.

Specify in watershed plans and project plans the standards, guidelines, and prescriptions needed to meet identified habitat goals and objectives for wildlife and fish, including endangered, threatened, and sensitive animal and plant species.

Coordinate with other uses and activities to accomplish habitat management objectives and to reduce detrimental effects on wildlife and fisheries.

Cooperate with local, States and Federal agencies, and private groups to plan and accomplish habitat management.

Include opportunities to accomplish fish and wildlife habitat objectives in all resource project proposals.

Give attention to land along all stream channels capable of supporting riparian vegetation.

Give special attention to land and vegetation for approximately 100 feet from the edges of all perennial streams, lakes, and other bodies of water. This distance shall correspond to at least the recognizable area dominated by the riparian vegetation. Give special attention to adjacent terrestrial areas to ensure adequate protection for the riparian dependent resources.

Consider a full range of methods, including physical barriers, repellents, habitat manipulation, biological controls, silvicultural methods (for example, fertilizing to improve soil fertility), pesticides, and hunting and trapping. Use licensed hunting, fishing, and trapping as a control technique where practicable.

**Public &
Governmental
Relations**

Recognize the role of the State to manage wildlife and fish populations within their jurisdictions.

Participate with and involve other agencies, organizations, and individuals in fostering support for natural resources management within the Watershed District.

Coordinate with other uses and activities to accomplish habitat management objectives and to reduce detrimental effects on wildlife and fisheries.

Cooperate with local, States and Federal agencies, and private groups to

plan and accomplish habitat management.

Coordinate with the City and Anoka County to improve effectiveness of control program activities conducted within the Watershed District.

Inform the District Administrator and Board of Managers about animal damage management requests, management activities, and results on a timely basis.

Provide the Watershed District with technical information on recommended animal damage management tools and techniques.

Meet with responsible state agencies to cooperate where proposed nuisance control is needed to ensure coordination of Watershed District resources or activities within the Watershed District.

**Research and
Monitoring**

Use management indicators to address issues, concerns and opportunities for plants, wildlife, fish, and sensitive species habitats through all planning levels.

Monitor management indicators to evaluate compliance of management activities with plan direction, effectiveness of prescribed management, and validity of information used in habitat evaluation and planning.

Issue Goals

Introduction

Address water resource issues that are growing in importance as a result of current economic and demographic trends and in response to more recent legislative actions and mandates.

They may also address potentially serious resource conditions that may require immediate attention because the condition presents a serious problem on the current or future provision of a beneficial use or because there is no known management strategy or technology for dealing with the condition or situation

Issue goals describe areas in which we anticipate the need for greatly expanded activity in the future. Issues and concerns are initially identified or described in Appendix B or C but discussed in detail here. Those areas of concern are:

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| Declining Regional Groundwater and the Effect on Groundwater Dependent Resources | 12 | 87 |

Issue Discussion

Issue Statement

Describes the nature and impacts of the issue being discussed. The purpose of the Issue Statement is not to provide an exhaustive review of the literature and effects pertaining to the issue but to zero in on the impact and importance to the Coon Creek Watershed.

Goals and Objectives

Are intended to provide the direction and some specific outcomes to address the issue as described.

Introduction

Provides additional background on the issue that pertains to successfully addressing the issue.

Current Situation

Provides a description of current District policies and actions that directly or indirectly pertain to the issue

Strategies and Actions

List more specific actions proposed by the District to address the issue

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Aquatic Invasive Species

Issue

There are many introduced species that can wreak havoc on the District's environment and economy. Those species that cause harm and spread quickly from their point of introduction are often called "invasive." For these species, a single individual may produce thousands of seeds, masses of larvae or reproduce from nothing bigger than bits of stems, roots or leaves. Those that live in or near the water – aquatic invasive species – can be easily dispersed to distant water bodies or new ecosystems by currents, tides, river flows, streams, floods and other water flows (Appendix B, page 76, Appendix C, page 147).

Coon Creek currently faces a variety of significant and lasting impacts from aquatic invaders. In general, these include:

1. Reduced diversity and abundance of native plants and animals (due to competition, predation, parasitism, genetic dilution, introduction of pathogens, smothering and loss of habitat to invasive species).
2. Degradation of wildlife habitat.
3. Stresses on rare, threatened, and endangered species.
4. Alteration of the native food web and declines in productivity.
5. Changes in biogeochemical cycles (including nutrient cycling and energy flow).
6. Losses in fisheries production.
7. Impairment of recreational uses such as swimming, boating, diving and fishing.
8. Impairment of agricultural infrastructure such as irrigation canals.
9. Degradation of water quality.
10. Threats to public health and safety (via parasites and disease).
11. Diminished property values.
12. Erosion and destabilization of shorelines, banks and levees.
13. Increased costs to business, agriculture, landowners and government of invasive pest control, treatment and clean up.

Ecological Impacts

In terms of ecological impacts, the introduction of invasive species is thought to be second only to habitat loss in contributing to declining native biodiversity throughout the United States. Nationwide, non-native species have contributed to 68% of the fish extinctions in the past 100 years and the decline of 70% of the fish species listed under the Endangered Species Act (Wilcove et al. 1998).

Economic Impacts

Most of the environmental impacts described above have associated economic costs as managers invest time and money trying to minimize AIS impacts on native species and habitats. Other economic losses are incurred when AIS invasions hamper or jeopardize human activities.

On a national level, invasions are costing American taxpayers billions of dollars every year in environmental degradation, lost agricultural productivity, expensive prevention and eradication efforts and increased

health problems. One nationwide estimate suggests that annual costs in environmental damage and losses, arising from the 50,000 invasive species now in the United States, exceed \$120 billion (Pimentel et al. 2005).

Goals

6.1 To minimize the harmful ecological, economic and human health impacts of aquatic invasive species.

6.2 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.

6.3 Control the spread of AIS and minimize their impacts on native habitats and species.

Objectives

1. Implement projects identified in the District's capital improvement plan to manage aquatic invasive species in lakes, streams and wetlands, where these species present a water quality problem or that can lead to or be a cause of water quality degradation.
2. Work to limit the spread of aquatic invasive species to un-impacted lakes, stream segments and wetlands through Education and Involvement program and Research and Monitoring program.
3. Improve coordination and collaboration among the people, agencies, and activities involved with AIS.
4. Minimize and prevent the introduction and spread of AIS into and throughout the waters of the Coon Creek Watershed District.
5. Develop and maintain programs that ensure the early detection of new AIS and the monitoring of existing AIS.
6. Establish and manage systems for rapid response and eradication.
7. Increase education and outreach efforts to ensure awareness of AIS threats and management priorities throughout the Coon Creek Watershed District.
8. Increase research on the baseline biology of AIS, the ecological and economic impacts of invasions and control options to improve management.
- 9.
10. Ensure state laws and regulations promote the prevention and management of AIS introductions.

Introduction

Invasive species arrived in Minnesota via vectors – the means or agents that transport species from one place to the next. Vectors, also referred to as pathways, include ships, fishing vessels, recreational boats and gear, sea planes, diving gear, bait, aquariums, pets and water gardens.

Shoreline restoration or construction projects and water-based scientific research or monitoring can also inadvertently move organisms from one place to another. Invasive species cling to boat bottoms and recreational or research gear, construction equipment, wildlife, and floating debris and docks.

Once a highly invasive species arrives, preventing its rapid spread can be difficult if not impossible. Plants can produce thousands of seeds, which may be carried by wind, water, animals or human activities to distant water bodies. Some aquatic plants can reproduce vegetatively with small bits of leaves, stems or roots resulting in new plants. Water flows and currents may also deliver these AIS to new ecosystems.

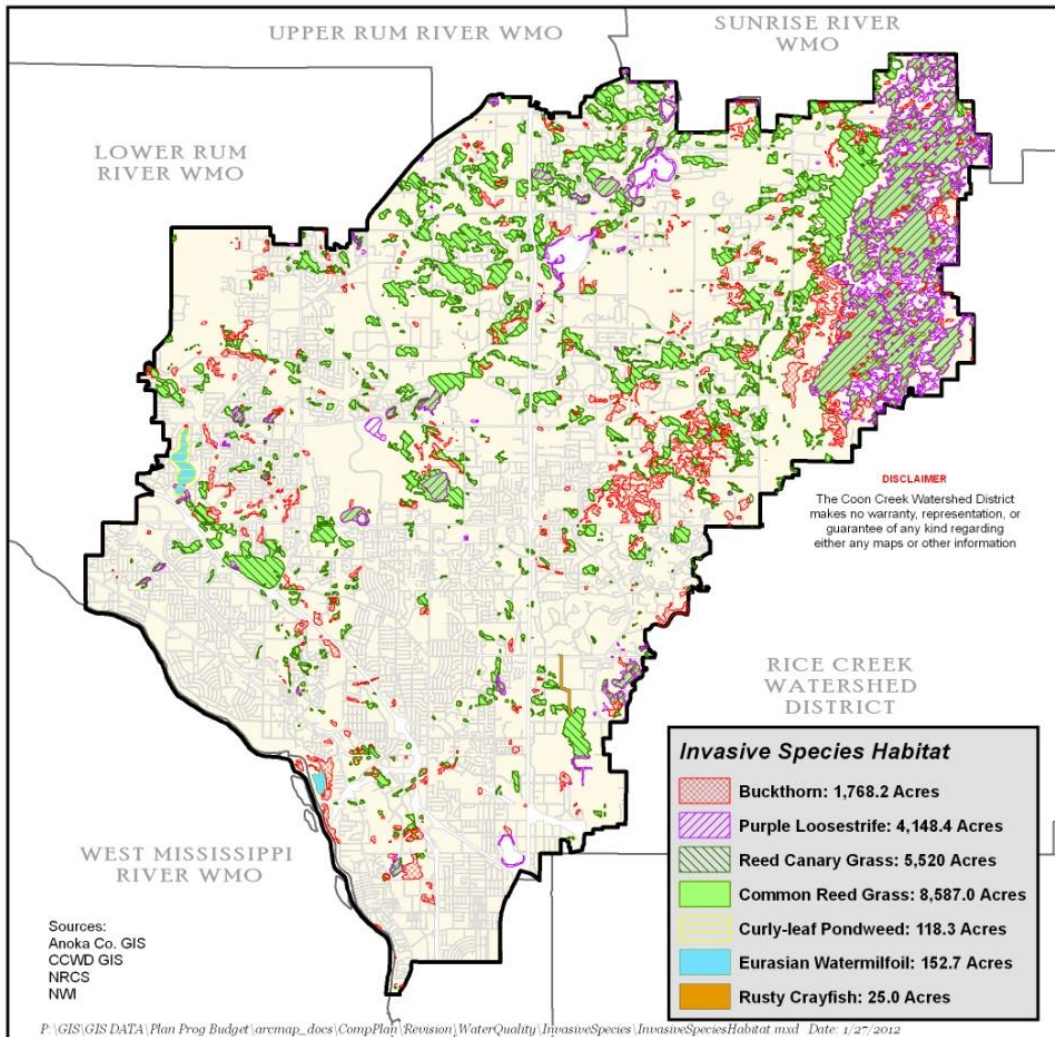
In the past, efforts to control such invasions have focused on managing individual problem species. More recently, however, the concept of focusing on vectors, rather than species, has begun to gain support as a more effective approach for addressing aquatic invaders.

On a general level, invasive species management involves five basic strategies, often in combination:

1. Prevention
2. Early Detection & Monitoring
3. Rapid Response & Eradication
4. Long-Term Control & Management
5. Education & Outreach

Current Situation

At present known occurrences of Invasive species within the Coon Creek Watershed District are as follows:



Current efforts to manage aquatic invasive species within the Watershed District have involved chemicals. Mechanical removal, either by hand with a scythe or with the help of "saw boats" which shred plants with rotating blades has been discussed. Recently, management approaches have changed and become more diverse to include everything from hyperspectral remote sensing, ozone treatment and K-12 education curricula to herbicides, electro-fishing, Internet sales precautions, PowerPoint presentations and equipment inspections.

Most long-established programs – both state and federal – are targeted at managing terrestrial agricultural pests, which can spread easily by wind, fog and through the air. Many of these programs are species specific.

Efforts to manage invaders living in and around water present a different set of challenges for containment and control and focus on preventing vectors from bringing in new species and on developing early detection networks.

Basic Strategies

On a general level, invasive species management involves five basic strategies, often in combination:

1. Prevention
2. Early Detection & Monitoring
3. Rapid Response & Eradication
4. Long-Term Control & Management
5. Education & Outreach

In choosing management approaches within this framework, the nature of the invader itself comes into play.

Some invaders such as the Asian carp, specifically bighead carp and silver carp, are increasing their range up the Mississippi river and could invade inland waters such as CCWD lakes and streams. While they may not have yet arrived in Coon Creek, a management response focused on monitoring, education and early detection would be the most appropriate.

Other invaders (such as curly leaf pond weed (*Potamogeton crispus*) and Eurasian watermilfoil (*Myriophyllum spicatum*)) are so well-established, that eradication may be infeasible and ongoing chemical and/or mechanical removal is selected to minimize the harmful effects of the infestations.

Still others such as Zebra mussels (*Dreissena polymorpha*) may present no management options whatsoever since there is no environmentally acceptable way to treat or remove widespread benthic invertebrates in open waters. Whatever the species, the possible human management responses generally narrow as any invasion progresses (Lodge et al. 2006).

Strategies to Achieve the Goal

Regulation & Prevention

Minimize and prevent the introduction and spread of AIS into and throughout the waters of the Coon Creek Watershed.

Develop a watercraft inspection program.

Develop guidelines for water access inspections.

Operations & Maintenance

Establish and manage a rapid response and eradication program.

Reduce unauthorized stocking of non-native species.

Develop and implement a rapid response plan for detecting and eradicating AIS.

Develop species and/or location-specific rapid response plans.

Review effectiveness of eradication programs.

Prioritize control efforts for existing and new organisms of concern.

Continue existing control programs.

Planning, Programming and Budgeting

Develop species and/or location-specific control plans.

Develop or update Lake or resource specific management plans.

Ensure that state laws and regulations promote the prevention and management of AIS introductions.

Annually update the list of AIS as high risk for introduction.

Identify lead agencies for particular AIS, water bodies and invasion vector.

Every 5 years assess the effectiveness and gaps in State AIS programs and provide to elected officials and state agencies.

Establish stable long-term funding to help implement this plan.

Plan for and provide funding for AIS rapid response actions.

Encourage a statewide approach to early detection.

Explore permanent funding for rapid response.

Standardize criteria for identifying priority species for control & eradication.

Use volunteer monitors to conduct AIS inspections.

Prioritize ecologically sensitive areas at risk for AIS impacts.

Develop GIS maps showing coincidence of AIS and critical ecosystems.

**Public &
Governmental
Relations**

Improve coordination and collaboration among people, agencies, lake associations and activities involved with AIS.

Use Citizen and Technical Advisory Committees for consultation process on actions concerning AIS.

Increase education and outreach efforts to ensure awareness of the threats and management priorities throughout the Coon Creek Watershed.

Invite community groups and NGOs for AIS planning and education.

Identify and apply for state and national grant funding.

Rank AIS vector importance.

Develop a recreational boating outreach and management program.

Develop a recreational fishing outreach and management program.

Develop guideline for:

1. Disposal of AIS at boat landings and fishing piers
2. Cleaning out fishing gear and equipment
3. Disposal of live bait

Develop a bait outreach and management program.

Work with industry to develop equipment documentation guidelines.

Develop a construction outreach and management program.

Encourage use of native species.

Develop a restoration outreach and management program.

Create and train a citizen monitoring network for AIS.

Engage professional & recreational divers in early detection work.

Evaluate and coordinate existing systems for reporting AIS sightings.

Provide technical assistance to Cities, Lake Associations and Homeowner Associations.

Encourage Boat washing stations and disposal facilities at infested waters.

Facilitate installation of AIS warning and information signs in infested areas.

Use volunteer monitors to conduct AIS inspections.

Inventory education and outreach efforts and develop a District AIS communication strategy.

Partner with ongoing outreach programs.

Develop posters, brochures and articles for industry sectors and user groups.

Present AIS information at public gatherings.

Partner with stakeholders and interest groups to broaden education efforts.

Educate shoreline property owners about AIS.

Brief decision makers and legislators on AIS management progress.

Increase local TV, radio and newspaper media coverage.

Research and Monitoring

Develop and maintain a monitoring program that ensures early detection of new AIS and the monitoring of existing AIS.

Support increased research on the baseline biology of AIS, the ecological and economic impacts of invasions, and control options to improve management.

Quantify and assess recreational boating as an AIS vector.

Quantify and assess recreational fishing as an AIS vector.

Quantify and assess bait as an AIS vector.

Quantify and assess research, resource management and educational activities as AIS vectors.

Quantify and assess construction activities as an AIS vector.

Quantify and assess restoration activities as an AIS vector.

Assess current and long-term monitoring of the District's waters for early detection opportunities.

Monitor locations with a high invasion rate.

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Changes in Precipitation

Issue

Weather extremes pose a challenge to water and related land management within Coon Creek (Appendix B, pages 5 - 10; Appendix C). Recent episodic events such as drought, high intensity mini-storms, and weather variations can damage soil, water, and lead to a general scarcity of water.

In addition, the pending publication of Atlas 14, Volume 8 appears to clarify through a larger more representative sample of precipitation that the larger less frequent storm events may be as much as 30% larger than originally thought and planned for when sizing ponds, pipes, culverts and other water management infrastructure and that 100 year floodplains may be significantly larger than the original floodplain studies conducted in the 1970's had estimated.

From a local water management perspective there are four critical impacts regarding precipitation and potential climate change:

1. How increasing hydrologic variability may affect water supply and demand and stormwater collection and treatment.
2. How changes in climatic patterns potentially may have large impacts on the watershed in the coming century.
3. How increasing hydrologic variability (e.g., wetter wet seasons and drier dry seasons) will pose challenges for Coon Creek since topography limits the ability to create artificial areas to store excess precipitation for use during the anticipated extreme dry periods.
4. How changes in precipitation frequency and/or intensity will affect local floodplain management programs and the operation, maintenance and performance of the stormwater treatment systems and best management practices.

Goal

1. To gather and disseminate weather data and climatic information, and provide meteorological expertise in support of Watershed District water and related resource management decisions and weather related management activities.
2. To ensure validity, integrity, and utility of weather information provided for Watershed District use.

3. To provide precipitation frequency estimates for the Coon Creek Watershed

Objectives

1. Coordinate requests for meteorological assistance and related research by other units of a long-term and/or Watershed scope.
2. Use meteorological data in water and related resource management decisions.
3. Install, operate, and maintain Watershed District weather stations in accordance with this chapter and related policies unless those standards would conflict with the primary objective of a station operated for research purposes.
4. Locate year-round Watershed District weather stations to optimize the multidisciplinary needs for real-time weather and climatological data when consistent with the primary objective of the site.
5. Share costs for installing, operating, and maintaining weather stations between or among benefiting functions.
6. Operate weather stations precipitation gages in compliance with the Memorandum of Agreement and work plan between the Watershed District, Anoka Conservation District, Minnesota DNR and the University of Minnesota.

Introduction

The principle impacts of climate change would manifest themselves through changing precipitation patterns that may result in more severe drought or floods and varying stream flow patterns and lake levels.

The uncertainty caused by potential climate change relative to its impacts on water resources poses a daunting challenge for Flood control, water quality management and water resources such as lakes and wetlands and stormwater professionals responsible for managing water resources in the watershed. Therefore, water management authorities must anticipate, plan for and adapt to the potential effects of climate change.

Current Situation

The 2000-2010 Comprehensive Plan noted that a “key Factor and Major Issue Facing the Watershed was “Unusual or Prolonged Adverse Environmental conditions.

That plan noted that weather extremes have always posed a challenge to water and related land management and that episodic events such as

drought, high intensity mini-storms, and wildfire have created or set the stage for problems such as excessive erosion and sedimentation which can affect the public health, safety and welfare. The concern was that increases in the variability and intensity of weather extremes may be leading to an increased shifting of greater portions of the District's resources to emergency response and that if the trend continued it would be difficult to manage in an orderly and equitable manner.

Atlas 14

In January 2013 the District became aware of a project being conducted and released for technical review by the National Oceanic and Atmospheric Administration (NOAA) called Atlas 14. Atlas 14 contains precipitation frequency estimates with associated confidence limits for the United States and is accompanied by additional information such as temporal distributions and seasonality. The Atlas is divided into volumes based on geographic sections of the country.

The Atlas is intended to replace Technical Publication 40, and associated documents, as the official documentation of precipitation frequency estimates and associated information for the United States. It includes discussion of the development methodology and intermediate results. The Precipitation Frequency Data Server (PFDS) was developed and published in tandem with this Atlas to allow delivery of the results and supporting information in multiple forms via the Internet.

The Atlas provides precipitation frequency estimates for 5-minute through 60-day durations at average recurrence intervals of 1-year through 1,000-year. The estimates are based on the analysis of annual maximum series and then converted to partial duration series results.

The information in NOAA Atlas 14, once adopted, will supersede precipitation frequency estimates contained in Technical Paper No. 40 "Rainfall frequency atlas of the United States for durations from 30 minutes to 24 hours and return periods from 1 to 100 years" (Hershfield, 1961), NWS HYDRO-35 "Five- to 60-minute precipitation frequency for the eastern and central United States" (Frederick et al., 1977) and Technical Paper No. 49 "Two- to ten-day precipitation for return periods of 2 to 100 years in the contiguous United States" (Miller et al., 1964).

The results are provided at high spatial resolution and include confidence limits for the estimates. The Atlas includes temporal distributions designed for use with the precipitation frequency estimates and seasonal information for heavy precipitation. In addition, the potential effects of climate change were examined.

The new estimates are based on improvements in three primary areas:

1. Denser data networks with a greater period of record,
2. Application of regional frequency analysis using L-moments for selecting and parameterizing probability distributions and
3. New techniques for spatial interpolation and mapping.

The new techniques for spatial interpolation and mapping account for topography and have allowed significant improvements in areas of complex terrain.

| Event | Annual Probability | TP-40 (inches) | Atlas 14 (inches) | Percent Change |
|--------------|---------------------------|-----------------------|--------------------------|-----------------------|
| 2 Yr | 50% | 2.78 | 2.9 | 1.8% |
| 5 Yr | 20% | 3.5 | 3.8 | 8.5% |
| 10 Yr | 10% | 4.1 | 4.6 | 12.1% |
| 25 Yr | 4% | 4.7 | 5.8 | 23.4% |
| 50 Yr | 2% | 5.3 | 6.7 | 27.6% |
| 100 Yr | 1% | 5.9 | 7.6 | 29.9% |

Climate Change

According to the U.S. Environmental Protection Agency (EPA), the climate of the earth is changing because human activities are altering the chemical composition of the atmosphere through the buildup of greenhouse gases, primarily carbon dioxide, methane, nitrous oxide, and chlorofluorocarbons. Projections by the Intergovernmental Panel on Climate Change suggest that temperatures in Minnesota could increase by about 4°F (with a range of 2-7°F) in winter, spring, and fall, and by somewhat less in summer. Precipitation is projected to increase by around 15% in winter, summer, and fall, with little change projected for spring.

If the climate warms, the ice-cover on lakes and streams would melt earlier. Many lakes and streams in the northern hemisphere already are showing these effects (Magnuson and others, 2000; Hodgkins and James, 2002).

According to the 2003 report on climate change by the Soil and Water Conservation Society, total precipitation amounts in the United States and the Great Lakes region of Canada, are increasing, as are storm intensities. Precipitation records in the Twin Cities area indicate that the annual average precipitation has increased, as shown in the following examples:

| Period | Avg Annual Precipitation (inches) | Pct Change |
|---------------|--|-------------------|
| 1960-1990 | 28.32 | |
| 1970-2000 | 29.41 | 3.8% |
| 1980-2010 | 30.30 | 3.0% |
| 1990-2010 | 32.59 | 7.6% |
| | | |

The potential effects of climate change are also being evaluated as part of Atlas 14. Other Volumes of Atlas 14 have analyzed the 1-day annual maximum series for linear trends in mean and variance and shifts in mean to determine whether climate change during the period of record was an issue in the production of this Atlas.

Precipitation frequency studies make the implicit assumption that the past is prologue for the future, i.e. that climate is stationary. Tests for linear trends in means and variance and shifts in mean were conducted on the 1-day annual maximum time series to verify the suitability of the data for this Atlas. At this writing the results of that analysis are not available for public review.

Strategies to Achieve the Goal

Strategies to help reduce the effects of unusual or prolonged environmental conditions include:

Development Regulation

Assist in the application of best management and best development practices that not only improve the resiliency of the resource but encourage its sustainability.

Capture and Retain maximum amount of precipitation.

Break up routing of stormwater to maximize retention and detention to benefit water quality, flood control, habitat and water supply.

Adopt ‘treatment train’ approach to the management and retention of water.

Add an advisory notice to permit reviews that provide the Atlas 14 100-year elevations.

**Planning,
Programming and
Budgeting**

Risk assessments must be done to understand the uncertainties associated with the effects of climate change.

Address climate impacts on major subwatersheds.

Promote subwatershed planning to address the sub-regional/sub-watershed nature of increasingly “localized” storm and environmental events or conditions.

Continue to develop the District’s hydrologic model as a basis for supplying information and tools to lessen present and future impacts.

Review all stormwater standards and sizing criteria and evaluate performance in light of changes in precipitation.

Verify the District’s Atlas 14 XP-SWMM model.

Investigate with member cities, the DNR, FEMA and CAC the benefits and impacts of making the District Atlas 14 XP-SWMM model the regulatory flood plain model for the Watershed.

**Public &
Governmental
Relations**

Provide assistance to cities, when needed in characterizing their water resources and how these resources could be affected by climate change.

Provide leadership within the watershed district on long-term issues with protecting existing water supplies (including potential changes in state water policy).

Continue discussing with the TAC and CAC the implications of increasing rainfall amounts on design and maintenance of water resources and administration of individual municipal floodplain programs.

**Research and
Monitoring**

Support research to develop Sand Plain-specific climate change models in order to foster a sustainability/vulnerability analysis handbook on climate change impacts.

Ensure that the location of weather stations meets multiple-use management and/or research needs of the Watershed District

Ensure the installation, operation, and maintenance of weather stations in accordance with accepted standards.

Assure the transmission of information to MDNR within established standards and guidelines.

Declining Regional Surficial Groundwater and the Effect on Groundwater Dependent Resources

Issue

Ground water is the Watershed District's principal reserve of fresh water and represents much of its potential future water supply. Ground water within the Watershed is a major contributor to flow in Coon Creek and has a strong influence on the health and diversity of plant and animal species in, riparian areas, lakes, and wetlands. It also provides drinking water to individuals and communities within the watershed. Demands for safe drinking water and requirements to maintain healthy ecosystems are increasing (Appendix B, page 11-15; Appendix C, pages 59- 80).

Today, many of the concerns about ground water resources on or adjacent to the Watershed District involve questions about reductions in streamflow, potential loss of ground water-dependent ecosystems such as lakes and wetlands, land subsidence.

Ground water and surface water are interconnected and interdependent in almost all ecosystems in the Anoka Sand Plain. Ground water plays significant roles in sustaining the flow, chemistry, and temperature of streams, lakes, and wetlands, in many settings, while surface waters provide recharge to ground water in other settings. Ground water has a major influence on streambank erosion, and the headward progression of stream channels. In flat terrain, it limits soil compaction and land subsidence. Pumping of ground water can reduce stream flows, lower lake levels, and reduce or eliminate discharges to wetlands. It also can influence the sustainability of drinking-water supplies and maintenance of critical ground water-dependent habitats.

Increasingly, attention is being placed on how to manage ground water (and surface-water) resources in a sustainable manner. The potential for ground water resources to become contaminated from human as well as natural sources is being assessed. Each ground water system and development situation is unique and requires a specific analysis to draw appropriate conclusions.

Declining surficial groundwater levels will affect not only the drinking water supplies, but also resources that may depend on groundwater, such as wetlands, lakes and streams

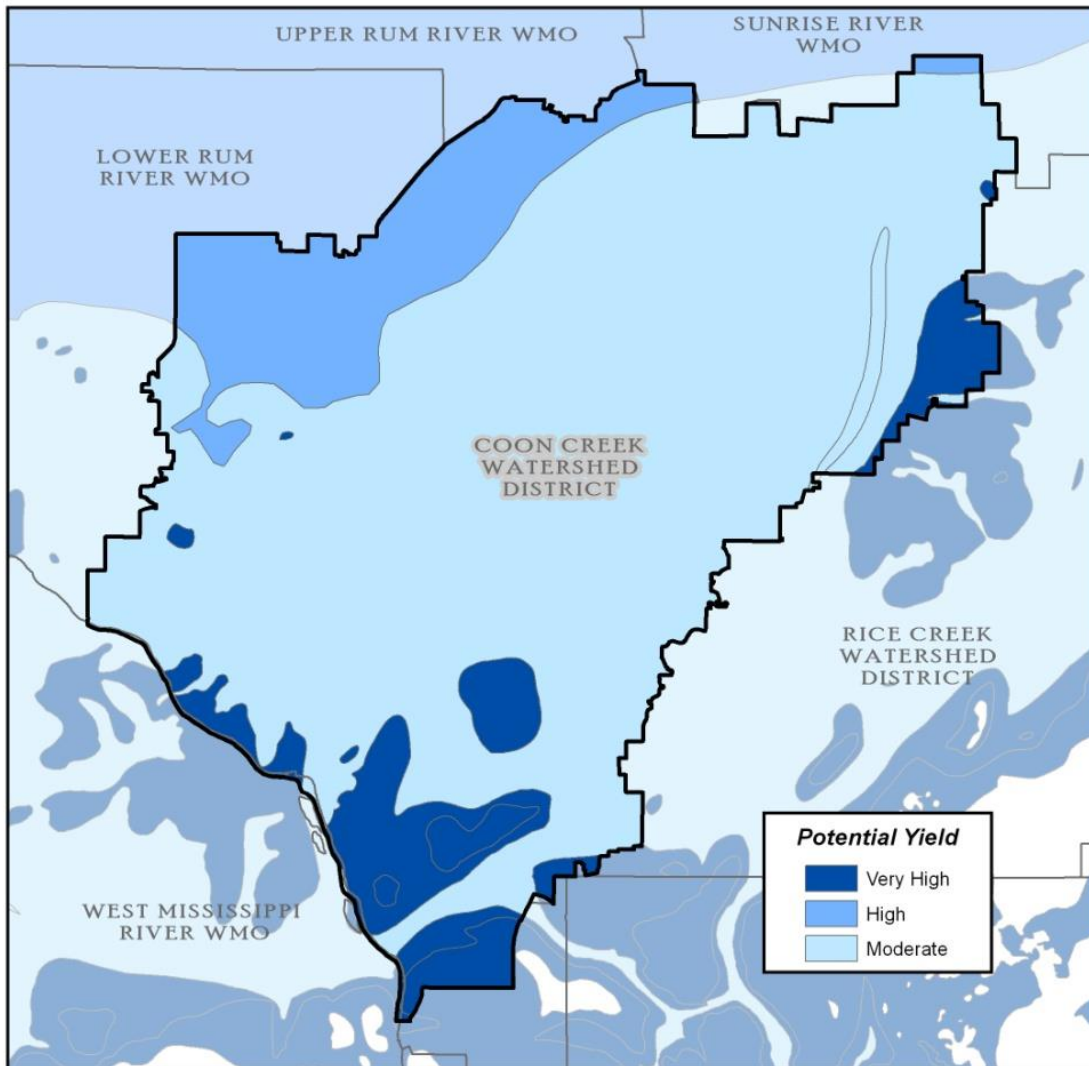
This issue is further complicated by the fact that the dependency of these resources on groundwater is not well understood. In addition, the rates and methods of ground water recharge are not well understood, and vary depending on geologic conditions of the aquifer

Uncertainty in meeting the projected demand in an area generally

corresponds to:

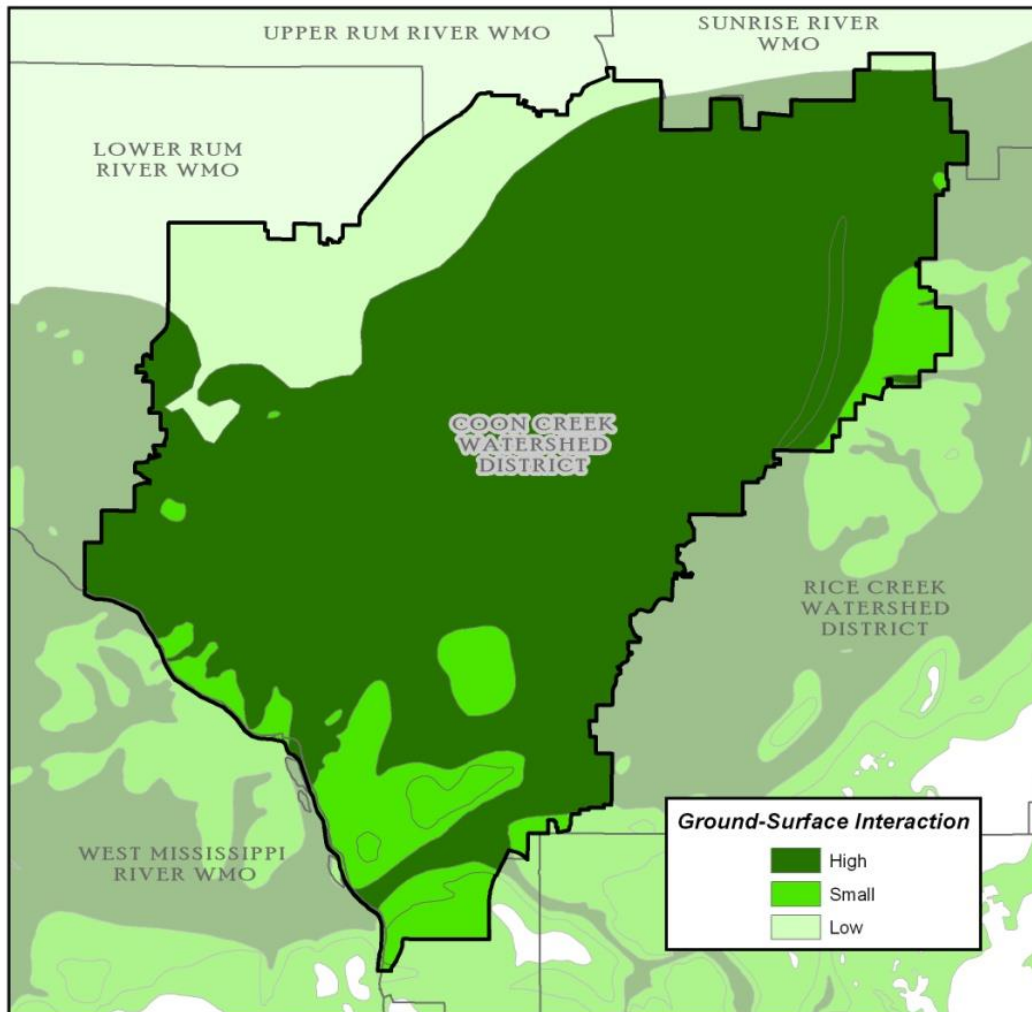
- Areas lacking in productive aquifers
- Groundwater/surface water interdependence
- High susceptibility to contamination

Aquifer Productivity The watershed is fortunate to have a relative abundance of available groundwater. However, productive aquifers are not evenly distributed across the watershed



Groundwater/Surface Water Interaction The fresh groundwater in the unconsolidated formations of the watershed is derived largely from precipitation over the outcrop areas. Rainfall lost to evapotranspiration has been estimated at 79 percent. An additional 16 percent is lost to overland flow, leaving 5 percent for recharge.

Since rainfall averages 30 inches per year in the watershed, approximately 1.5 inches per year (23.9 mgy) is potentially available to recharge the surficial groundwater reservoir.



- Susceptibility to Contamination** The surface, unconsolidated sands can hold a vast quantity of water. Significant pollution sources, actual or potential, include
- septic tanks
 - landfills
 - chemical spills and dumping
 - chemical storage leaks
 - Highway deicing
 - Agricultural chemicals.

These sources may have immediate local impacts and may also pose long-term, cumulative threats.

Pollutants detected in groundwater that could be harmful to humans or animals should they rise to inappropriate levels include:

- Bacteria
- Chloride,
- Nitrate, and

- Crop protection chemicals

It is estimated that 60,000 people reside in the unsewered portions of the watershed, producing 4.5 mgd of sewage and 6.6 million gallons per year of septage (septic tank pumpage).

| Water Source | Susceptibility |
|-------------------------------|-----------------------|
| Drift | Very High |
| Franconia-Ironton- Galesville | High |
| Prairie Du Chien-Jordan | Moderately Low |
| Mt. Simon- Hinckley | Low |

Goal

To manage Watershed District water resources for multiple-uses by balancing present and future resource use with domestic water supply needs.

Manage ground water 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.

Objectives

1. Identify minor sub-watersheds providing water within the drinking water supply Management Area as defined in the City's well-head protection plan or 1 year travel time of municipal and other public wells and water supplies during land management planning.
2. Develop prescriptions on a case-by-case basis to ensure desired multiple-use outputs while recognizing domestic water supply needs.
3. Support Anoka County Geologic Atlas.
4. Show Municipal Water Supply Areas as Special Management Areas.
5. Increase Groundwater Recharge.
6. Decrease Waste of Groundwater.
7. Estimate Groundwater Storage and Supply within the Watershed.
8. Support Proper Abandonment of Unused Wells.

9. Protect the ecological processes and biodiversity of ground water-dependent resources such as lakes and wetlands.
10. Manage ground water-dependent ecosystems to satisfy legal mandates, including, but not limited to, those associated with floodplains, wetlands, water quality and quantity, dredge and fill material, and endangered, threatened and special concern species.
11. To minimize the adverse impacts on groundwater dependent systems by maintaining natural patterns of recharge and discharge.
12. To minimize disruption to groundwater levels critical for sustaining groundwater dependent resources.

Introduction

Ground water-dependent ecosystems are communities of plants, animals and other organisms whose extent and life processes depend on ground water. The following are examples of some ecosystems that may depend on ground water:

- Wetlands in areas of ground water discharge or shallow water table.
- Terrestrial vegetation and fauna, in areas with a shallow water table or in riparian zones.
- Aquatic ecosystems in ground water-fed streams and lakes.
- Aquifer systems.
- Springs and seeps.

Ecological resources include sensitive fish, wildlife, plants, and habitats that are at risk from exposure to ground water contaminants or ground water depletion. Some examples are breeding, spawning, and nesting areas; early life-stage concentration and nursery areas; wintering or migratory areas; rare, threatened, and endangered species locations; and other types of concentrated population or sensitive areas. These areas contain ecological resources that potentially are highly susceptible to permanent or long-term environmental damage from contaminated or depleted ground water.

Ground water-dependent ecosystems vary dramatically in how extensively they depend on ground water, from being entirely dependent to having occasional dependence. Unique ecosystems that depend on ground water, fens for example, can be entirely dependent on ground water, which makes them very vulnerable to local changes in ground water conditions. Ground water extraction by humans modifies the pre-existing hydrologic cycle. It can lower ground water levels and alter the natural variability of these levels. The result can be alteration of the timing, availability, and volume of ground water flow to dependent

ecosystems.

Ground water-dependent ecosystems can be threatened by contamination and extraction. Particular threats include urban development, contamination from industry, intensive irrigation or dewatering, clearing of vegetation, mining, and filling or draining of wetlands.

Types of Ground Water-Dependent Resources

Shallow ground water can support terrestrial vegetation, such as forests and woodlands, either permanently or seasonally. Examples occur in riparian areas along streams and in upland areas that support forested wetland environments. Phreatophytes are plants whose roots generally extend downward to the water table and are common in these high-water-table areas. Some fauna depend on this vegetation and therefore indirectly depend on ground water. Terrestrial vegetation may depend to varying degrees on the diffuse discharge of shallow ground water, either to sustain transpiration and growth through a dry season or for the maintenance of perennially lush ecosystems in otherwise arid environments. Ground water-dependent terrestrial plant communities provide habitat for a variety of terrestrial and aquatic animals, which by extension must also be considered ground water dependent.

An additional group of ground water-dependent fauna (including humans) rely on ground water as a source of drinking water. Ground water, as creek baseflow, is an important source of water across much of the watershed. Its significance is greater for larger mammals and birds, as many smaller animals can obtain most of their water requirements from other sources.

Ground water is also used by native fauna. Provision of water has allowed larger populations of both wildlife and pest animals to be sustained than would otherwise be the case. Ground water-dependent vegetation and wetlands may be used by terrestrial fauna as drought refuges. Access to ground water allows the vegetation to maintain its condition and normal phenology (for example, nectar production, new foliage initiation, seeding). Populations of some birds and mammals retreat to these areas during drought and then recolonize drier parts of the landscape following recovery. The long-term survival of such animal populations relies on maintaining the vegetation communities and ensuring that their water requirements are met.

Ecosystems in Streams and Lakes Fed by Ground Water

This category of ecosystem includes many ecosystems that are dependent on ground water-derived baseflow in creeks and streams. Baseflow is that part of streamflow derived from ground water discharge and bank storage. Stream flow is often maintained largely by ground water, which provides baseflow long after rainfall or snow melt runoff ceases. On average, up to 40 percent of the flow of many streams is estimated to be

made up of ground water-fed baseflow. The baseflow typically emerges as springs or as diffuse flow from sediments underlying the stream and banks. This water may be crucial for in-stream and near-stream ecosystems. Localized areas of ground water discharge have a largely stable temperature and provide thermal refuges for fish in both winter and summer. Ground water also influences the spawning behavior of some fish. Reducing the baseflow to ground water-fed rivers could reduce upwelling or dry out riffles and reduce spawning success.

The ambient ground water flux is likely to be the key attribute influencing a surface-water ecosystem's dependency on ground water. The ground water level in riverine aquifers is important for maintaining a hydraulic gradient towards the stream that supports the necessary discharge flux. Sufficient discharge of ground water is needed to maintain the level of flow required by the various ecosystem components. Contamination of riverine aquifers by nutrients, pesticides, or other contaminants may adversely affect dependent ecosystems in baseflow-dominated streams.

Lakes, both natural and human made, can have complex ground water flow systems. Lakes interact with ground water in one of three basic ways:

1. Some receive ground water inflow throughout their entire bed;
2. Some have seepage loss to ground water throughout their entire bed
3. Others, perhaps most, receive ground water inflow through part of their bed and have seepage loss to ground water through other parts.

Changes in flow patterns to lakes as a result of pumping may alter the natural fluxes to lakes of key constituents, such as nutrients. As a result, the distribution and composition of lake biota may be altered.

The chemistry of ground water and the direction and magnitude of exchange with surface water significantly affect the input of dissolved chemicals to lakes. In fact, ground water can be the principal source of dissolved chemicals to a lake, even in cases where ground water discharge is a small component of a lake's water budget.

The transport of nutrients by ground water can be a significant source of water-quality degradation in lakes. Major sources of nutrient enrichment are inadequately designed and maintained household septic systems and nonpoint pollution sources, such as construction-project and agricultural runoff.

Hyporheic and Hypolentic Zones

The interface between saturated ground water and surface water in streams is a zone of active mixing and interchange between the two and is known as the hyporheic zone. The hyporheic zone is generally confined

to the near stream area; however, in large alluvial or glacial outwash areas this zone may extend hundreds of feet away from the river channel. Hyporheic zones can be important for aquatic life. In both gaining and losing streams, water and dissolved chemicals can move repeatedly over short distances between the stream and the shallow subsurface below the streambed. The spawning success of fish may be greater where flow from the stream brings oxygen into contact with eggs that were deposited within the coarse bottom sediment or where stream temperatures are controlled by ground water inflow. Upwelling of ground water provides stream organisms with nutrients, while downwelling stream water provides dissolved oxygen and organic matter to microbes and invertebrates in the hyporheic zone. This exchange zone is an important habitat for many invertebrates and a refuge for some vertebrates during droughts and floods.

A similar mixing zone, called the hypolentic zone, occurs at the interface between saturated ground water and surface water in lakes and wetlands. In many lakes, the most active portion of the hypolentic zone is located in the littoral zone in close proximity to the shoreline. Distinct vegetation and aquatic communities are likely to be associated with focused and diffuse discharge of ground water.

Springs

Springs typically are present where the water table intersects the land surface. Springs are important sources of water to streams and other surface-water features. They also may be important cultural and aesthetic features. The constant source of water at springs leads to the abundant growth of plants, and many times to unique habitats for endemic species like spring snails. Ground water development can reduce spring flow, change springs from perennial to intermittent, or eliminate springs altogether. Springs typically represent points on the landscape where ground water flow paths from different sources converge. Ground water development may affect the amount of flow from these different sources to varying extents, thus affecting the chemical composition of the spring water.

Wetlands

Wetlands occur in widely diverse settings from organic flats to depressions and floodplains. Similar to streams and lakes, wetlands can receive inflow from ground water, recharge ground water, or do both. The persistence, size, and function of wetlands are controlled by hydrologic processes active at each site. For example, the persistence of wetness for many wetlands depends on a relatively stable influx of ground water throughout seasonal and annual climatic cycles. Characterizing ground water discharge to wetlands and its relation to environmental factors such as moisture content and chemistry in the root zone of wetland plants is a critical but highly challenging aspect of wetlands hydrology.

Wetlands can be quite sensitive to the effects of ground water pumping. This pumping can affect wetlands not only by lowering the water table, but also by increasing seasonal changes in the elevation of the water table and exposing accumulated organic and inorganic material to oxidation. Some peat-forming wetlands are highly stable environments that may contain fossil material that provides insights into past environments. Over extraction of water, like the draining of wetlands for agriculture and other development, can destroy this valuable source of scientific data.

Fens are peat-forming wetlands that receive recharge and nutrients almost exclusively from ground water. The water table is at or just below the ground surface. Water moves into fens from upslope mineral soils, and flows through the fen at a low gradient. Fens differ from other peatlands because they are less acidic and have higher nutrient levels; therefore, they are able to support a much more diverse plant and animal community. Grasses, sedges, rushes, and wildflowers often cover these systems. Over time, peat may build up and separate the fen from its ground water supply. When this happens, the fen receives fewer nutrients and may become a bog. Patterned fens are characterized by a distribution of narrow, shrub-dominated ridges separated by wet depressions.

Fens, and ground water driven wetlands are common in the Anoka Sand Plain and the Coon Creek Watershed. Low temperatures and short growing seasons slow decomposition of organic matter and allow peat to accumulate. Fens provide important benefits in a watershed, including preventing or reducing the risk of floods, improving water quality, and providing habitat for unique plant and animal communities. Like most peatlands, fens have experienced a decline in acreage, mostly from mining and draining for cropland, fuel, and fertilizer. Because of the large historical loss of this ecosystem type, remaining fens are rare, and it is crucial to protect them. While mining and draining these ecosystems provide resources for people, up to 10,000 years are required to form a fen naturally.

**Current
Situation**

Many of the outer suburbs of the Twin Cities area draw on groundwater aquifers for their primary drinking water supply. There is a growing concern that these aquifers are being depleted because municipalities are drawing water out faster than the water can be recharged. The Master Water Supply Plan by the Metropolitan Council indicates the potential for a significant decline in aquifer water levels, up to a 50% decline in available head by 2030.

Implications

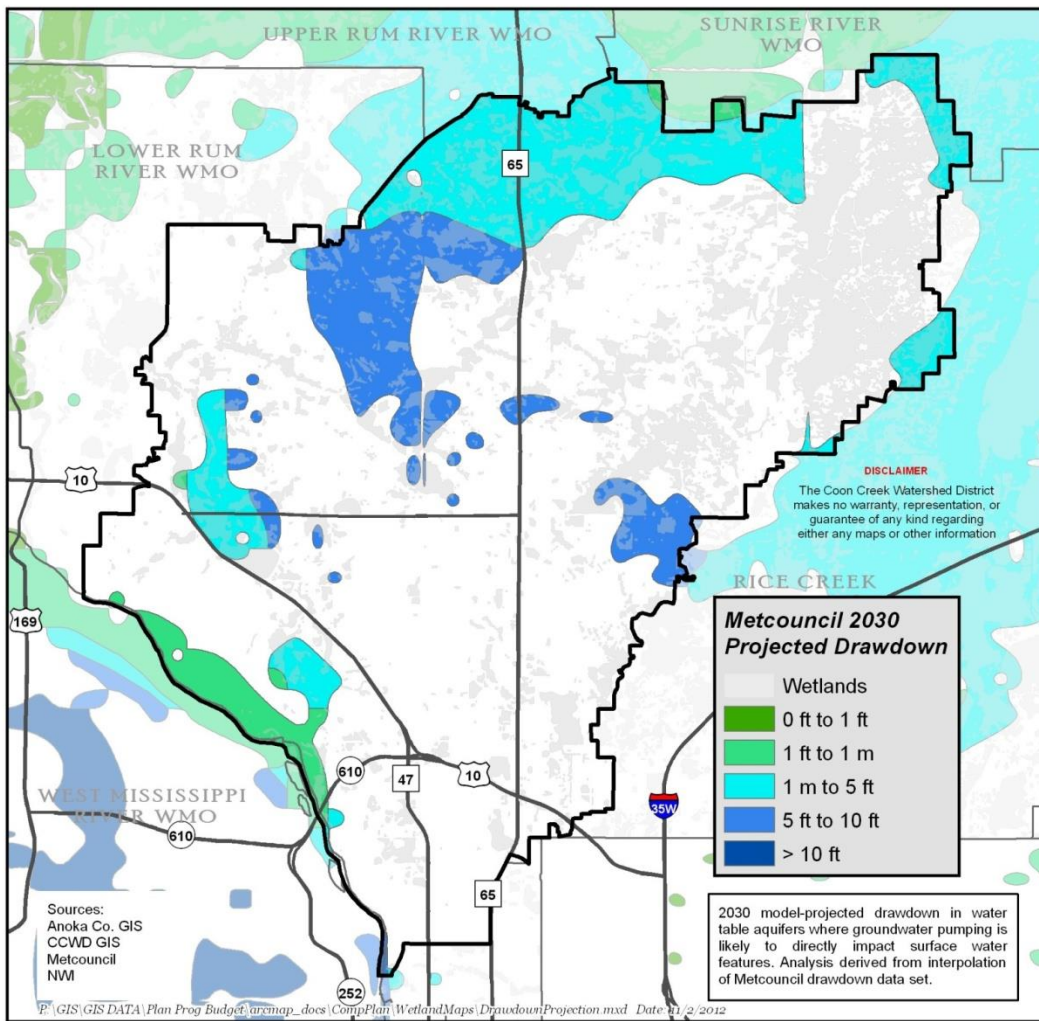
Adequate water supplies are necessary for any home or city. The source must provide quality water at a constant and dependable rate. Groundwater is the source for 100 per cent of public drinking water within the watershed for both domestic use and livestock and wildlife watering.

Loss of Groundwater Driven Surface Water Features

If surficial groundwater levels continue to fall between 2013 and 2023, surficial water features, such as

- a. Lakes (decline of 50% surface area)
- b. Wetlands (8,375 acres)
- c. Base Flow

will be difficult to protect and sustain in the areas shown below:



Blaine “Uncertainty”

The Met Council study indicates that the ‘uncertainty in meeting the projected demand in an area generally corresponds to:

- Areas lacking in productive aquifers
- Groundwater/surface water interdependence

- High susceptibility to contamination

Potential Impacts on Surface Water Contribute to Drinking Water Uncertainty in Certain Areas

If the Metropolitan Council projections are correct, the watershed will experience a loss of almost 52% (8,400 acres) of surficial water and related land resources by 2030.

The District estimates that there will be an additional impact (either through conversion of wetland type or lower lake levels) to an additional 2,000 acres (approximately 12%).

Management Considerations

The Watershed District ground water policy is specifically designed to protect ground water-dependent ecosystems so that, wherever possible, the ecological processes and biodiversity of their dependent ecosystems are maintained, or restored, for the benefit of present and future generations. The general level of understanding of the role of ground water in maintaining ecosystems is very low. Ground water resource managers and investigators tend to underestimate ecosystem vulnerability to ground water development, pollution, and land-use change. Planners must recognize ecosystem dependence on ground water and related processes. Perhaps such recognition can be best achieved by incorporating ground water resource inventory, monitoring, and protection into management plans.

The initial step in protecting ground water-dependent ecosystems is developing an inventory of those systems within the watershed. Identify and describe their locations, ecological values, and degrees of dependence on ground water. Land management plans should then be reviewed and revised as necessary to incorporate ground water-level, ground water extraction-rate, ground water recharge-rate targets or other management rules that minimize localized impacts on dependent ecosystems. The degree of protection will vary according to the characteristics and dynamics of each ground water system and the significance of the ground water-dependent ecosystems. Protection may range from minimal where the aquifer is deep and has little connection to the surface, to significant where the connection is strong and the conservation value of dependent ecosystems is high. More localized measures for protecting ground water-dependent ecosystems may include the following steps:

- Establishing buffer zones around dependent ecosystems, within which ground water extraction is excluded or limited.

- Establishing maximum limits to which water levels can be drawn down at a specified distance from a dependent ecosystem.
- Establish a minimum distance from a connected creek or other dependent ecosystem from which a well could be sited.
- Protecting ground water quality in areas that provide recharge to dependent ecosystems by limiting the types of activities that can take place there.

The social and economic costs of the recommended management prescriptions and protections, as well as the costs related to impacts from use, also need to be considered. Ground water extractions should be managed within the sustainable yield of aquifer systems so that the ecological processes and biodiversity of their dependent ecosystems are maintained or restored. In this process, threshold levels that are critical for ecosystem health should be estimated and considered. Planning, approval, and management of developments and land uses should aim to minimize adverse impacts on ground water systems by maintaining natural patterns of recharge and discharge, and by minimizing disruption to ground water levels that are critical for ecosystems.

Activities That Affect Ground Water

This section describes some of the activities that commonly cause ground water problems within the watershed.

Ground Water Pumping

As surface water resources become fully developed and appropriated, ground water commonly offers the only available source for new development. In many areas of the watershed, however, pumping of ground water has resulted in significant depletion of ground water storage. These ground water depletions can result in lowered water levels in wells, hydraulic interference between pumping wells, reduced surface water discharge, land subsidence, and adverse changes in water quality.

Declining Water Levels

It is useful to consider three terms that have long been associated with ground water sustainability:

1. Safe yield
2. Ground water mining
3. Overdraft.

The term “safe yield” commonly is used in efforts to quantify sustainable ground water development. The term should be used with respect to specific effects of pumping, such as water-level declines, reduced streamflow, and degradation of water quality. The consequences of pumping should be assessed for each level of development, and safe yield should be taken as the maximum pumpage for which the consequences are considered acceptable.

The term “ground water mining” typically refers to a prolonged, progressive, and, in many cases, permanent decrease in the amount of water stored in a ground water system. This phenomenon may occur, for example, in heavily pumped aquifers in arid and semiarid regions. Ground water mining is a hydrologic term without connotations about water-management practices.

The term “overdraft” refers to withdrawals of ground water from an aquifer at rates considered to be excessive and therefore carries the value judgment of overdevelopment. Thus, overdraft may refer to ground water mining that is considered excessive as well as to other undesirable effects of ground water withdrawals

Pumping ground water from a well always causes:

1. A decline in ground water levels at and near the well;
2. A diversion of ground water to the pumping well that was moving slowly to its natural, possibly distant, area of discharge (fig. 19).

Pumping of a single low-capacity well typically has a local effect on the ground water flow system. Pumping of high-capacity wells or many wells (sometimes hundreds or thousands of wells) in large areas can have regionally significant effects on ground water systems. Where a new pumping well is installed near an existing pumping well and both are tapping the same aquifer, overlapping cones of depression (well interference) can result (Fetter 2000).

The effect on the existing well from pumping the new well is lowered water levels, an increased rate of decline, and reduced yield. In addition, changes in water chemistry at the existing well can result. The new well likewise has a lower yield than if it had been placed farther from the existing pumping well.

Ground water heads respond to pumping to markedly different degrees in unconfined and confined aquifers. Pumping the same quantity of water from wells in confined and in unconfined aquifers initially results in much larger declines in heads over much larger areas for the confined aquifers. This is because less water is available from confined aquifers for a given loss of head compared to similar unconfined aquifers.

As might be expected, declines in heads and associated reductions in storage in response to pumping can be large compared to changes in unstressed ground water systems. For example, declines in heads as a result of intense pumping can reach several hundred feet in some hydrogeological settings. Drawdown is typically larger in confined aquifers. Widespread pumping that is sufficient to cause regional declines in aquifer heads can result in several unwanted effects:

Substantially decreased aquifer storage, particularly in unconfined aquifers;

1. Dried up wells in places because the lowered heads are below the screened or open intervals of these wells;
2. Decreased pumping efficiency and increased pumping costs because the vertical distance that ground water must be lifted to the land surface increases;
3. Changed rates of movement of low quality or contaminated ground water and increased likelihood that the low quality or contaminated ground water will be intercepted by a pumping well;
4. Land subsidence or intrusion of saline ground water may result in some hydrogeologic settings.

Perennially flowing springs can be adversely affected by too much water well pumping. Flows may diminish or cease if too much pumping occurs in an aquifer where a hydrologic connection exists between a spring and a well. Many examples of this phenomenon can be found in the Metropolitan Area and Anoka County. The same holds true for surface streamflows, especially during baseflow periods and in times of drought when all of the streamflow comes from ground water discharge.

Depletion of ground water also can lower water levels in lakes, ponds, wetlands, and riparian areas. Water temperatures can rise from solar heating of smaller volumes of water and depletion of cooler ground water inflows. In turn, geochemical reaction rates may increase and affect the organisms in those waters, possibly to their detriment. Algae blooms are more likely in these lakes, ponds, and reservoirs, and when the algae die, fall to the bottom, and decompose, dissolved oxygen is consumed in the water body, causing stress to or killing fish and other aquatic species.

Where the depletion of ground water causes a decline in surface water or even total stream dewatering, terrestrial species may be adversely affected similarly to aquatic species. If any species so affected are listed under the Endangered Species Act, the Watershed District has a duty to consult with the appropriate agency responsible for administering that act and implement its recommendations for species protection or recovery. Recommendations can include modifying or canceling an authorization for water extraction.

Land Subsidence

Land subsidence is a gradual settling or sudden sinking of the Earth's surface because of subsurface movement of earth materials. More than 80 percent of the identified subsidence in the United States is a consequence of human impact on subsurface water. This effect is an often-overlooked environmental consequence of our water-use practices. Impacts from land subsidence include damage to manmade structures, such as buildings and roads, as well as irrecoverable damage to aquifers.

In some areas, excessive pumping can cause the collapse of the framework of aquifer materials. The result is aquifer compaction and subsidence at the land surface. This compaction results in the permanent loss of aquifer storage, even if the water table should later recover when pumping stops. Although the water table may recover to prepumping levels, resumption of pumping will result in rapid drawdown because of the loss of aquifer storage capacity. In some parts of the Watershed, the lowering of the water table from pumping has resulted in drainage of organic soils and wetland areas, and such changes can adversely affect wetland ecosystems. Subsidence also can severely damage building foundations, roads, and buried pipelines, and can increase the frequency of flooding in low-lying areas.

A time lag often occurs between the dewatering of an aquifer and subsidence because much of the compaction results from the slow draining of water from confining units adjacent to the aquifer. This phenomenon is called “hydrodynamic consolidation.” It is also responsible for residual compaction, which may continue long after water levels are initially lowered or even after pumping stops.

Two distinct processes account for most water-related subsidence in the Watershed:

- (1) Compaction of aquifer systems
- (2) Drainage and subsequent oxidation of organic soils.

Impacts of Subsidence

Localized surface impacts of subsidence include earth fissures and sinkholes. Earth fissures occur as a result of ground failure in areas of uneven or differential compaction. Most fissures occur near the margins of alluvial basins or near exposed or shallow buried bedrock in regions where differential land subsidence has occurred. They tend to be concentrated where the thickness of alluvium changes markedly. When they first open, fissures are usually narrow vertical cracks, less than an inch wide and up to hundreds of feet long. They can subsequently lengthen to many thousands of feet and widen to more than 10 feet as a result of erosion and collapse. Vertical offset along the fissure is usually no more than a few inches.

The large-scale and differential settling of the ground surface that accompanies subsidence can have a profound impact on manmade structures. The cost of damage caused by subsidence is estimated to be millions of dollars each year. Types of potential damage to manmade structures caused by subsidence include the following:

- Damaged roads.
- Broken foundations.
- Severed utilities and pipelines.

- Damaged underground and above-ground storage tanks.
- Damaged storage and treatment ponds.
- Broken well casings and damaged pumps.
- Damaged railroad tracks, bridges and tunnels.
- Flood damage in low-lying areas
- Damage to irrigated fields.

**Effects of
Vegetation
Management on
Ground Water**

Manipulation of vegetation, including both trees and shrubs, can directly and indirectly affect ground water. Vegetation influences the water budget through its effects on water inputs to the basin and more directly through plant water use. By intercepting rain and snow, the vegetation canopy can facilitate water loss to sublimation and evaporation. This interception loss may affect the amount of water available for ground water recharge. By shading ground and water surfaces, vegetation can also influence the rate and timing of snowmelt and evaporation from those surfaces. Plants with access to ground water (phreatophytes) also influence ground water quantity. They take up ground water directly for transpiration. Management activities that intentionally or unintentionally influence the density, structure, and species composition of vegetation may have measurable effects on the quantity and quality of ground water.

**Phreatophyte
Management**

Plants growing along creek and ditch margins generally have better access to water than plants growing in upland areas. Although most phreatophytic plants utilize soil water when available, phreatophytes primarily use ground water. This use may cause quite dramatic diurnal fluctuations in shallow alluvial aquifers in areas near streams. Because of higher water availability in areas adjacent to stream channels and on floodplains, plants growing in these areas generally transpire at higher rates than vegetation in uplands where water is limiting. As a consequence of these high rates of water use by plants with access to ground water, attempts have been made to estimate potential water salvage through the removal of phreatophytes. Although the volumes of salvaged water proposed in these studies are often quite impressive, very few studies have actually demonstrated that removal of even extensive areas of vegetation have resulted in measurable increases in streamflow. Most studies have indicated that clearing of phreatophytes results in no measurable change in streamflow. Removal of phreatophytes, however, does often result in increases in water table elevations in shallow aquifers and destabilization of streambanks. Water salvage from removing such vegetation is often significantly less than expected and sometimes results in higher water loss from an area than before removal. Depending on the depth from the soil surface to the water table, an elevated water table may result in increased evaporative losses from the site if the capillary fringe comes into contact with the atmosphere. Furthermore, water is used by the vegetation that replaces the phreatophytes.

Evapotranspiration in stands dominated by phreatophytes has been estimated to be from 1.1 to 9 acre-feet of water per acre per year in arid areas. Robinson reported that annual savings in areas of dense vegetation may amount to 2 to 3 feet of water, depending on depth to the water table. The benefits of riparian vegetation to fish, wildlife, and humans are now recognized and far fewer projects to eliminate them are being undertaken. The recent drought, however, has stimulated an interest in controlling phreatophytes such as willow (*Salix spp.*) or Box elder (*Acer negundo*).

The presence, density, and composition of phreatophytes can affect the quality of ground water through uptake of nutrients and pollutants. Phreatophytic vegetation has been used for bioremediation of soil and ground water toxicity caused by mining and solid waste disposal. Certain species can take up and store particular ions, heavy metals, and other pollutants. Phreatophytic vegetation may be very effective in removing nitrate from ground water as well as phosphorous and other nutrients.

Upland Forest Management Removal of the forest canopy affects the amount of interception of snow and rain by the canopy, as well as the infiltration rate of the precipitation that reaches the forest floor. Both of these processes can affect ground water recharge and the rate of ground water movement at a local scale. MPCA has estimated that interception in Minnesota ranges from 30% to 40% in natural to developed areas. Intercepted water is not available for ground water recharge; however, if the forest canopy is reduced or removed, this water can become available as long as the forest floor has not been compacted by heavy machinery or removed by erosion. Under certain conditions, forest fires can form impermeable layers (hydrophobicity), which hinder or even prevent infiltration of water on the forest floor, limiting water on the ground surface from recharging shallow aquifers. Slow drainage of soil moisture in the range of field capacity is the source of a large proportion of the baseflow of forested headwaters streams, where organic matter content of soils tends to be high.

The Developing Fringe Residential and commercial development has been rapid within the Watershed. As dewatering occurs and water supplies become stressed, land managers will be pressured to permit additional municipal drinking-water wells. In the future, ground water management is likely to evolve toward total aquifer management. Protection measures such as limitations on activities in recharge areas, reservation of some areas for production of high quality water, and protection of unique ground water-dependent ecosystems will be incorporated into land management plans. It will no longer be sufficient to manage for operators and users. Managers must recognize that ground water serves diverse functions, some of which are ecological.

In unincorporated areas, residential growth is characterized by the use of individual domestic wells and individual sewage treatment systems (ISTS; also known as septic systems). In the settings typical of much of the watershed, proper siting and design of an ISTS is problematic. The traditional ISTS; design is appropriate for installation in areas underlain by sufficient soil thickness and porous media aquifers.

| | |
|--|--|
| Strategies to Achieve the Goal | Strategies to help reduce the effects of unusual or prolonged environmental conditions include: |
| Development Regulation | Streamline and develop consistent permitting process between the Minnesota Pollution Control Agency, the Minnesota Department of Natural Resources, Cities, and Watershed Districts. One-stop shopping is the objective with consistent requirements. |
| | Maintain natural drainage patterns of recharge and discharge, and minimize disruption of ground water levels that are critical to groundwater dependent resources. |
| | Prevent pollution or significant changes to ground water quality. |
| | Give preferential consideration to ground water-dependent resources when conflicts among land-uses activities occur. |
| | Delineate and evaluate both ground water itself and ground water-dependent ecosystems before approving any project with the potential to adversely affect those resources. |
| | Establish maximum limits to which water levels can be drawn down as a specified distance from a ground water-dependent ecosystem in order to protect the character and function of that ecosystem. |
| | Establish a minimum distance from a connected stream, wetland, lake or other ground water-dependent ecosystem from which ground water withdrawal may be sited. |
| Planning, Programming and Budgeting | The District anticipates addressing this issue through ground water studies, particularly support of the County Geologic Atlas, both through those completed by the District and by others. As more information becomes available, the District may revise its rules to incorporate the new knowledge. |
| | Evaluate adopting a policy that, in all state and water management district funding programs, quantifiable water conservation best management |

practices are considered an “alternative water supply” and are equally as eligible as capital facility expansion projects for grants and financial assistance.

Encourage the development of region wide plans for the distribution, interconnection, and use of reclaimed water.

Encourage a dedicated source of state funding for alternative water supply development projects.

Evaluate the minimum flows and levels needed to protect water supply needs of natural systems before determining the availability of surface water for water supply.

Plan and implement to minimize adverse impacts on ground water-dependent ecosystems.

Evaluate, plan and implement a program to pursue rehabilitation of degraded ground water systems, where possible.

**Public &
Governmental
Relations**

Cities must anticipate, plan for and adapt to the potential effects of climate change.

**Research & Data
Collection**

Support research to develop Sand Plain-specific climate change models to foster a sustainability/vulnerability analysis handbook on climate change impacts.

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Implementation

Purpose The implementation plan identifies the specific activities, projects, studies, and other tasks necessary to implement the goals and objectives of the Comprehensive Plan. These were identified by members of the public, the Planning Advisory Committee (PAC); the District’s other advisory committees, staff and Managers as necessary to achieve objectives that were suggested during the public involvement process.

Intent The initiatives contained in the implementation plan seek to protect and improve District resources and productive capacity. In many cases, implementation requires further action and/or approval and participation of other parties. Inclusion of a program, activity, project, or capital improvement in the implementation plan is not a set decision to implement that action. Implementation rests on annual Board decisions to budget for and fund the action, and in some cases may require further legal procedures and/or the approval or participation of other parties.

The District will regularly evaluate the water resources needs within the District and make appropriate changes in priorities during the term of the implementation plan.

Over the 10-year period of this implementation plan, as new information becomes available, priorities change, new concerns emerge, or new technical approaches are developed, the District will likely amend the implementation plan to reflect this new information.

The listing of initiatives in the implementation plan is not intended to exclude other initiatives consistent with the goals identified in this Plan. If the new activity is widely different in scope or cost from that detailed in the implementation plan, plan amendments may be required. If not, the District could proceed with a new initiative under the existing implementation plan

Scope The implementation plan focuses on those resource concerns that are of interest to and a priority for the District to address in the next 10 years. This may result in some resource issues and concerns not being identified as a key area of focus in this Plan. This may be due to the fact that other units of government may already address these areas or because the methods for management of these issues are not yet clear or they are not a priority resource concern at this time.

District Priority Upon review of the District’s basic statutory authorities (Appendix D), the watershed’s functional capacity and tendencies (Appendix B) and the demands for values placed on water and related resources within the watershed (Appendix C), the District has committed itself to pursuing the

Mission Goals as part of its ongoing water resource management efforts. The District has also recognized that there are emerging issues that require immediate attention because they present serious problems or because there is no known management strategy or technology for dealing with them. However, while the District will continue to address both its obligations to ongoing management of the watershed and to anticipate and address emerging issues with a goal of positioning the District or preventing the issue from becoming a crises the District must maintain a focus on critical elements that exert the greatest influence on the ecology and economy of the watershed.

The District's main focus at this time is on

1. Preventing flooding
2. Improving water quality in impaired or impacted waters
3. Maintaining and enhancing water quality in waters that are not impaired.

Goals

The implementation goals and objectives are:

1. To integrate water resource management with Watershed District land and resource management planning
2. To coordinate Watershed water resource protection, development, and improvement programs with similar programs of other Federal, State, and local agencies.
3. To assess effectiveness of management in meeting legislative mandates, such as those pertaining to pollution control and securing favorable conditions for stream flow.
4. To provide the operational staff with the best mix of trained staff, equipment, and support attainable within fiscal constraints.

Objectives

1. Address water resource management in related land and resource planning, program planning and budgeting, and when conducting environmental analyses.
2. Coordinate programs and activities, such as precipitation monitoring, which can produce affects outside as well as within the watershed, with all affected interests
3. Support properly designed and technically sound water related activities of cooperators within the Watershed, provided those activities and anticipated results are not in conflict with any applicable law or regulation governing the administration and management of these lands.

4. To annually produce a plan, a program, and, finally, a budget for Board of Managers approval that reflects changes in the physical, social and management environments that affect water resources within the Coon Creek watershed
5. To make the adjustments to plans and programs that allow the District to continue to implement the Comprehensive Plan

Management Overview

The Coon Creek Watershed District’s Comprehensive Plan commits the agency to delivering a range of natural resource-based benefits to the people of the District based on the Comprehensive Plan goals and objectives. The District will seek to assist people and local units of government in being good stewards of the watershed by utilizing the strategies identified in Section 1 of this plan (Collaborative efforts; watershed and subwatershed management; performance and market based solutions; and adaptive management).

Description of Implementation

Implementation of the Comprehensive Plan will occur through an annual adaptive management using the annual planning, programming and budgeting cycle to evaluate, plan and fund activities. This process will be the primary resource management process of the Coon Creek Watershed District and contains five distinct but interrelated phases



Annual Assessment

In addition to establishing the framework and process for decision making on future programs, the process permits prior decisions to be re-examined and analyzed from the viewpoint of the current environment (physical

social and political/economic threats and opportunities) and for the time period being addressed. The decisions shall be based on and consistent with a set of objectives, policies, priorities, and strategies derived from the State of Minnesota, Anoka County, the Cities within the District and the Board's own priorities

In the assessment phase the role and posture of the cities, Anoka County and the state agencies in the regional and state operating environment shall be examined, considering enduring water resource objectives and the need for efficient management of resources.

Planning The Comprehensive Plan provides a general long-term direction for the Watershed based on 11 legislative goals identified in the Metropolitan Water Management Act, the Watershed District Act, the Wetland Conservation Act, and the Federal Clean Water Act and MS4 NPDES program.

In planning, the District will focus on:

1. Defining the Watershed District strategy necessary to help maintain sustainable management and support of state and local water resource policy 2 to 5 years in the future;
2. Planning the integrated and balanced program efforts necessary to accomplish that strategy;
3. Ensuring the necessary framework (including priorities) to manage Watershed District resources effectively for successful mission accomplishment consistent with national resource limitations; and providing decision options to the Board of Managers to help them assess the role of water resource management.

This review shall culminate in the issuance of Management Guidance.

Annual Program Plan & Budget In the programming phase, the Watershed District shall develop or adjust plans programs consistent with the Comprehensive Plan.

Program Plan The Annual Plan provides short-term direction for the purposes of formulating budgets and work plans to accomplish these objectives. Annual goals and intermediate outcomes or measures are intended to show progress toward long-term goals.

These programs shall reflect systematic analysis of the District's mission and objectives to be achieved, alternative methods of accomplishing them, and the effective allocation of the resources.

The Advisory Committees shall analyze the programs and provide a comments based on the capability of the composite program and activity efforts of the District and its collaborators

Annual Budget The District budget provides a framework for meeting these goals by describing the resource requirements for work activities and output measures describing the actual “on-the-ground” work that needs to be done.

On-the-ground activities and projects can be for the purpose of meeting more than one objective. Consequently, trying to determine how much of the work is for one objective versus another is difficult, impractical, and may be inappropriate when the same project simultaneously contributes to multiple objectives.

The budget resources (Funding and FTE) of an activity are assigned to the program and activity is primarily dedicated toward achieving. This methodology is used to determine the total amount of resources by program and objective.

In the budgeting phase, the Watershed District program components shall develop detailed budget estimates for the budget years of the programs approved during the programming phase.

A budget review is conducted by the CAC and TAC; the results are issued in Program Budget Decisions

Monthly Reports Monitoring of the implementation of the annual plan and budget (and therefore the Comprehensive Plan) is done through monthly reports to the Board of Managers in the form of staff and financial reports. Monthly reports provide sufficient time to make adjustments to annual work plans and budgets.

Annual Report 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 listed in the appendix.

The results and outcomes of the annual report provide the major inputs into the annual assessment of progress and condition.

Implementation Plan Structure To pursue its mission, goals and objectives the implementation of the comprehensive plan will be organized around five categories:

1. Funds
2. Programs (Cost Centers)
3. Policies and Procedures
4. Partnerships and Collaboration
5. Capital Projects

Funds A fund is a statutory entity required for government accounting purposes. It is defined as an independent fiscal and accounting entity with a set of self-balancing accounts. These accounts are segregated for the purpose of carrying on specific activities or attaining certain objectives.

Funding for all District operations, activities and projects can be said to be either, governmental, proprietary, or fiduciary in nature stemming from five basic fund types:

1. General Fund is used to account for financial resources that are not required legally or by sound financial management to be accounted for in another fund.
2. Special Revenue Funds account for financial resources whose use is legally restricted or defined.
3. Debt Service Funds are used to account for the accumulation of resources and payment of debt associated with general obligation bond principle, interest and fiscal charges.
4. Capital Project Funds are used to account for major repairs or improvements of individual watershed ditches, other than those financed by annual maintenance levies.
5. Agency Funds are used to account for funds received and disbursed on behalf of another entity. They are fiduciary in nature

A review of the size and use of these funds is available through the District's Annual Financial Audit.

Programs (Cost Centers) To accomplish its mission, the Coon Creek Watershed District operates six programs. These programs are organized units with the responsibility for carrying out specific activities and services. They are the District's cost centers:

1. Administration: Implement policies of the Board of Managers, manage financial affairs of the Watershed District, and ensure accountability of public funds
2. Development Regulations and Issue Management: Evaluate, permit, and monitor plans and programs affecting the water and related land resources of the District
3. Operations and Maintenance: Plan, design, construct and maintain the District ditch system and water control structures, and preserve the location, character, and extent of the District ditch and conveyance system
4. Planning, Programming and Budgeting: Coordinate the planning, prioritizing, and financing of District programs projects and activities and to coordinate policies and programs of the local, state, and federal government agencies to achieve consistency with the plan
5. Public and Governmental Relations: Ensure that the continuing planning and management of the Coon Creek watershed is responsive to the needs and concerns of an informed public

6. Research and Data Collection: Gather and analyze data that will result in increased efficiency and effectiveness of watershed management

Policies and Procedures

The approach taken in this plan does not intend to assert management strictly on the basis of an existing landscape feature but intends to emphasize the functioning of natural systems and landscape (biogeochemical) processes, especially the hydrologic system.

The watershed's environment is determined by a set of existing natural resources and processes. The primary determinant for management within the watershed is the hydrologic system.

Ditches and other watercourses, wetlands and other water bodies, floodplains and groundwater recharge are all integral parts of the hydrologic system of the watershed. Water quality, soils and wildlife are related in that they are affected by or affect the hydrologic system.

The management of these natural resources does not mean prohibiting their use, rather it means the wise use, while preserving the capacity to function, yet allowing development and use compatible with these systems. In some instances, water and related land resources should be kept free of any landscape alteration. In other instances, natural resources can sustain certain types of alteration without detrimental impact, or additional degradation of natural processes, or their ecological function can be easily replaced or mitigated.

The objectives of maintaining the Policies and Procedures are to:

1. Identify direction essential for employees to administer and control District programs and activities.
2. Classify and target needed direction to the appropriate employees.
3. Provide efficient means to supplement and revise current direction.
4. Maintain the currency of direction
5. Hold direction to the minimum necessary to fulfill the District's mission

Policies and Procedures have been developed for:

1. Ditches and Water Courses
2. Floodplains
3. Groundwater
4. Soils
5. Stormwater and hydraulics
6. Water Quality, Soils & Erosion Control
7. Wetlands and Water Bodies
8. Wildlife – Areas of endangered/ threatened/ special concern plants and animals

Between 2013 and 2023, the District will evaluate Policies and Procedures for:

1. Aquatic Invasive Species
2. Climate change
3. Groundwater dependent resources
4. Nuisance wildlife and animal damage such as beaver
5. Fishery management
6. Aquatic Life
7. Bacteria
8. Total Suspended Solids
9. Storm Water Volume Management

Partnerships and Collaboration

The Watershed District has responsibilities over the development of water resource projects within the Watershed District. All of these projects occur within one or more of the cities that lie wholly or partially within the watershed. In addition, efficiently and effectively accomplishing these projects depends to the great degree on partnerships and collaboration with the cities and Anoka County.

To integrate water resource management with other land and resource management in the Watershed, the District will:

- Actively coordinate its water resource protection, development, and improvement programs with similar programs of other local state and Federal agencies.
- Seek to assess the effectiveness of water management efforts within the watershed in meeting legislative mandates, such as those pertaining to pollution control and to the securing of favorable conditions of streamflow.
- Plan and execute a coordinated program of water resource development to maximize public benefits within the Watershed.

Capital Projects

Coon Creek’s Capital Improvement Program is intended to provide the Board of Managers and District staff with a process for identifying and prioritizing capital projects in order to coordinate the financing and timing of these projects, which maximize the return to the public. The process will enable the District to evaluate long-term cost and benefits of projects being adapted for the coming year against those projects planned between now and 2023.

The capital Improvement Program follows the following policy.

1. A Capital Improvement Plan (CIP) will be developed for a period of ten (10) years and included in the District’s Comprehensive Plan. As resources are available, the most current year of the CIP will be

incorporated into the current year operating budget as the Capital Improvement Budget (CIB). The CIP will be reviewed and updated annually and plan amendments completed if required. Years two through ten are for planning purposes only.

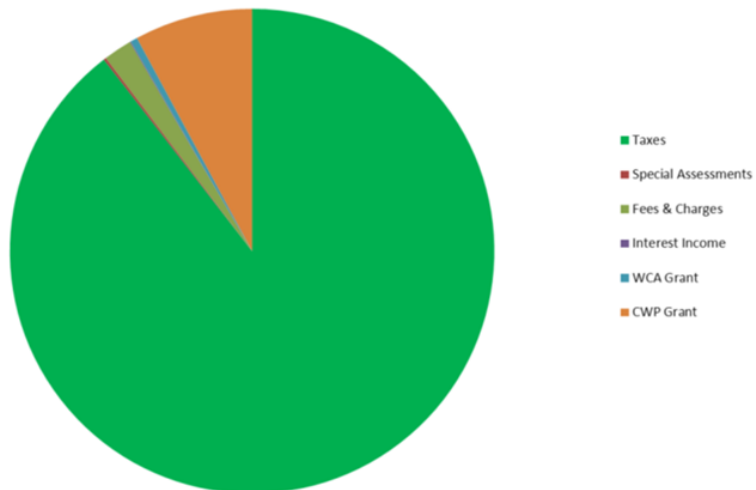
2. The District will maintain physical assets in a manner, adequate to protect the District's capital investment and to minimize future maintenance and replacement costs. The District will provide maintenance and replacement from current revenues where possible.

Funds and Funding Strategy

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Current Situation

At present, The Coon Creek Watershed District obtains the majority of its funding for water resource programs and projects from property taxes through a watershed-wide ad valorem levy. Other sources of funding include grants or cost share from other governmental bodies, expenditures by program/project partners, and permit fees. The direct financial burden on watershed residents has been moderated by the CCWD’s success in securing grant or cost-share funds through programs administered by the Anoka Conservation District, Minnesota Board of Water and Soil Resources, the Minnesota Pollution Control Agency and the Minnesota Department of Natural Resources. The participation of volunteers in the District’s programs and projects also helps to reduce the levied costs. The Implementation section of this Plan outlines potential funding partners, grant sources, and other funding mechanisms that are likely to be used for the programs and projects of the District.



As the scope of District responsibilities and programs has expanded to

include broader issues such as stormwater, water quality, erosion control, groundwater management and wetlands, identifying and quantifying integrated benefits is more difficult, time consuming and expensive and the cost of calculation and assigning benefits and costs to individual properties can easily exceed the benefits derived. Hence the uses and sources of revenues have become more generalized to keep costs down. While dedicated or special revenues may continue to be used for special purposes, there is a trend toward more general levies for broader and more integrated public ends and goals. However, there is a place for both approaches in the District's overall revenue structure.

Within this framework, the programs and purposes of the District must be viewed as being essentially watershed-wide activities with watershed-wide benefits, yet causing substantial impact or benefit in some areas.

The revenues to cover the costs of implementing the comprehensive plan should be derived from own source revenues, and supplemented with state and federal resources, often in the form of grants. This should be done in a manner that is true to the principles of administrative efficiency, equity, and fiscal balance.

Goals and Objectives

- Financial Goals** The following are the Board of Managers financial goals, used by District Staff while preparing their proposed operating budgets:
1. A commitment to a District Tax Capacity Rate to meet the needs of the District and positioning the District for long-term operation through the use of sustainable revenue sources and operational efficiencies.
 2. A fiscal goal that works toward establishing the General Fund balance for working capital at no less than 35% of planned General Fund expenditures and the preservation of emergency fund balances (Natural disasters and emergencies, public safety, facility management and information technology) through targeting revenue enhancements or expenditure limitations.
 3. A comprehensive review of the condition of capital equipment to ensure that the most cost-effective replacement schedule is followed. Equipment will be replaced on the basis of a cost benefit analysis rather than a year-based replacement schedule.
 4. A team approach that encourages strategic planning to meet immediate and long-term operational, staffing, infrastructure and facility needs.

5. A management philosophy that actively supports the funding and implementation of Board of Manager policies and goals, and a commitment to being responsive to changing physical, social and management conditions, concerns and demands, and to do so in a cost-effective manner

Long Term Fiscal Objectives

The District Board and staff are committed to expending public resources in the most cost-effective and economical manner possible to ensure the stability of the District's basic services. In light of the current sporadic onset of levy limits, fiscal strategies will need to be constantly monitored to ensure a balanced approach in providing sufficient revenues to fund District services:

1. Employing a strategy aimed at reducing the District's reliance on the property tax levy to fund basic District services through "sustainable" revenue sources such as special revenues, user fees and fee-for-service transaction
2. The use of an appropriate cost accounting structure that will lead to the creation of individual cost centers for all District program activities to accurately reflect the true cost of providing specific services.
3. The development of work performance goals for each department to ascertain and measure how each operating program contributes to the District's mission.
4. The development of long-term financial models that identify anticipated trends in community growth and financial resources, designate appropriate capital resources to future District needs, tracks per capita spending growth, and establishes a link between fiscal targets and budgetary expenditure goals.
5. The aggressive and appropriate investment of idle District funds to maximize the generation of interest income, while ensuring adequate cash flow requirements
6. Greater reliance on technology to enhance employee productivity in all areas of District operations and improve customer communications
7. The adoption of a financial philosophy that seeks to spread the cost of significant capital outlay expenditures over an extended period of time to ensure that current and future taxpayers share equally in underwriting the cost of significant public expenditures.

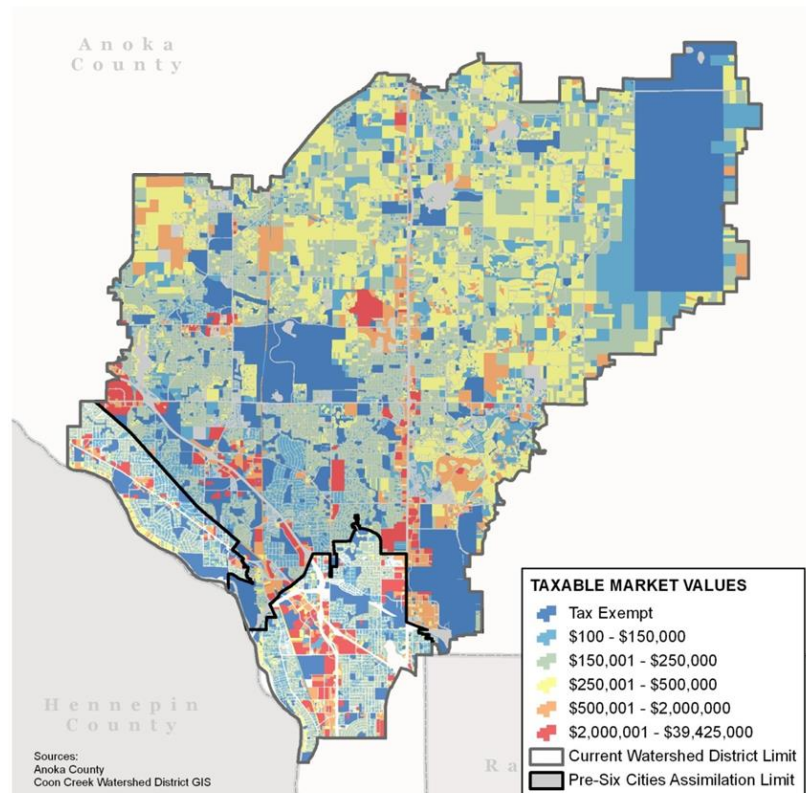
8. Involving all employees in the process of re-engineering the work environment by encouraging cross-training opportunities, reducing and eliminating bureaucratic barriers, streamlining public process requirements, and adopting private sector business values in District operations.
9. Continuously reviewing opportunities to form partnerships with the cities within the watershed and neighboring watershed management organizations to share services and equipment, jointly purchase equipment and develop strategies to deal with local issues using a regional approach

Fiscal Capacity

Taxable Market Value

The taxable market value of the Coon Creek Watershed District in 2012 was approximately \$15.6 Billion occurring as follows

| | | |
|-------------------------|------------------|-----|
| Residential | \$10,134,753,851 | 74% |
| Agriculture | \$ 94,779,249 | 1% |
| Apartments | \$672,975,600 | 5% |
| Commercial & Industrial | \$2,743,600,400 | 20% |



Accounting, Auditing and Financial Reporting Policy

Basis of Accounting

The financial reporting and budgeting systems of the District are organized on a fund basis. A fund is a fiscal and accounting entity with a self-balancing set of accounts. All funds in the budget were prepared using the following basis of accounting, which is consistent with the accounting methods used for financial reporting.

Government Funds All governmental funds are budgeted and maintained on a modified accrual basis for accounting and budgeting. Revenues are recognized in the accounting period in which they become available and measurable. Expenditures are recognized in the accounting period in which the fund liability is incurred. Governmental funds include the General Fund, Special Revenue Funds, Debt Service Funds, and Capital Projects Funds.

Proprietary Funds Proprietary funds are budgeted and maintained on an accrual basis for accounting and budgeting. Revenues are recognized in the accounting period in which they are earned and expenses are recognized in the period in which the liability is incurred. Proprietary funds include Enterprise Funds and Internal Service Funds.

Policies

The Coon Creek Watershed District has adopted the following accounting, auditing and financial reporting policies:

1. The Coon Creek Watershed District will establish and maintain a high standard of accounting practices. Accounting standards will conform to Generally Accepted Accounting Principles (GAAP) as outlined by the Governmental Accounting Standards Board (GASB).
2. At the end of each fiscal year, a Certified Public Accounting firm that will include issuing a financial opinion will conduct an audit of the District records and a management and compliance report on internal controls
3. The Coon Creek Watershed District will maintain a strong internal audit function
4. The District will maintain a fixed asset system to identify and protect all District assets.
5. The Administration Program will prepare monthly financial reports for internal management purposes
6. The District Board of Managers delegates the authority to designate fund balance, as required for prudent fiscal management, to the

District Administrator.

7. Annually, the Administration Program will prepare a comprehensive annual financial report. This report shall be made available to the elected officials, District management, bond-rating agencies, and the general public

Budget Development Process

The Budget Process

Minnesota Statutes require the Watershed District to adopt an annual budget on or before September 15 of each year. In addition District policy requires the District Administrator to submit an annual budget to the District Board of Managers, which accurately reflects the financial needs of the District. Additionally, state law requires that the District Board of Managers to certify a proposed levy to the Anoka County Property Records and Taxation Division also by September 15th

The budget adoption is subject to public hearing and noticing requirements. The date of the hearing is advertised in the District's official newspapers, on the District and municipal web sites

The budget is prepared on an annual basis, and follows the calendar year, January 1st to December 31st.

Policies are set by the Board of Managers in one of two ways

1. Policies are initiated by actions of the Board of Managers at its regular board meetings through adoption of rules, resolutions, or motions
2. Policies are also initiated, studied, and reviewed at special work sessions called for that purpose

The District Administrator and District staff address the Board's concerns in the preparation of the budget and evaluate the financial costs of the implementation of these policies and include them in the budget where economically feasible.

In summary, policy issues are identified by the Board of Managers, evaluated, and costed out by the Administrator, and returned to Board for appropriations if necessary. If no appropriation is necessary, the new policy is implemented as soon as practical by the Administrator.

Each program coordinator is given a monthly financial report of expenditures compared to the adopted budget. Expenditures related to District activities may not exceed appropriations without approval of the

Board of Managers.

Budgeting for District Operations

The District is required to account for revenues and expenditures in accordance with generally accepted accounting principles. Because fund accounting is required for financial reporting, the appropriation budgets are organized and presented in like manner. A brief description of each fund type can be found in Appendix D.

Budget Policies

The District Financial Policies identifies an Operating Budget Policy which includes the process for monitoring and amending the budget, fund balance considerations and the capital improvement budget coordination, those policies are as follows:

1. The formal budgeting process is the primary mechanism by which key decisions are made regarding the levels and types of services to be provided, given the anticipated level of available resources.
 - The District will attempt to maintain its present service level for priority and essential services subject to available revenues. New services will be considered for funding within available resources.
 - The Coon Creek Watershed District will utilize a "bottom-up" resource allocation approach. Each program will have an opportunity to request personnel, goods, capital items and services needed to carry out its responsibilities in a timely manner.
 - The resources to fund the budget will include all revenues reasonably anticipated from all sources and the unreserved undesignated fund balance estimate to be carried forward at the beginning of the fiscal year.
 - The District will utilize procedures that allow programs to integrate priorities and objectives into the budget requests.
2. The operating budget will be adopted annually by the District Board at the fund and program levels (Program Areas and Programs are listed below). The expenditures may not exceed the total for any program, within a fund, without the District Board's approval. The authority to make changes to the adopted District Budget during the operating year is as follows:
 - Board of Manager approval is required for all budget adjustments or transfers that will increase the District's adopted expenditure budget, or adjustments that are made to facilitate a District restructuring.
 - Board of Manager approval is required for any budget adjustment that exceeds either \$10,000 or 5% of a department's expenditure

budget, except that adjustments under \$10,000 may be approved as provided in C. & D. below.

- District Administrator, or their designee when unavailable, approval is required for all budget adjustments or transfers made to **professional services, other program costs** or **capital outlay** under \$10,000 on a one-time basis.
 - Budget adjustments and transfers among expenditure accounts may be authorized during the fiscal year by the District Administrator if there is no effect on a program's of activity gross expenditure budget and the adjustment is not to employee compensation.
 - Under no circumstances should budget adjustments be split to avoid approval limits.
3. The District will budget to maintain fund balances at adequate levels to ensure that sufficient resources are available for current and future expenditures, whether planned or unforeseen.
- The District will budget to maintain an unreserved designation for cash flow for each operating fund, to support operations until current tax revenues are received. Based upon the semi-annual collection of local taxes, each operating fund, relying on property tax related revenues, should maintain cash flow designations at year-end necessary for approximately 5 months of operation.
 - The District will budget to maintain an unreserved fund balance available for contingencies of between 1 percent and 3 percent of budgeted expenditures for each operating fund in order to finance unforeseen items and events that occur during the course of the year. It is not necessary for each fund to hold its own contingency. The General Fund may hold contingencies for other funds when appropriate.
 - All unencumbered appropriations and encumbered purchases less than \$1,000 lapse at year-end. However, the appropriation authority for all major capital projects and capital assets carries forward automatically to the subsequent year. Appropriations for encumbered purchases in excess of \$1,000, which are not budgeted in the ensuing year, may be transferred to the subsequent year with the approval of the District Administrator and Finance Director. The current year appropriation is reduced and the subsequent year appropriation is increased.
4. The District will maintain a budgetary control system to ensure adherence to the budget and will prepare monthly reports, which compare actual revenues, and expenditures to budgeted amounts.

5. The District will coordinate development of the Capital Improvement Budget with the development of the annual operating budget. Each capital improvement project is reviewed for its impact on the operating budget in terms of revenue generation, additional personnel required and additional operating expenses.
6. The capitalization threshold for assets of the Coon Creek Watershed District, as defined in the Fixed Asset Policy, applies to all budgets and purchases associated with the Capital Expenditure series of accounts.
7. Annually, the Planning and Administration programs will prepare an Annual Operating Budget report. This report will be made available to Anoka County Board of Commissioners, Cities, BWSR, District management, and the general public.
8. The District will place its highest budget priority on addressing those issues in the watershed that pose threats to the public health, and safety.
9. The District will use its hydrologic model to forecast the potential threats to the public health, and safety from flooding for budget purposes.
10. The District will prioritize the maintenance of the drainage system based on stream order and volume of flow.
11. District will prioritize capital funding and rehabilitation based on position in the watershed, and effective role in conveying, retaining, or detaining water.
12. The District will continue to support and fulfill its role in providing and coordinating agricultural drainage.
13. To impose a Subwatershed tax to finance projects and programs, the demand for, or need is created by, and attributable to a definable subwatershed, minor subwatershed, or catchment area of the District. The tax shall be used only for those projects and programs for which the need is attributable to the subwatershed, minor subwatershed, or catchment area being taxed..

**Budget and
Levy Process**

These levy authorities highlight the importance of the Comprehensive Plan for CCWD activities. The Plan defines the programs and projects for which the CCWD may exercise its taxing authority. The Minnesota Board of Water and Soil Resources, which oversees watershed district activity, has confirmed that the 103B.241 levy may be used broadly to fund the CCWD Watershed Management Plan preparation and both the administrative and project costs of carrying out the implementation program in the plan.

The basic CCWD budget and levy process is:

1. Each year, the Board approves a budget and sets the amount of the levy for the following year.
2. The Board must, by September 15, certify to the Anoka County Auditors the amount of the CCWD levy for the following year. This levy may be adjusted before a late-December date established by the county auditor.
3. Anoka County includes the CCWD levy in their tax statements, collects the levy, and distributes the proceeds to the CCWD, half the following July and half the January thereafter.

Revenue Sources and Policies

The District Administrator is responsible for compiling all revenue estimates contained in the budget. Estimates are arrived by studying relevant revenue history along with economic trends and indices when available. Discussion regarding specific revenue sources can be found in the annual budget summary. The Coon Creek Watershed District Financial Policies identifies a Revenue Policy that outlines the District's revenue philosophy and that policy is as follows:

**Revenue
Sources****General Property
Taxes**

Property taxes are a revenue source in the General, Special Revenue, Debt Service and Capital Projects Funds. This revenue source is primarily used in the General Fund and Water Management Fund and is determined on the basis of the availability of other revenue sources and the expenditure level necessary to conduct District business in accordance with Board policy and directives.

The 2000-2012 goals for the budget for property taxes were commitment to maintain the District Tax Rate Capacity in a manner consistent with the needs of the organization to ensure the long-term efficiency, staffing and capital requirements. In light of severe budget reductions over the last two

budget cycles, the need to maintain a tax capacity rate that is cognizant of the changing nature of the watershed for District services was reviewed extensively.

Special Assessments Special assessments are a revenue source in the Capital Projects Funds. Special Assessments are used for reimbursing the District's Capital Projects Funds for projects financed internally.

The 2013 to 2023 budget forecast is based on special assessment payment schedules and a review of potential situations (Obstructions or locally benefited projects) within the Coon Creek Watershed District.

Fees and Charges for Services Charges for services comes from a variety of sources in the General and Special Revenue Funds such as project review and inspection services to residential and commercial developers, drainage and mapping services, plat reviews and other miscellaneous charges for dedicated use of District staff.

Other Investment Income This revenue source is in all funds. Investment income is interest earned on investments and is allocated to funds based on average cash balances. Revenues from this source are dependent on interest rates and cash balances available for investment. Revenue from investments is increasing slightly due to an increase in cash balances.

Intergovernmental This revenue source is present in the General, Special Revenue, and Capital Projects Funds. In prior years, this revenue source was comprised primarily of state aid in the form of Homestead and Agricultural Credit Aid (HACA). The Legislature, in the 2001 Legislative Session, eliminated HACA. In 2008, 2009, 2010 and 2011, the Governor unallotted \$196,150, \$350,938, \$490,186 and 490,186 of the Market Value Homestead Credit (MVHC) to help offset the state budget deficits.

In 2012, the MVHC program was eliminated and a market value homestead exclusion program was put in its place. The new program reduced the taxable market values for certain homestead properties. The intergovernmental represents the remaining state aid distributions as well as grants applied for and awarded from other government agencies (federal, state, or county) such as BWSR and DNR grants.

Revenue Policies

1. The District will attempt to maintain a diverse and stable revenue system to shelter it from short run fluctuations in any single revenue source. The revenue mix should combine elastic and inelastic revenue sources to minimize the effect of economic downturns.

2. The District will follow an aggressive policy in collecting revenues.
3. The District will review fees and charges annually in order to keep pace with the cost of providing the service or that percentage of the total cost deemed appropriate by the District, and will conduct a public hearing or adopt a policy, as required by law, prior to setting fees and charges.
4. The District will consider market rates and charges levied by other public and private organizations for similar services in establishing taxes, fees and charges.
5. The district will allocate District-wide revenues to funds which provide services to the entire Watershed District.
6. All revenues, reasonably expected to be unexpended and unencumbered at the end of the year, will be anticipated as “available fund balance” in the budget the following year.
7. The District will attempt to invest all cash holdings through Anoka County and maximize those holdings with an effective payment policy.
8. To impose a localized tax to finance projects and programs, the demand for, or need is created by, and attributable to a localized, definable portion of the watershed. The tax shall be used only for those projects and programs for which the need is attributable to the area being taxed.

Capital Improvement Policies and Funding

Coon Creek’s Capital Improvement Program is intended to provide the Board of Managers and staff with a process for identifying and prioritizing capital projects in order to coordinate the financing and timing of improvements, which maximizes the return to the public. The process will enable the District to evaluate long-term cost and benefits of projects being adopted for the coming year against those projects planned between 2013 and 2023. The Capital Improvement Program follows the following policy:

Capital Improvement Policies

1. A Capital Improvement Plan (CIP) will be developed for a period of ten (10) years and included in the District Comprehensive Plan. As resources are available, the most current year of the CIP will be incorporated into the current year operating budget as the Capital Improvement Budget (CIB). The CIP will be reviewed and updated annually. Years two through ten are for planning purposes only.

2. The District will maintain physical assets in a manner, adequate to protect the District's capital investment and to minimize future maintenance and replacement costs. The District will provide maintenance and replacement from current revenues where possible.
3. To be considered in the Capital Improvement Program, a project must have an estimated cost of at least \$5,000 in one of the calendar years of the project. Projects may not be combined to meet the minimum standard unless they are dependent upon each other. Items that are operating expense (such as maintenance agreements, personal computer upgrades, etc.) will not be considered within the CIP.
4. Capital projects which duplicate other public and/or private services will not be considered.
5. The District will identify the estimated costs and potential funding sources for each capital project prior to inclusion in the CIP. The operating costs to maintain capital projects shall be considered prior to the decision to undertake the capital projects.
6. Capital projects and/or capital asset purchases will receive a higher priority if they meet a majority of the following criteria:
 - a. Mandatory project
 - b. Maintenance project (approved replacement schedules)
 - c. Improve efficiency
 - d. Improve effectiveness
 - e. Elimination of Hazards (improves public safety)
 - f. Replacement due to disaster or loss
 - g. Policy area project
 - h. Prior Commitment (Comp Plan/ SWPPP)
 - i. Complete existing project
 - j. Positive effect on operation and maintenance costs
 - k. New Service or Facility
 - l. Availability of Local/State/Federal grants
7. The CIP is to be presented by the District Administrator annually to the Board of Managers for approval. This presentation will be pursuant to review and comment by the District's Advisory Committees. Any substantive change to the CIP after approval must be approved by the Board of Managers.

**Capital
Improvement**

The District expects that the majority of Capital Improvement Projects will be funded through the District's Minnesota Statutes 103B authorities.

Project Funding

The Metropolitan Water Management Act Fund levy covers the cost of implementing the projects and programs of the District as guided by this Plan.

The planned capital improvement projects to be funded through this plan and the estimated project costs are summarized in CIP later in the Implementation Plan. Each of these projects are described in more detail in that Section. The District will annually review its capital improvement plan to refine the schedule and costs of planned projects as needed.

A watershed district which has adopted a watershed management plan in accordance with Minnesota Statutes 103B.231 may fund capital improvement projects in a number of different ways including:

1. Using its ad-valorem authority under Minnesota Statutes 103B.241 to accumulate funds to pay for capital improvement projects identified in its watershed management plan,
2. Certify for payment by the county all or any part of a capital improvement contained in the capital improvement program of the plan, Minnesota Statute 103B.251.
3. Certification to Anoka County all or parts of a capital improvement project initiated by petition under Minnesota Statutes 103D including assessment levies against the benefited properties.

The District expects that the majority of Capital Improvement Projects will be funded through the District's Minnesota Statutes 103B authorities.

The Projects/Programs Fund levy covers the cost of implementing the projects and programs of the District as guided by this Plan. As discussed in the Administrative, Program, and General Project Funding section above, this levy varies in amount.

This Projects/Programs Fund allows the District to implement water and natural resource related programs, projects and capital improvements. The funds may be accumulated to pay for these projects and programs (Minnesota Statutes 103B.241).

The planned capital improvement projects to be funded through this plan and the estimated project costs are summarized in the Capital Improvement Plan. Each of these projects is described in more detail in that plan.

The District will annually review its capital improvement plan to refine the schedule and costs of planned projects as needed.

Funding for capital improvements may also be supplemented by outside grants and funding partnerships with municipalities or agencies as appropriate to the project.

Local government or District representatives often become aware of opportunities that arise within the context of an infrastructure or private redevelopment project. For water quality elements to be incorporated into the project, or to make use of the retrofit cost efficiencies that the project offers, action often must occur quickly. For these reasons, the District does not intend to undertake further formal amendments to this plan as individual projects are identified. Rather, the District intends to follow a set of steps in reviewing individual proposals that will ensure thorough review and a full opportunity for input from public agencies, watershed residents and other interested parties.

Distribution of Budget Information

Copies of the proposed budget are typically available to the general public beginning the second week in August in the offices of the District Administrator and District Clerk. Notices of the public hearings are published in the District’s official newspaper, the Anoka County Union, along with notices posted on public bulletin boards. Citizens are invited to provide written or oral comments at the public hearings.

The County Property Records and Taxation Division is required to notify each property owner of the impact of the proposed tax levy upon each individual parcel of property along with the final budget hearing date.

Funding Strategy

| Program/ Activity | Property Tax | Water Management Fees ¹ | Revenue Sources | | | |
|-----------------------------|-----------------|--|---|-----------------------|---------------------|--------|
| | | | Subwatershed Taxing District ¹ | Special Assessment | Fees and Charges | Grants |
| Administration | * | | | | | |
| Development Regulation | * | | | | * | * |
| Operations & Maintenance | * | * | * | * | * | * |
| Inspections | * | * | * | | * | * |
| Bank Repair | * | | | | | |
| Channel Repair | * | * | * | * | | |

| | | | | | |
|---------------------------------|---|---|---|---|---|
| WQ Retrofit | * | * | * | * | * |
| Planning | * | | * | | * |
| Special Area Management Plans | * | * | * | | * |
| Public & Governmental Relations | * | | * | | * |
| Research & Monitoring | * | * | * | * | * |

¹ Subwatershed Taxing District: Watershed districts may establish a Subwatershed management district for the purpose of collecting revenues and paying costs of projects initiated under Minnesota Statutes section 103B.231, and Minnesota Statutes sections M103D.601, 605, 611, or 730 (Minnesota Statutes 103D.729).

NOTE: If the Board of Managers chooses to use this funding mechanism, the specific application or situation will be amended into the Comprehensive Plan.

Program Costs

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 10-Year Total |
|--------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------------|----------------|----------------|-------------------|
| Administration | 133,899 | 135,365 | 142,341 | 139,923 | 144,022 | 142,775 | 147,549 | 146,374 | 148,431 | 148,261 | 151,405 | 1,580,345 |
| Develop Regulation | 224,848 | 223,123 | 220,382 | 221,683 | 222,998 | 224,328 | 225,668 | 227,027 | 228,390 | 229,774 | 231,172 | 2,479,393 |
| Operations & Maintenance | 637,403 | 492,390 | 825,942 | 642,682 | 564,696 | 522,365 | 606,330 | 853,977 | 77,980 | 79,788 | 79,255 | 5,382,808 |
| Planning | 354,737 | 291,363 | 318,595 | 148,543 | 141,245 | 109,680 | 70,953 | 56,285 | 99,124 | 86,883 | 75,277 | 1,752,685 |
| Public & Gov Relations | 124,765 | 109,223 | 138,935 | 131,173 | 109,467 | 108,307 | 109,950 | 107,340 | 110,225 | 112,057 | 113,519 | 1,274,960 |
| Research and Monitoring | 69,770 | 65,008 | 61,783 | 66,051 | 66,759 | 72,073 | 64,214 | 79,863 | 69,506 | 70,859 | 82,041 | 767,928 |
| Total | 1,545,421 | 1,316,470 | 1,707,977 | 1,350,055 | 1,249,187 | 1,179,529 | 1,224,664 | 1,470,866 | 733,656 | 727,623 | 732,670 | 13,238,118 |

Means and Methods of Doing Business

This section articulates a strategy for accomplishing the District's goals and objectives effectively at the lowest cost.

Goal

- To create and maintain a management climate that encourages people to do their best in carrying out the District's mission.
- To reliably identify the composition, size, and organization of the work force, after considering alternative approaches to achieve District goals, to the most efficient workforce at the lowest cost.
- Provide a management system to enhance environmental performance and accountability through continual improvement.
- Increase the effectiveness and/or efficiency of District operations
- Promote a high level of consciousness about reducing costs while maintaining an acceptable level of quality of programs and service.
- Eliminate duplication of effort.

Policies

To pursue these goals the Coon Creek Watershed District will:

1. Conduct only essential activities.
2. Accomplish its mission at the lowest cost consistent with program needs.
3. Develop and implement management policies that maintain an adequate quality and quantity level of goods and services required to meet public program objectives.
4. The District will seek innovative and least-cost alternative ways of doing business, and select and manage the work force to achieve assigned program objectives and targets at a satisfactory level of performance.
5. Integrate work force planning into the program budget process, and evaluate its efficiency and effectiveness through management reviews and performance evaluations.
6. Use the comprehensive plan and annual budget process to provide a framework for making staffing decisions based on the District's mission, comprehensive plan, budgetary resources, and a set of

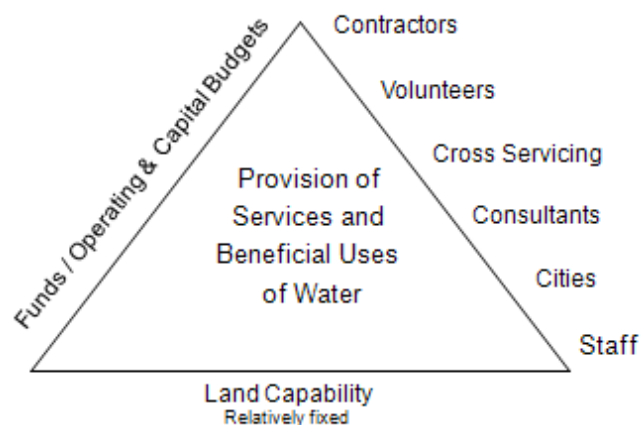
needed workforce competencies.

7. Ensure that all assessments and studies intended to increase program efficiency and effectiveness and/or decrease operating costs assess the potential impacts to the District's legal responsibilities and emergency response capabilities that would result from changes proposed.
8. In conjunction with its mission and guiding principles the District is committed to complying with applicable legal and other requirements, pollution prevention, and continual improvement of the resource.

Ways of Doing Business

Planning for and managing the work force requires the analysis of the numbers and kinds of people and the skills needed to accomplish constantly changing priorities and programs and considers alternative ways of doing business using:

1. District Staff
2. Consultants
3. Volunteers
4. Contracts
5. Grants
6. Cross Servicing
7. New Equipment & Technology



District Staff

At present the District retains 5.5 FTEs. Four of these individuals have professional training in at least one of the traditional natural resource disciplines (forestry, hydrology/watershed management, fisheries and wildlife, and range management), two employees have a BS in biology- one with an emphasis in water quality and one with a minor in communications. Two employees have backgrounds in accounting and economics. Two employees are Masters prepared in their fields.

All of the employees have acquired additional training to acquire or hone necessary field skills in surveying, wetland delineation and erosion and sediment control inspection, and communications and technology. In addition staff have acquired the skills and knowledge needed in hydrologic modeling and GIS.

Professional Services Consultants

The District currently retains six consultants for professional services:

1. Accounting and Payroll
2. Audit Services
3. Computer Support and information Technology Services
4. Engineering Services
5. GIS Services
6. Legal Services

Volunteers

The District benefits from the volunteer efforts of several individuals who read lake gauges within the District.

Volunteers have also helped to clean up a number of different sections of stream within the watershed, picking up trash and litter which is later hauled away by a city public works crew.

Contracts

The District contracts for two types of labor.

First, is an ongoing service contract for three types of ongoing yet intermittent services (Non-Routine):

1. Nuisance Beaver
2. Forestry – Removal of spot obstructions caused by downed trees
3. Excavation – Removal of earthen material and sand bars obstructing or impairing flow caused by erosion and or accumulation of bed load.

Second, is project or construction labor. These projects are large enough that they either require quotes or bids and typically involve:

1. Channel repair
2. Excavation and construction (such as a pond)
3. Construction (water control structures or weirs).

- Grants** Grants have provided a means to perform a variety of work within the District. Work has ranged from special studies on the connection between surface water and ground water to the construction of rain gardens and the retrofitting of existing stormwater facilities to enhance their performance for water quality treatment.
- New Equipment and Technology** In the 2013 budget the District made the first commitment to utilizing technology to enhance staff productivity and to integrate District operations with our collaborators. The District will continue to pursue that strategy.
- Cross-Servicing** Informal cross-servicing has been the most common type of collaboration between the District and the Cities within the watershed. The service has worked for and by both organizations and has ranged from simple “heads up” in sharing observations to taking the lead, when appropriate, in explaining the others goals, objectives and key contacts.
- The District currently has cooperative agreements with the Anoka Conservation District and the City of Blaine. Cooperation and collaboration are central to the implementation strategy of this plan and the implementation section on Partnerships and Collaboration discuss this in detail. At present, the agreements signed by the District stipulate specific services performed either by or for the watershed district.

Programs and Activities

To implement its mission and pursue the goals and permit requirements, the Watershed District operates six programs which oversee 22 basic activities which in turn involve a considerable number of separate tasks.

The programs are:

| | |
|--|-----|
| Administration | 139 |
| Development Regulations and Issue Management | 149 |
| Operations and Maintenance | 165 |
| Planning, Programming and Budgeting | 175 |
| Public and Governmental Relations | 199 |
| Research and Monitoring | 229 |

Administration (9601)

The Purpose of administration is to carry out the approved policies of the Board of Managers, administer the financial affairs of the Coon Creek Watershed District, and ensure the accountability of public funds and serve the District's financial needs.

The Administration Program consists of the following activities:

Activities **Board of Managers:** The District Board of Managers exercises the legislative power of the District by which all matters of policy are determined, as provided by the as provided under applicable law. Board of Managers exercises budgetary control through the adoption of the annual budget, and approval of claims against the District treasury. The Board of Managers also approves capital improvement projects through the adoption of a five year capital improvement plan identifying the District's infrastructure needs. Board of Managers appoints various citizen committees to render advice on legislative and District issues. Members of the Board of Managers respond to citizen concerns and questions by working with District administration to address watershed service issues.

Performance Measure: Number of Board meetings

Building Maintenance: Maintains District facilities including the District Office, so that they are clean, safe and attractive. Responds promptly to landlord to address District staff's maintenance needs. Coordinates contracted maintenance workload with employee schedules to ensure completion.

Contract Administration: Contracted personnel support the District's mission through select services or sets of services. Contractor compensation administrations, enforcement of personnel policies, are essential functions of the activity. Labor relations activities such as negotiations, contract administration, and costing of benefits provide the

District with the ability to interpret and manage labor components of providing District services.

Financial Management: This activity is responsible for administration of the District's financial affairs. This includes maintaining accounting records for all operations, custody and investment of funds, supervision of revenue collection and disbursements of District monies, administration of debt, payroll function, audit and budget preparation. This activity also:

- Issues timely and accurate financial and budget reports, and provides timely and accurate financial information to Board, staff and other parties for decision-making purposes.
- Performs all payroll functions including the accurate processing of bi-weekly payrolls and the timely submission of taxes and other benefit payments.
- Maintains the treasury and manages the District's outstanding debt, providing for the timely issuance of debt instruments.
- Produces the District's annual operating budget and the Comprehensive Annual Financial Report.
- Maintains an accurate special assessment register.
- Provides funding for the state-mandated independent audit of the District's financial activities, and for property assessment services provided by Anoka County
- Accounting
- Purchasing and Accounts Payable
- Payroll

Information Systems: Provide end-user support for computing/ technology and phone needs. Lead the investigation and appropriate implementation of technology for the watershed district, within the framework of budgeting, needs and capabilities. Supports, maintains, administers and upgrades technology as it is installed in city offices. Continues rollout of document imaging system for all remaining target departments, given budget and timeframe considerations for each.

Legal: Provides legal advice and representation of the District in carrying out its statutory powers and obligations:

- Includes attending Board meetings and
- Providing guidance in preparing contracts, leases, and joint powers agreements that the District may become involved with.

Personnel Administration & Training: Personnel activities support the District's human resource needs in the areas of recruitment, selection, development, training and assessment of organizational needs. Employee benefits, compensation administration, enforcement of personnel policies, and compliance with state and federal employment laws are essential functions of the activity. Labor relations activities such as negotiations,

contract administration, grievance processing and costing of benefits provide the District with the ability to interpret and manage labor components of providing District services. Conducting and facilitating employee training in the areas of customer service, safety training and programs designed to enhance the productivity and performance of the organization.

- Facilitates the assessment of human resource needs, and recruits candidates and manages the selection process to fill those needs.
- Processes employee grievances when necessary.
- Facilitates training opportunities for District personnel
- Administers compensation and benefits packages.

Records Management: is responsible for protecting and preserving and disposing all District records from deterioration, mutilation, loss or destruction, and see that those records are eventually properly archived or disposed of.

Risk Management: is the identification, assessment, and prioritization of risks (the effect of uncertainty on objectives, whether positive or negative) followed by coordinated and economical application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events or to maximize the realization of opportunities.

The strategies to manage risk typically include:

- Transferring the risk to another party (Insurance),
- Avoiding the risk,
- Reducing the negative effect or probability of the risk, or even
- Accepting some or all of the potential or actual consequences of a particular risk.

Performance Measure/ Outcome Input measures and counts: Number of

- Board Meetings
- Agenda Items
- Financial Reports
- Staff Reviews

Outcome Measures:

- Annual Financial Report and Audit
- Annual Report
- Records Destroyed according to disposal policy

Means Board of Managers
District Staff
Professional Services

**Partners/
Collaborators** Anoka County

**Potential Program
Funding Sources** Funding for the Administration program is expected to be primarily through the District's annual property tax levy.

Cost Average annual cost over ten years is expected to be \$116,600

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|----------------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Board Meetings | Number of Discussion Items | 50 | 51 | 51 | 52 | 52 | 53 | 53 | 54 | 54 | 55 | 55 |
| | Number of Informational Items | 30 | 30 | 31 | 31 | 31 | 32 | 32 | 32 | 32 | 33 | 33 |
| | Number of Meetings | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 |
| | Number of Permit Items | 45 | 45 | 46 | 46 | 47 | 47 | 48 | 48 | 49 | 49 | 50 |
| | Number of Policy Items | 150 | 152 | 153 | 155 | 156 | 158 | 159 | 161 | 162 | 164 | 166 |
| | Per Diem Cost | \$8,625 | \$8,625 | \$8,625 | \$8,625 | \$8,625 | \$8,625 | \$8,625 | \$8,625 | \$8,625 | \$8,625 | \$8,625 |
| Building Maintenance | Cost | \$21,998 | \$23,201 | \$26,812 | \$26,812 | \$27,213 | \$27,347 | \$27,347 | \$27,347 | \$27,347 | \$27,347 | \$27,347 |
| | Number of Issues | 10 | 5 | 3 | 5 | 4 | 6 | 4 | 7 | 5 | 8 | 6 |
| | Arrange for obtaining quantitative precipitation forecasts and assisting with timely flood or high water warnings to expedite damage control activities | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Develop formal agreements for municipal supply watersheds | 1 | 1 | 1 | | | | | | | | |
| Contract Admin | Execute an Interagency Agreement specifying actions and other terms of agreement, when water measurement data is furnished to another agency on a regular schedule | 1 | 1 | 1 | 1 | 1 | 1 | | | | | |
| | Prepare memorandums of understanding and cooperative agreements when necessary | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | | | | | | | | | | | |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|----------------------|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | Review and approve memorandums of understanding or cooperative agreements between the watershed district and other federal, state and local governments involved in water management | \$800 | \$800 | \$1,200 | \$800 | \$800 | \$800 | \$1,200 | \$800 | \$800 | \$800 | \$1,200 |
| | Professional Services Solicitation of Interest Proposals | \$1,876 | | \$1,914 | | \$1,952 | | \$1,991 | | \$2,031 | | \$2,071 |
| Financial Management | Anoka County Accounting Costs | \$3,996 | \$3,996 | \$3,996 | \$4,116 | \$4,239 | \$4,367 | \$4,498 | \$4,632 | \$4,771 | \$4,915 | \$5,062 |
| | Audit Costs | \$13,500 | \$13,635 | \$13,771 | \$13,909 | \$14,048 | \$14,189 | \$14,331 | \$14,474 | \$14,619 | \$14,765 | \$14,912 |
| | Performs all payroll functions including the accurate processing of bi-weekly payrolls | \$819 | \$819 | \$819 | \$819 | \$819 | \$819 | \$819 | \$819 | \$819 | \$819 | \$819 |
| | Produces the District's Comprehensive Annual Financial Report | \$1,680 | \$1,680 | \$1,680 | \$1,680 | \$1,680 | \$1,680 | \$1,680 | \$1,680 | \$1,680 | \$1,680 | \$1,680 |
| | Purchasing and Accounts Payable | \$7,744 | \$7,821 | \$7,900 | \$7,979 | \$8,058 | \$8,139 | \$8,220 | \$8,303 | \$8,386 | \$8,469 | \$8,554 |
| | Timely and accurate financial and budget reports, and financial information to Board, staff and other parties for decision-making purposes and the timely submission of taxes and other benefit payments. | \$672 | \$672 | \$672 | \$672 | \$672 | \$672 | \$672 | \$672 | \$672 | \$672 | \$672 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Information Systems | Provide end-user support for computing/ technology and phone needs. Lead the investigation and appropriate implementation of technology for the watershed district, within the framework of budgeting, needs and capabilities. Supports, maintains, administers and upgrades technology as it is installed in District offices. Continues rollout of document imaging system for all remaining target departments, given budget and timeframe considerations for each | \$ 6,876 | \$ 6,979 | \$ 7,084 | \$ 7,190 | \$ 7,298 | \$ 7,407 | \$ 7,519 | \$ 7,631 | \$ 7,746 | \$ 7,862 | \$ 7,980 |
| Legal | Provides legal advice and representation of the District in carrying out its statutory powers and obligations | \$30,491 | \$30,796 | \$31,104 | \$31,415 | \$31,729 | \$32,046 | \$32,367 | \$32,690 | \$33,017 | \$33,348 | \$33,681 |
| Personnel Admin | Administers compensation and benefits packages | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| | Facilitates the assessment of human resource needs, and recruits candidates and manages the selection process to fill those needs. | | 1 | | | 1 | | | 1 | | | 1 |
| | Processes employee grievances when necessary | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Records Retention & Disposal | Dispose of bids & specs for years prior to | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| | Dispose of Budget work papers for budget years prior to | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| | Dispose of Conference & Workshop Info | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | Dispose of Contracts & Leases | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
| | Dispose of Employment Apps & Resumes | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| | Dispose of Expired Service Contracts | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| | Dispose of Financial Details | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| | Dispose of Separated Personnel files | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| | Dispose of Timesheets | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| Risk Management | Insurance Claims | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 2 | 0 | 3 | 0 |
| | Projected Insurance Cost | \$9,224 | \$9,501 | \$9,786 | \$10,079 | \$10,382 | \$10,693 | \$11,014 | \$11,344 | \$11,685 | \$12,035 | \$12,396 |
| Training | Best Management Practices | | \$600 | | | | | \$ 600 | | | | |
| | Conferences and Workshops | \$3,245 | \$3,245 | \$ 3,342 | \$ 3,342 | \$ 3,375 | \$ 3,409 | \$ 3,443 | \$ 3,478 | \$ 3,512 | \$ 3,548 | \$ 3,583 |
| | Construction Site Management | \$ 600 | | | | | \$ 600 | | | | | \$ 600 |
| | Design of Construction SWPPPs | | | | | \$ 600 | | | | | \$ 600 | |
| Training | Ensure that licensing and certification of Watershed District personnel performing animal damage management activities comply with applicable federal and state regulations | \$ 20 | \$ 20 | \$ 20 | \$ 20 | \$ 20 | \$ 20 | \$ 20 | \$ 20 | \$ 20 | \$ 20 | \$ 20 |
| | Hours of Training | 100 | 100 | 102 | 103 | 105 | 106 | 108 | 109 | 111 | 113 | 114 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | Identify and implement training and technical assistance for employees to ensure professional development and achieve long-range position management objectives. | \$ 3,245 | \$ 3,277 | \$ 3,310 | \$ 3,343 | \$ 3,377 | \$ 3,411 | \$ 3,445 | \$ 3,479 | \$ 3,514 | \$ 3,549 | \$ 3,584 |
| | Illicit Discharge Detection & Elimination | | | \$ 600 | | | | | \$ 600 | | | |
| | Number of Conferences/Workshops/ Webinars | 10 | 10 | 10 | 10 | 11 | 11 | 11 | 11 | 11 | 11 | 12 |
| | P8 Modeling | | | | \$ 600 | | | | | \$ 600 | | |
| | Provide technical guidance and technical training necessary for hydrologic survey, analyses, and studies undertaken by the Coon Creek Watershed District | | | | | \$ 600 | | | | | \$ 600 | |
| | Regulatory Enforcement | | \$ 600 | | | | | \$ 600 | | | | |
| | Volume Control | | | \$ 600 | | | | | \$ 600 | | | |
| | Wetland Delineation | | | \$ 600 | | | | | \$ 600 | | | |
| | Wetland Functions & Values Assessment | | \$ 600 | | | | | \$ 600 | | | | |

**Development
Regulations and
Issue Management
(9602)**

The purpose of development regulation is to evaluate, permit, and monitor plans and programs affecting the water and related land resources of the District in an orderly and informed fashion

The Development Regulation and Issue Management Program consist of five activities:

Environmental Review (includes comments on DNR and Corps of Engineers permits): The intent of this activity is to review and evaluate the potential for significant impact on the water and related land resources of the watershed. Environmental review within the District is largely restricted to DNR protected waters and appropriate permits, review of State Environmental Assessment Worksheets (EAWs) and Environmental Impact Statements (EISs) when they occur. The District review is guided by the District performance standards for the various resource concerns within the watershed.

Issues and Complaints: To facilitate work necessary to protect and preserve life or property. When emergency work is required, the person performing the work shall report the pertinent facts relating to the work to the District Administrator or District Engineer prior to the commencement of the work.

Pre-Application Meeting: Any applicant may request an informal conference with the District Administrator (and/or District Engineer) prior to filing an application.

The purpose of the pre-application conference shall be to openly consider the proposals, concerns, and requirements of the applicant and the District.

Permit Review: Permit review will involve making findings on the following elements as they relate to the rules, regulations, principles and standards of the District. To review the completeness, accuracy and consistency of the application and/or information based on the standards and guidelines of the District and sound scientific principles.

Permit Issuance: To regulate land-disturbing activities affecting the quality, course, current or cross section of ditches and watercourses

Permit Inspection: To ensure compliance with permit requirements and the goals, objectives and rules of the District.

1. To ensure that the approved plan is implemented,
2. Provide the landowner with technical assistance as needed
3. Provide a means to determine if changes to the plan are necessary,
4. Observe and document deviations from the plan as they occur

Permit Enforcement & Illicit Discharge Detection & Elimination: To encourage voluntary rule compliance by providing residents, property owners, and tenants the opportunity, with sufficient notice and information, to comply with the Coon Creek Watershed District Rule and other applicable laws and requirements.

The District will maintain a zero tolerance to violations of federal, state and local water and related land resource laws, including wetland fill and degradation of the States waters.

Final Inspections, Project Close Outs & Escrow Returns: To ensure completion of construction activity on site and compliance with the approved and permitted plans/activity.

Performance Measure / Outcome Input Measures: Number of:

- Applications
- Permit Reviews
- Inspections
- Enforcement Actions

Outcome Measures:

- BMPs and SWPs built to specification
- Flood Damage avoided

Means Staff
Professional Services

Potential Partners/ Collaborators Anoka Conservation District
Cities
State and Federal Agencies
Volunteers in AIS efforts

Potential Funding Sources Funding for the Development Regulation and Issue Management program is expected to be primarily through the District’s annual property tax levy but will be augmented ostensibly through Fees.

Cost Average annual cost over ten years is expected to be \$137,200

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------------------------|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Enforcement: Actions | Cease & Desist Order | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Notice of Apparent Violation | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| | Notice of Obstruction | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| | Notice of Violation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Request City to Withhold Certificate of Occupancy | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| | Stop Work Order | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Utilization of Escrow Funds to Remedy Situation | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Verbal Warnings | 136 | 137 | 139 | 140 | 142 | 143 | 144 | 146 | 147 | 149 | 150 | |
| Enforcement: Violation | Failure to comply with permit or approved plan | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | Failure to maintain or repair BMPs or STPs | 10 | 9 | 9 | 9 | 9 | 9 | 9 | 10 | 10 | 10 | 10 |
| | Failure to maintain site in Good condition | 10 | 10 | 10 | 10 | 10 | 10 | 11 | 11 | 11 | 11 | 11 |
| | Failure to meet standards | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | Failure to use BMPs to stop erosion & sedimentation | 10 | 10 | 10 | 10 | 10 | 10 | 11 | 11 | 11 | 11 | 11 |
| Enforcement: Violation | False information | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-------------------------------|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | Illicit Connection | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | Illicit Discharge | 10 | 11 | 11 | 11 | 11 | 11 | 12 | 12 | 12 | 12 | 12 |
| | Obstruction | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | Submittal of As Built | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Wetland Drainage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Wetland Excavation | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Wetland Fill | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | Work without a permit | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Environmental Review | Cost | \$ 3,200 | \$ 3,200 | \$ 3,232 | \$ 3,264 | \$ 3,297 | \$ 3,330 | \$ 3,363 | \$ 3,397 | \$ 3,431 | \$ 3,465 | \$ 3,500 |
| | Maintain case folders for municipal supply watersheds | \$ 1,200 | \$ 1,212 | \$ 1,224 | \$ 1,236 | \$ 1,249 | \$ 1,261 | \$ 1,274 | \$ 1,287 | \$ 1,299 | \$ 1,312 | \$ 1,326 |
| | Number of DNR Permits | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 |
| | Number of EAWs | 1 | | | | | 1 | | | | | 1 |
| | Number of Environmental Reviews | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 |
| Final Inspections & close Out | Fees withheld by District | \$30,000 | \$30,300 | \$30,603 | \$30,909 | \$31,218 | \$31,530 | \$31,846 | \$32,164 | \$32,486 | \$32,811 | \$33,139 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | Number of Final Inspections conducted | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| | Number of Project Close Outs | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| | Value of Escrows Returned | \$90,000 | \$90,000 | \$90,000 | \$90,000 | \$90,000 | \$90,000 | \$90,000 | \$90,000 | \$90,000 | \$90,000 | \$90,000 |
| Inspection | Develop a watercraft inspection program | \$ 3,000 | \$ 3,030 | | | | | | | | | |
| | Develop guidelines for water access inspections | \$ 1,000 | \$ 1,000 | | | | | | | | | |
| | Provide ongoing review of implementation and post-implementation phases of the proposed action to ensure that all provisions associated with the action, including appropriate mitigating measures as identified in the permit review, are fully implemented. | \$ 9,844 | \$ 9,942 | \$10,042 | \$10,142 | \$10,243 | \$10,346 | \$10,449 | \$10,554 | \$10,659 | \$10,766 | \$10,874 |
| | Encourage the utilization of all appropriate BMPs for erosion and sediment control and storm water management. | \$ 2,250 | \$ 2,273 | \$ 2,295 | \$ 2,318 | \$ 2,341 | \$ 2,365 | \$ 2,388 | \$ 2,412 | \$ 2,436 | \$ 2,461 | \$ 2,485 |
| Permit | Limit permit holder responsibility to that necessary for the intended use. Avoid assigning responsibility for | \$ 625 | \$ 631 | \$ 638 | \$ 644 | \$ 650 | \$ 657 | \$ 663 | \$ 670 | \$ 677 | \$ 684 | \$ 690 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-------------------|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | major repair. | | | | | | | | | | | |
| | To ensure performance of permit requirements through collection of sureties. | \$ 7,500 | \$ 7,575 | \$ 7,651 | \$ 7,727 | \$ 7,805 | \$ 7,883 | \$ 7,961 | \$ 8,041 | \$ 8,121 | \$ 8,203 | \$ 8,285 |
| Permit Inspection | Cost of Inspections | \$323,700 | \$326,937 | \$330,206 | \$333,508 | \$336,844 | \$340,212 | \$343,614 | \$347,050 | \$350,521 | \$354,026 | \$357,566 |
| | Ensure compliance with permit requirements and the goals, objectives and rules of the District. | \$10,000 | \$10,100 | \$10,201 | \$10,303 | \$10,406 | \$10,510 | \$10,615 | \$10,721 | \$10,829 | \$10,937 | \$11,046 |
| | Monitor resource management activities, and soil conditions and trends to ensure that soil and water conservation practices are implemented and effective. | \$10,000 | \$10,100 | \$10,201 | \$10,303 | \$10,406 | \$10,510 | \$10,615 | \$10,721 | \$10,829 | \$10,937 | \$11,046 |
| | Number of Inspections | 170 | 172 | 173 | 175 | 177 | 179 | 180 | 182 | 184 | 186 | 188 |
| Permit Issuance | Organize to assign through Stormwater permits or Stormwater agreements responsibility for Stormwater improvement maintenance to Stormwater permittee | \$ 3,000 | | | | | | | | | | |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Permit Review | Analyze proposed actions affecting floodplains or involving new construction in wetlands to assess the specific flood hazards; | \$ 6,000 | \$ 6,060 | \$ 6,121 | \$ 6,182 | \$ 6,244 | \$ 6,306 | \$ 6,369 | \$ 6,433 | \$ 6,497 | \$ 6,562 | \$ 6,628 |
| | Determine the direct and indirect effects of water resource projects upon designated parks and open space and vice versa | \$ 999 | \$ 1,009 | \$ 1,019 | \$ 1,029 | \$ 1,040 | \$ 1,050 | \$ 1,060 | \$ 1,071 | \$ 1,082 | \$ 1,093 | \$ 1,104 |
| | Determine the impacts of the proposal on those hazards and values; | \$ 1,500 | \$ 1,515 | \$ 1,530 | \$ 1,545 | \$ 1,561 | \$ 1,577 | \$ 1,592 | \$ 1,608 | \$ 1,624 | \$ 1,641 | \$ 1,657 |
| | Determine whether the proposed action is located in the 100-year floodplain for critical actions); or whether it has the potential to affect a floodplain or indirectly support floodplain development. If not, or if an action is of an emergency nature. A critical action is any action for which even a slight chance of flooding would be too great | \$ 999 | \$ 1,009 | \$ 1,019 | \$ 1,029 | \$ 1,040 | \$ 1,050 | \$ 1,060 | \$ 1,071 | \$ 1,082 | \$ 1,093 | \$ 1,104 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Permit Review | Do not rely on management practices to provide pure drinking water. Use only proven techniques in management prescriptions for municipal supply watersheds | \$ 431 | \$ 436 | \$ 440 | \$ 444 | \$ 449 | \$ 453 | \$ 458 | \$ 462 | \$ 467 | \$ 472 | \$ 476 |
| | Ensure that all documents conveying interest in or authorizing use of floodplains and wetlands within the Watershed District contain restrictions that will reduce the risk of loss and preserve the beneficial values served by floodplains and wetlands | \$ 3,750 | \$ 3,788 | \$ 3,825 | \$ 3,864 | \$ 3,902 | \$ 3,941 | \$ 3,981 | \$ 4,021 | \$ 4,061 | \$ 4,101 | \$ 4,142 |
| Permit Review | Ensure that all practicable and necessary mitigating measures are incorporated in specifications for the proposed action, and that the implementation of the selected action is accomplished in a manner that to the extent practicable, restores and preserves | \$ 4,500 | \$ 4,545 | \$ 4,590 | \$ 4,636 | \$ 4,683 | \$ 4,730 | \$ 4,777 | \$ 4,825 | \$ 4,873 | \$ 4,922 | \$ 4,971 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------------|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | the natural and beneficial values served by floodplains and preserves and enhances the natural and beneficial values of wetlands. | | | | | | | | | | | |
| Permit Review | Ensure that design, construction, or rehabilitation of lands within the Watershed District is in accordance with standards and criteria outlined in the National Flood Insurance Program using flood-proofing measures and structural elevation, where practicable. | \$ 1,665 | \$ 1,682 | \$ 1,698 | \$ 1,715 | \$ 1,733 | \$ 1,750 | \$ 1,767 | \$ 1,785 | \$ 1,803 | \$ 1,821 | \$ 1,839 |
| | Ensure that flood hazards, floodplain and wetland values, and all alternatives that affect a floodplain or that involve new construction in wetlands are fully considered in the Watershed District planning and decision | \$ 3,999 | \$ 4,039 | \$ 4,079 | \$ 4,120 | \$ 4,161 | \$ 4,203 | \$ 4,245 | \$ 4,287 | \$ 4,330 | \$ 4,374 | \$ 4,417 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------------|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | making processes | | | | | | | | | | | |
| | Ensure that soils within the Watershed District are conserved and protected in order to maintain healthy watersheds that provide critical ecological services | \$ 1,998 | \$ 2,018 | \$ 2,038 | \$ 2,059 | \$ 2,079 | \$ 2,100 | \$ 2,121 | \$ 2,142 | \$ 2,164 | \$ 2,185 | \$ 2,207 |
| Permit Review | Formulate and evaluate land and resource management options; identify practicable alternative action or location; and determine whether the "no action" option is practicable | \$ 2,250 | \$ 2,273 | \$ 2,295 | \$ 2,318 | \$ 2,341 | \$ 2,365 | \$ 2,388 | \$ 2,412 | \$ 2,436 | \$ 2,461 | \$ 2,485 |
| | Identify and evaluate mitigating measures that will minimize the potential adverse impacts of the action if avoidance cannot be achieved, and measures that will preserve and restore or enhance the natural and beneficial floodplain values that would be adversely | \$ 1,875 | \$ 1,894 | \$ 1,913 | \$ 1,932 | \$ 1,951 | \$ 1,971 | \$ 1,990 | \$ 2,010 | \$ 2,030 | \$ 2,051 | \$ 2,071 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------------|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | impacted by the action. | | | | | | | | | | | |
| Permit Review | Identify and evaluate practicable alternatives to locating a proposed action in a floodplain, including alternative sites outside the floodplain, alternative actions serving the same purpose as the proposed action, and the "no action" option. | \$ 1,250 | \$ 1,263 | \$ 1,275 | \$ 1,288 | \$ 1,301 | \$ 1,314 | \$ 1,327 | \$ 1,340 | \$ 1,354 | \$ 1,367 | \$ 1,381 |
| | Identify the direct or indirect adverse impacts associated with the occupancy or modification of the floodplain and the potential direct and indirect support of floodplain development that could result from the proposed action. | \$ 1,250 | \$ 1,263 | \$ 1,275 | \$ 1,288 | \$ 1,301 | \$ 1,314 | \$ 1,327 | \$ 1,340 | \$ 1,354 | \$ 1,367 | \$ 1,381 |
| Permit Review | Modify plans, activities, and designs to minimize impacts of the action and to mitigate its effects on the natural and beneficial values of the floodplain or wetland in all actions where an alternative to an action in or | \$ 1,500 | \$ 1,515 | \$ 1,530 | \$ 1,545 | \$ 1,561 | \$ 1,577 | \$ 1,592 | \$ 1,608 | \$ 1,624 | \$ 1,641 | \$ 1,657 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------------|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | affecting the floodplain or new construction in a wetland is not practicable | | | | | | | | | | | |
| | Monitor, evaluate and permit plans and programs affecting the water and related land resources of the District. | \$ 4,500 | \$ 4,545 | \$ 4,590 | \$ 4,636 | \$ 4,683 | \$ 4,730 | \$ 4,777 | \$ 4,825 | \$ 4,873 | \$ 4,922 | \$ 4,971 |
| Permit Review | Notify the appropriate city and public at the earliest possible time of any plan or proposal to undertake, support, or allow an action which would result in the occupancy, modification, or development in a floodplain, and involve the affected and interested public in the decision making process. | \$ 750 | \$ 758 | \$ 765 | \$ 773 | \$ 780 | \$ 788 | \$ 796 | \$ 804 | \$ 812 | \$ 820 | \$ 828 |
| | Number of Permit Applications | 60 | 60 | 61 | 61 | 62 | 62 | 63 | 64 | 64 | 65 | 66 |
| | Number of Permit Reviews by Board of Managers | 35 | 35 | 35 | 36 | 36 | 36 | 37 | 37 | 38 | 38 | 38 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------------|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | Pre-Application Meeting | 23 | 25 | 25 | 26 | 26 | 26 | 26 | 27 | 27 | 27 | 27 |
| | Prepare and provide the public with a finding and public explanation of any final decision that there is no practicable alternative to locating an action in, or adversely affecting, a floodplain. | \$ 6,563 | \$ 6,628 | \$ 6,694 | \$ 6,761 | \$ 6,829 | \$ 6,897 | \$ 6,966 | \$ 7,036 | \$ 7,106 | \$ 7,177 | \$ 7,249 |
| Permit Review | Prohibit the taking of threatened and endangered species of plants and animals except under MDNR or FWS permits. Prohibit the collection or taking of sensitive plants except as authorized by state policy | \$ 844 | \$ 852 | \$ 861 | \$ 869 | \$ 878 | \$ 887 | \$ 896 | \$ 905 | \$ 914 | \$ 923 | \$ 932 |
| | Quantify floodplain or wetland values of the areas; Require flood hazard and wetlands evaluations prior to issuing of permits, or grants-in-aid, and provide assistance to applicants in obtaining help to make such | \$ 2,250 | \$ 2,273 | \$ 2,295 | \$ 2,318 | \$ 2,341 | \$ 2,365 | \$ 2,388 | \$ 2,412 | \$ 2,436 | \$ 2,461 | \$ 2,485 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------------|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | evaluations in their proposals | | | | | | | | | | | |
| Permit Review | Require public and private recreation facilities to protect soil, vegetation, and other resources to protect water and related resources Support proper abandonment of unused wells To ensure compliance with permit requirements and the goals, objectives and rules of the District | \$ 394 | \$ 398 | \$ 402 | \$ 406 | \$ 410 | \$ 414 | \$ 418 | \$ 422 | \$ 426 | \$ 431 | \$ 435 |
| | Use chemical, physical, and biological soil properties to assess existing soil condition for watershed condition and ecological assessments | \$ 3,094 | \$ 3,125 | \$ 3,156 | \$ 3,187 | \$ 3,219 | \$ 3,252 | \$ 3,284 | \$ 3,317 | \$ 3,350 | \$ 3,384 | \$ 3,417 |
| Permits | Certificates of No-Loss | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Number of Best Management Practices | 140 | 141 | 143 | 144 | 146 | 147 | 149 | 150 | 152 | 153 | 155 |
| | Number of Permit Renewals/ Extensions | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-------------------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | Number of Permits | 30 | 30 | 31 | 31 | 31 | 32 | 32 | 32 | 32 | 33 | 33 |
| | Number of Pre-Construction Meetings | 15 | 15 | 15 | 15 | 16 | 16 | 16 | 16 | 16 | 16 | 17 |
| | Number of WCA Exemptions | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Variances to Rules | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Pre-Application Meeting | Define specific locations during the preliminary phases of project planning for proposed development within floodplains or wetlands. | \$ 1,725 | \$ 1,742 | \$ 1,760 | \$ 1,777 | \$ 1,795 | \$ 1,813 | \$ 1,831 | \$ 1,849 | \$ 1,868 | \$ 1,887 | \$ 1,905 |

Operations and Maintenance (9603)

The purpose of the Operations and Maintenance program is the planning, design, construction and maintenance of the District's public ditch system and water control structures, and to preserve the location, character, and extent of the ditch and conveyance system within the District.

The Operations & Maintenance program consists of the following activities:

Routine Maintenance: Routine maintenance is intended to be preventive or predictive in nature. Activities include:

1. **Inspections:** The District is required to inspect the components of the watershed's stormwater system that is within the District's operational jurisdiction. Some features are inspected annually (dams and control structures). Other features are inspected every five years (public ditches). In some instances inspections may occur semi-annually. It is also necessary to inspect a feature any time that the capacity of a given feature is exceeded or surpassed.
2. **Litter & Debris Removal:** Regular removal of debris and litter can be expected to help in the following areas:
 - Reduce chances of clogging outlet structures and trash racks
 - Reduce chances of diverting or deflecting flow into ditch bank and causing erosion
 - Prevent damage to vegetated areas
 - Reduce mosquito breeding habitats
 - Maintain ditch or facility appearance
 - Reduce condition for excessive algae growth

Special attention should be given to the removal of floating debris which can clog inlet and outlet devices or divert flows in the creek bank. If trash is particularly bad, outreach to the local watershed may help

3. **Vegetation & Ground Cover Management:** Most BMPs rely on vegetation to filter sediment from stormwater before it reaches the BMP and prevent erosion of the banks and the bottom of the facility. Turf grass is the most common groundcover – although many BMPs use woody vegetation (rain gardens) and wetland plants to increase pollutant removal.
4. **Access Management:** Most District facilities are designed so that heavy equipment can safely and easily reach the facility for non-routine maintenance. Routine maintenance of these areas is particularly important since one never knows when emergency access will be needed. Maintenance includes removal of woody vegetation and can involve removal or relocation of landscaping or structures such as tool sheds.

Non-Routine Maintenance: Non-routine maintenance involves repairs that are unplanned and corrective in nature. While infrequent, non-routine maintenance can be a major undertaking. While tasks will vary by facility, they typically involve sediment/pollution removal and replacement of components:

1. **Cleanout Trees and Sediment:** Trees and sediment naturally accumulate in ditches and stormwater facilities and eventually need to be removed. Facilities and portions of ditch systems vary so dramatically in terms of removal requirements, that there are no fast “rules of thumb” to guide maintenance. For instance, ephemeral portions of the system (1st and 2nd order streams) should be cleared of sediment once a significant portion of the ditch volume (25-50%) has been filled (2-10 years). For portions of the system that act as collectors or trunk conveyances, signs of sediment accumulation (20% of ditch volume or 3 feet above approved elevation), algae blooms, or obstruction by trees or vegetation, the channel needs to be excavated to its as-built elevation to restore positive drainage (5-15 years). In all cases, standing water visible after 24 hours on drainage dependent land uses (sod, root crops, golf courses) indicates the need for immediate maintenance.
2. **Structural Repair:** A stable embankment is important to ensure that erosion does not contribute to water quality problems and that embankments are not breached, resulting in downstream flooding

Repair and Rehabilitation: Eventually, like most infrastructure, system components will need to be replaced or reconstructed. System components/facilities may include:

- Ditch Channel
- Earthworks such as embankments
- Ditch/stream banks and side slopes
- Weirs and Ditch plugs
- Inflow and outflow devices

While most structures will last for a long time with proper maintenance, the District should plan long in advance for replacing these facilities.

Construction Retrofit and Rehabilitation: This activity includes the new construction or modification of drainage or stormwater facilities or the increase in capacity of existing systems.

Performance Measure / Outcome Stormwater facility maintenance is performed to meet desired outcomes. Maintenance desired outcomes are specific for each drainage feature or activity. They include maintaining performance and appearance of the

facility, and the need to prevent maintenance work itself from becoming a pollutant source or damaging habitat.

The Water Quality Outcomes are:

- Avoid and minimize sediment and pollution discharges from the work area
- Prevent drainage systems, facilities and property from becoming pollutant sources
- Avoid or minimize vegetation removal
- Preserve native plants

The Infrastructure Maintenance Outcomes are:

- Protect public health and safety
- Prevent catastrophic infrastructure failures
- Maintain or restore the intended infrastructure function
- Prevent or reduce flooding
- Protect infrastructure
- Meet public expectations for aesthetics

Means and Strategies Staff
Professional Services
Hired Contractors
Volunteers on Rain Gardens and more local Stormwater Treatment Devices (STDs)

Potential Partners/ Collaborators The primary partners in the operation and maintenance of the water resource system will be the cities of Andover, Blaine, Columbus, Coon Rapids, Fridley, Ham Lake, Spring Lake Park.
The Crooked Lake Area Association

Potential Funding Sources Funding for the Operations and Maintenance program is expected to be primarily through the District's annual property tax levy but may include grants and or matching funds from the District's member cities.

Value Projected Average Value is \$489,346 per year.

Cost Average annual cost – equipment and materials over ten years is expected to be \$131,500.

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| AIS Detection & Control | Continue existing control programs | \$5,500 | \$5,665 | \$5,835 | \$6,010 | \$6,190 | \$6,376 | \$6,567 | \$6,764 | \$6,967 | \$7,176 | \$7,392 |
| Construction Retrofit & Rehabilitation | Cost of Water Quality Retrofit Projects | \$462,627 | \$333,597 | \$607,077 | \$469,666 | \$420,000 | \$329,690 | \$472,362 | \$774,880 | | | |
| | Number of Water Quality Retrofit Projects | 6 | 2 | 1 | 13 | 2 | 1 | 2 | 3 | | | |
| Non-Routine Maintenance | Cost of Beaver Removal | \$2,600 | \$1,300 | \$1,560 | \$2,600 | \$1,300 | \$1,560 | \$2,600 | \$1,300 | \$1,560 | \$2,600 | \$1,300 |
| | Cost of Sediment Removal | \$21,445 | \$3,500 | \$3,500 | \$3,500 | \$3,500 | \$3,500 | \$3,500 | \$3,500 | \$3,500 | \$3,500 | \$3,500 |
| | Cost of Tree Removal | \$48,800 | \$49,280 | \$49,784 | \$50,280 | \$50,786 | \$51,288 | \$51,800 | \$52,320 | \$52,840 | \$53,368 | \$53,904 |
| | Evaluate animal damage management needs and conduct nuisance control in cooperation with the state agencies, and landowners | * | * | * | * | * | * | * | * | * | * | * |
| | Feet of Obstructions and Sediment Removed | 6,130 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 |
| | Inform the District Administrator and Board of Managers about animal damage management requests, management activities, and results on a timely basis | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-------------------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Non-Routine Maintenance | Investigate all significant disasters promptly, appraise their impacts upon goals and targets, and recommend program adjustments for consideration by the Operations and Maintenance Coordinator and District Engineer | * | * | * | * | * | * | * | * | * | * | * |
| | Meet with responsible state agencies to cooperate where proposed nuisance control is needed to ensure coordination of Watershed District resources or activities within the Watershed District | * | * | * | * | * | * | * | * | * | * | * |
| | Number of Beaver Related Issues | 20 | 10 | 12 | 20 | 10 | 12 | 20 | 10 | 12 | 20 | 10 |
| | Number of Trees Removed | 61 | 61.61 | 62.23 | 62.85 | 63.48 | 64.11 | 64.75 | 65.40 | 66.05 | 66.71 | 67.38 |
| | Perform surveys of animal damage to evaluate these occurrences and their hazards and to develop treatment programs where needed | * | * | * | * | * | * | * | * | * | * | * |
| | Provide the Watershed District with technical information on recommended animal damage management tools and techniques | * | * | * | * | * | * | * | * | * | * | * |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-------------------------|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Non-Routine Maintenance | Request funds for emergency watershed stabilization work when needed | * | * | * | * | * | * | * | * | * | * | * |
| | Review and approve project plans and request emergency funds for rehabilitation following major floods, or other disasters | * | * | * | * | * | * | * | * | * | * | * |
| | To respond quickly and effectively to alleviate the effects of natural disasters and reduce the threat to life, public health, and property | * | * | * | * | * | * | * | * | * | * | * |
| | Conduct surveys, request funds, and install treatments necessary for emergency watershed rehabilitation to prevent onsite and downstream damage following floods and other disasters | * | * | * | * | * | * | * | * | * | * | * |
| | Coordinate flood and other natural disaster surveys with resource planning among Cities, and with similar efforts of other Federal, State, and area wide agencies. | * | * | * | * | * | * | * | * | * | * | * |
| | Identify and evaluate damage-producing events causing threat to life or property, site deterioration, or water pollution; and to plan appropriate corrective actions | \$1,600 | \$1,600 | \$1,600 | \$1,600 | \$1,600 | \$1,600 | \$1,600 | \$1,600 | \$1,600 | \$1,600 | \$1,600 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------------------|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Repair | Cost of Bank Stabilization Projects | \$47,250 | \$43,200 | \$135,000 | \$58,050 | \$40,500 | \$39,825 | \$14,850 | | | | |
| | Cost of Ditch Repair Projects | \$38,000 | \$40,814 | \$10,125 | \$39,500 | \$29,350 | \$77,050 | \$41,559 | \$2,100 | | | |
| | Number of Bank Stabilization Projects | 3 | 3 | 1 | 1 | 3 | 3 | 1 | | | | |
| | Number of Ditch Repair Projects | 10 | 1 | 5 | 10 | 10 | 7 | 4 | 1 | | | |
| Routine Maintenance | Access Management | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 |
| | Develop an automated reporting system for ditch inspection results | \$2,000 | \$2,000 | | | | | | | | | |
| | Increased frequency of inspection in 'critical reaches' of the drainage system to ensure agricultural drainage. (2x per year) | \$420 | \$ 420 | \$420 | \$ 420 | \$ 420 | \$420 | \$420 | \$420 | \$ 420 | \$420 | \$420 |
| | Inspect and replace Vegetation & Ground Cover | 25 | 30 | 36 | 43 | 52 | 62 | 74 | 89 | 107 | 128 | 154 |
| | Inspect Crooked Lake Dam | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Inspect Ditch 11 | | | | 5.4 | | | | | 5.4 | | |
| | Inspect Ditch 17 (Blaine Stormwater) | | | | 0.3 | | | | | 0.3 | | |
| | Inspect Ditch 17 (Springbrook) | | | | 4.9 | | | | | 4.9 | | |
| | Inspect Ditch 20 | 3.0 | | | | | 3.0 | | | | | 3.0 |
| | Inspect Ditch 23 | | | | | 1.9 | | | | | 1.9 | |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | |
|------------------------|---|------|------|------|------|------|------|------|------|------|------|------|------|
| Routine Maintenance | Inspect Ditch 37 | | 4.2 | | | | | 4.2 | | | | | |
| | Inspect Ditch 39 | | | 3.3 | | | | | 3.3 | | | | |
| | Inspect Ditch 39 (Blaine Stormwater) | | | 1.6 | | | | | 1.6 | | | | |
| | Inspect Ditch 41 (Blaine Private Ponds) | | | 8.0 | | | | | 8.0 | | | | |
| | Inspect Ditch 41 (Blaine Private Stormwater) | | | 7.0 | | | | | 7.0 | | | | |
| | Inspect Ditch 41 (Ponds) | | | 7.5 | | | | | 7.5 | | | | |
| | Inspect Ditch 41 (Sand Creek) | | | 11.0 | | | | | 11.0 | | | | |
| | Inspect Ditch 44 | | | | 14.7 | | | | | | 14.7 | | |
| | Inspect Ditch 44 (Blaine Private Agriculture) | | | | 1.7 | | | | | | 1.7 | | |
| | Inspect Ditch 54 | 5.1 | | | | | | 5.1 | | | | | 5.1 |
| | Inspect Ditch 57 | | 12.2 | | | | | | 12.2 | | | | |
| | Inspect Ditch 58 | 18.5 | | | | | | 18.5 | | | | | 18.5 |
| | Inspect Ditch 58 Structures (N=5) | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | Inspect Ditch 59 | | | | | | 20.2 | | | | | 20.2 | |
| | Inspect Ditch 59 (Blaine Private Stormwater) | | | | | | 0.7 | | | | | 0.7 | |
| | Inspect Ditch 60 | | 5.6 | | | | | | 5.6 | | | | |
| | Inspect Ditch 60 (Blaine Private Stormwater) | | 1.7 | | | | | | 1.7 | | | | |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Routine Maintenance | Inspect Ditch52 (Epiphany Creek) | | | | | 2.0 | | | | | 2.0 | |
| | Inspect Oak Glen Creek | | | 5.4 | | | | | 5.4 | | | |
| | Inspect Lake Andover Outlet | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Inspect Lower Coon Creek | | | | | 4.0 | | | | | 4.0 | |
| | Inspect Pleasure Creek | | 0.4 | | | | | 0.4 | | | | |
| | Inspect Riverview Creek | | 1.6 | | | | | 1.6 | | | | |
| | Inspect Stoneybrook Creek | 0.1 | | | | | 0.1 | | | | | 0.1 |
| | Inspect Tronson Creek | 0.6 | | | | | | 0.6 | | | | 0.6 |
| | Inspect Woodcrest Creek | | 1.3 | | | | | 1.3 | | | | |
| | Litter and Debris Removal Projects | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | 3 |
| | Miles of Ditch Inspected | 27 | 27 | 28 | 27 | 29 | 27 | 27 | 27 | 28 | 27 | 29 |
| | Percent of System Inspected | 20% | 20% | 21% | 20% | 21% | 20% | 20% | 20% | 21% | 20% | 21% |
| | Spring Evaluation of Snow Pack | \$368 | \$ 368 | \$368 | \$ 368 | \$ 368 | \$368 | \$368 | \$368 | \$ 368 | \$368 | \$368 |
| | Spring Inspection of Flood Potential | \$460 | \$ 460 | \$460 | \$ 460 | \$ 460 | \$460 | \$460 | \$460 | \$ 460 | \$460 | \$460 |

**Planning,
Programming and
Budgeting
(9604)**

The purpose of the program is to coordinate the planning, prioritizing, and financing of District programs and activities.

The Planning program consists of the following activities:

Annual Assessment, Reporting, and Planning: To establish a factual and scientific basis for the direction and intensity of water and related land resource management activities within the Coon Creek Watershed. Serves as the basis for accountability through quarterly objectives and through financial and program goals, and to provide the context for understanding the physical, social and managerial trends and concerns affecting the District that may not have been anticipated in the Watershed Management Plan and the basis for accountability.

Budgeting and Program Planning: Annually prioritize and fund needed work. The intent is to place the highest program budget priority on addressing those issues in the watershed that pose threats to the public health, and safety. To prioritize the maintenance of the drainage system based on stream order and volume of flow to prioritize capital funding and rehabilitation based on position in the watershed, and effective role in conveying, retaining, or detaining water.

Watershed Management Planning: Is the guiding document for program and capital facilities management. It provides context and purpose to near-term choices and assesses the future consequences of those choices.

Storm Water Pollution Prevention Planning: The Coon Creek Watershed District has been designated an MS4 because the public ditch system under its jurisdiction serves to convey storm water. To develop a Storm Water Management Program (SWPPP) that reduces storm water discharges to the maximum extent practicable, protects water quality, and satisfies the water quality requirements of the Clean Water Act.

Other MS4s within the Watershed District are:

1. Andover
2. Blaine
3. Coon Rapids
4. Fridley
5. Ham Lake
6. Spring Lake Park

Modeling: To model the hydrology of surface water flows within the watershed. Provide an accurate simulation of the District's hydrology for assessing and determining management needs and actions.

Policy and Procedures: Provides guidance, continuity and consistency in

District operations and activities. Contains the legal authorities, objectives, policies, responsibilities, instructions and guidance needed on a continuing basis by District staff to plan and implement assigned programs and activities.

Legislation & State & Federal Policy Review: Monitors and is involved in the crafting and review of legislation, policy and permits that directly influence the District's mission and operations.

Special Studies & Reports: Conduct special studies, analysis or reports on water and related resource topics related to the Watershed Management Plan but requiring more detail or current information or context.

Performance Measure / Outcome Completion of Studies and Plans
Development or Refinement of programs and policies

Means and Strategies Staff

Potential Partners/ Collaborators Anoka Conservation District
The cities of Andover, Blaine, Columbus, Coon Rapids, Fridley, Ham Lake, Spring Lake Park and Anoka County
The BWSR, MDNR and MPCA
The Crooked Lake Association

Potential Funding Sources Funding for the Planning Programming and Budgeting program is expected to be primarily through the District's annual property tax levy.

Value Projected average value is \$159,335 per year.

Cost Average annual cost – equipment and materials over ten years is expected to be \$148,700 (Assumes the addition of a water quality specialist).

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Annual Assessment, Budget & Evaluation | Annually update the list of AIS as high risk for introduction. | \$100 | \$101 | \$102 | \$103 | \$104 | \$105 | \$106 | \$ 107 | \$108 | \$109 | \$ 110 |
| | Identify and apply for state and national grant funding | \$1,000 | \$1,010 | \$1,020 | \$1,030 | \$1,041 | \$1,051 | \$ 1,062 | \$1,072 | \$ 1,083 | \$1,094 | \$1,105 |
| | Review effectiveness of eradication programs | \$600 | \$606 | \$612 | \$618 | \$624 | \$631 | \$637 | \$ 643 | \$650 | \$656 | \$ 663 |
| Annual Report | BWSR Annual Report & Plan | \$2,400 | \$2,400 | \$2,400 | \$2,400 | \$2,400 | \$2,400 | \$ 2,400 | \$2,400 | \$ 2,400 | \$2,400 | \$2,400 |
| | MS4 Annual Report | \$480 | \$485 | \$490 | \$495 | \$499 | \$504 | \$510 | \$ 515 | \$520 | \$525 | \$ 530 |
| Budget & Program Plan | Annually review capital improvement plans for the public ditch system maintenance and repair | \$4,000 | \$4,000 | \$4,000 | \$4,000 | \$4,000 | \$4,000 | \$ 4,000 | \$4,000 | \$ 4,000 | \$4,000 | \$4,000 |
| | Annually review Operations and maintenance fund and contingency funds for emergency repair caused by natural (catastrophic) events or similar circumstances | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$ 2,000 | \$2,000 | \$ 2,000 | \$2,000 | \$2,000 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Budget & Program Plan | Assign current maintenance in annual operating plans | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 |
| | Completion of 11 step budget process | \$9,600 | \$9,696 | \$9,793 | \$9,891 | \$9,990 | \$10,090 | \$10,191 | \$10,292 | \$10,395 | \$10,499 | \$10,604 |
| | Invest in cost-effective drainage and stormwater improvements to achieve objectives established in water and resource management plans. | \$800 | \$800 | \$800 | \$800 | \$800 | \$800 | \$800 | \$800 | \$800 | \$800 | \$800 |
| | Oversee the policy and direction for the establishment and administration of strategic partnerships for the delivery of high-quality Information and Education Services. | \$9,600 | \$9,600 | \$9,600 | \$9,600 | \$9,600 | \$9,600 | \$9,600 | \$9,600 | \$9,600 | \$9,600 | \$9,600 |
| Budget & Program Plan | Plan for short-term tactical resources and establishing long-term strategic direction for the Information and Education Services Program | \$2,000 | \$2,020 | \$2,040 | \$2,061 | \$2,081 | \$2,102 | \$2,123 | \$2,144 | \$2,166 | \$2,187 | \$2,209 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------------------------|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | Recommend program and budget direction for District programming and management | \$12,000 | \$12,000 | \$12,000 | \$12,000 | \$12,000 | \$12,000 | \$12,000 | \$12,000 | \$12,000 | \$12,000 | \$12,000 |
| | Request funds for emergency watershed stabilization work | \$400 | \$400 | \$400 | \$400 | \$400 | \$400 | \$400 | \$400 | \$400 | \$400 | \$400 |
| | Review screening and ranking criteria. Document the screening and ranking process and use the uniform comparative method to make funding allocations. | \$1,600 | | | | | | | | | | |
| Watershed Management Plan | Conduct and document a scenery assessment for all activities | | | | | | | | | \$4,000 | | |
| | Develop Landscape Character goals | | | | | | | | | | \$1,000 | \$1,000 |
| | Establish and implement a method for monitoring, recording, and documenting | | | | | | | | \$1,875 | | | |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------------------------|---|---------|------|---------|------|---------|------|------|---------|------|---------|------|
| | changes in scenic integrity, landscape character, and constituent information | | | | | | | | | | | |
| Watershed Management Plan | Evaluate potential stressors for channel stability and sediment transport consistent with waterway classification | \$3,200 | | | | | | | | | | |
| | Identify and map land currently in agricultural production | | | \$2,250 | | | | | \$2,250 | | | |
| | Identify and map lands that are dependent upon drainage (drainage sensitive) for their continued use | | | \$2,250 | | | | | \$2,250 | | | |
| | Identify and map segments of the Public ditch system which are impaired and that currently exceed water quality standards | | | | | \$2,250 | | | | | \$2,250 | |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------------------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Watershed Management Plan | Identify and map the ditch segments critical to serving drainage sensitive lands | | | \$1,125 | | | | | \$1,125 | | | |
| | Identify and map the private drainage systems within the watershed | | | | | \$1,125 | | | | | \$1,125 | |
| | Identify areas of high probability of bank erosion and failure | \$3,000 | | | | | \$3,000 | | | | | \$3,000 |
| | Integrate weather information into watershed planning and decision making | \$4,500 | \$4,545 | \$4,590 | \$4,636 | \$4,683 | \$4,730 | \$4,777 | \$4,825 | \$4,873 | \$4,922 | \$4,971 |
| | Inventory and analyze the characteristics of the water resource to provide background information for determining water quality management goals and objectives. | * | | | | | | | | | | |
| Watershed Management Plan | Inventory riparian areas in the Watershed land management planning process | | | | | \$1,500 | | | | | \$1,500 | |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------------------------|--|----------|----------|---------|-------|-------|-------|---------|--------|-------|-------|---------|
| | Inventory water quality on all Coon Creek Watershed System lands as needed for management of all District resources | \$600 | \$600 | \$600 | \$600 | \$600 | \$600 | \$600 | \$ 600 | \$600 | \$600 | \$ 600 |
| | Obtain public comments in the development of the Watershed Management Plan or stormwater management plan | \$1,000 | \$1,000 | | | | | \$1,000 | | | | \$1,000 |
| | Review & Refine Local Ordinances | \$1,600 | \$3,200 | \$6,400 | | | | | | | | |
| Watershed Management Plan | Transmit detailed boundary descriptions, creek segment classifications and management plans to the BWSR, MPCA & MDNR | \$400 | | | | \$400 | | | | | \$400 | \$ 400 |
| | Work with DNR to model and map the location of floodplains and wetlands within the Coon Creek Watershed | \$16,000 | \$16,000 | | | | | | | \$750 | | |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------------------------|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | Collect and manage information about the properties, distribution, capabilities, condition, suitability's, and limitations of soils associated with Watershed lands in accordance with District inventory, monitoring, assessment and information management policies. | | | | | | | | \$4,000 | | | |
| Watershed Management Plan | Coordinate Watershed District management planning with water quality management planning by State and local agencies | \$12,000 | \$12,000 | \$12,000 | \$12,000 | \$12,000 | \$12,000 | \$12,000 | \$12,000 | \$12,000 | \$12,000 | \$12,000 |
| | Electronic Ditch Profiles - Digitize the as-constructed and subsequently improved condition for public drainage systems | \$6,500 | \$6,500 | \$6,500 | | | | | | | | |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------------------------|---|----------|---------|------|-------|------|------|---------|------|----------|----------|------|
| | Establish and maintain an inventory and management system for aesthetics and scenery that allows for integration of landscape aesthetics into all aspects of the Watershed District land and resource management planning process | | | | | | | \$8,000 | | | | |
| Watershed Management Plan | Floodplain: Work with DNR to evaluate using XPSWMM Model as 'Official Floodplain Management Tool for District | \$10,000 | \$7,000 | | | | | | | | | |
| | Groundwater: Using the geologic atlas, update availability and forecast for groundwater | \$4,000 | \$3,000 | | | | | | | | | |
| | Update Watershed Management Plan | | | | | | | | | \$36,000 | \$35,999 | |
| | Updates to Land Use and Cover | | | | \$600 | | | | | \$600 | | |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|----------------------|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Environmental Review | Analyze environmental impacts | \$720 | \$1,080 | \$720 | \$720 | \$720 | \$720 | \$1,080 | \$ 720 | \$720 | \$720 | \$ 720 |
| Flood | Refine management goals for open channels which reflects their function and their classification | \$8,000 | \$8,000 | \$8,000 | | | | | | | | |
| GIS | Forecast & Prioritize potential Bank Erosion sites | \$3,500 | | | | | \$3,500 | | | | | \$3,500 |
| Lake Management Plan | Crooked | \$18,000 | | | | | | | | | | |
| | Ham | | | \$15,000 | | | | | | | | |
| | Netta | | | | | \$15,000 | | | | | | |
| | Sunrise | | | | | | | \$15,000 | | | | |
| Local Plan Review | Plan Review and approval (N=7) | | \$6,720 | \$6,720 | | | | | | | | |
| Local Plan Review | Review proposed restrictions that exceed coordinating requirements in Municipal Plans. Direct Program staff to develop formal agreements if proposed restrictions are found necessary | | \$960 | \$960 | \$960 | \$480 | | | | | | |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|----------------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Mining | Develop components and standards for mining operation and reclamation | | \$8,000 | \$8,000 | \$8,000 | | | | | | | |
| Modeling | Update P8 | \$10,000 | | | | | \$5,000 | | | | | \$10,000 |
| | Update XPSWMM | | | | \$5,000 | | | | | \$10,000 | | |
| Policy - Legislation | Ensure that state laws and regulations promote the prevention and management of AIS introductions | \$4,000 | \$4,040 | \$4,080 | \$4,121 | \$4,162 | \$4,204 | \$4,246 | \$4,289 | \$4,331 | \$4,375 | \$4,418 |
| | Designate restricted municipal supply watersheds on maps prepared for public use. | \$3,200 | | | | | | | | | | |
| Policy & Procedure | Ensure appropriate environmental analysis requirements are met for proposed non-nuisance control activities conducted by the Watershed District and ensuring consistency with Watershed plan direction | \$220 | \$222 | \$224 | \$227 | \$229 | \$231 | \$234 | \$ 236 | \$238 | \$241 | \$ 243 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--------------------|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | Ensure District participation in State and local early flood warning systems | \$1,000 | \$1,000 | \$1,000 | | | | | | | | |
| Policy & Procedure | Ensure systematic application of landscape aesthetics and scenery management processes in planning and managing Watershed District lands and resources | | | | | | | | | \$1,875 | \$1,875 | \$1,875 |
| | Ensure that standards and objectives for wildlife and fish, including endangered, threatened, and sensitive animal and plant species are met. | \$4,125 | \$3,713 | \$3,341 | \$3,007 | \$2,706 | \$2,436 | \$2,192 | \$1,973 | \$1,776 | \$1,598 | \$1,438 |
| | Establish methods for implementing and updating the landscape aesthetics and scenery management system | | | | | | \$2,000 | | | | | |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--------------------|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Policy & Procedure | Evaluate using public ditches to store water for irrigation is likely to increase over the next 10 years. | | \$3,000 | | | | | | | | | |
| | Identify and map areas where easements presently exist or are needed | | \$6,000 | | | | | | | | | |
| | Lead efforts to evaluate water quality issues associated with public drainage systems in the watershed | \$6,000 | \$6,000 | \$6,000 | | | | | | | | |
| | Participate in review of State standards and work toward change | \$5,000.0 | \$5,000.0 | \$5,000.0 | \$5,000.0 | \$5,000.0 | \$5,000.0 | \$5,000.0 | \$5,000.0 | \$5,000.0 | \$5,000.0 | \$5,000.0 |
| | Provide technical guidelines for standards, procedures and quality of work | | | \$1,500 | \$1,500 | \$1,500 | \$1,500 | \$1,500 | \$1,500 | \$1,500 | \$1,500 | \$1,500 |
| Policy & Procedure | Review Policy & Procedures | | | \$1,000 | | | | | \$1,000 | | | |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--------------------|--|---------|---------|---------|---------|------|------|------|------|---------|------|------|
| | SOP: Data & Monitoring - Develop quality assurance and control procedures and standards for weather data collection and storage | | | | \$4,000 | | | | | | | |
| | SOP: Develop and implement standard operating procedures and policies for inspections and minor repairs to be reviewed and updated every 5 years | | | | | | | | | | | |
| | SOP: Development Regulation & Enforcement | \$4,000 | | | | | | | | | | |
| | SOP: Operations & Maintenance | | \$8,000 | | | | | | | | | |
| Policy & Procedure | SOP: P&GR-develop methods to assess public knowledge, awareness, and attitudes | | \$5,100 | \$5,100 | | | | | | | | |
| | Update Policy & Procedures | | | | \$4,000 | | | | | \$4,000 | | |
| | Update Rule | \$6,000 | | | | | | | | | | |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------------------|---|----------|----------|----------|----------|----------|----------|------|------|------|------|---------|
| | Standardize criteria for identifying priority species for control & eradication | \$3,000 | | | | | | | | | | |
| Resource Assessment | Every 5 years assess the effectiveness and gaps in District AIS program and provide to elected officials and state agencies | \$3,000 | | | | | \$3,153 | | | | | \$3,314 |
| Retrofit Study | Anoka-Hennepin School District | | | | | \$30,000 | | | | | | |
| | Ditch 37 | | | | | | \$25,000 | | | | | |
| | Ditch 39 | | | \$25,000 | | | | | | | | |
| Retrofit Study | Ditch 54 | | | \$20,000 | | | | | | | | |
| | Ditch 57 | | | | \$35,000 | | | | | | | |
| | Evaluate Retrofit Priorities | | | | | | \$1,600 | | | | | |
| | Middle Ditch 41 | | \$40,000 | | | | | | | | | |
| | National Sports Center | | | \$10,000 | | | | | | | | |
| | Pleasure | \$33,000 | | | | | | | | | | |
| | Pleasure Creek - Stormwater Assessment with Bacteria & TSS | \$26,200 | | | | | | | | | | |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|----------|---|----------|----------|------|----------|----------|---------|------|------|------|------|------|
| | Estimation | | | | | | | | | | | |
| | Springbrook | \$33,000 | | | | | | | | | | |
| | Springbrook - Stormwater Assessment with Bacteria & TSS Estimation | \$39,800 | | | | | | | | | | |
| | The Lakes | | | | \$25,000 | | | | | | | |
| | Upper Ditch 41 | | | | | \$30,000 | | | | | | |
| Riparian | Woodcrest | | \$15,000 | | | | | | | | | |
| | Develop and implement measures to manage and protect riparian areas | | | | \$8,000 | \$8,000 | \$8,000 | | | | | |
| Rule | Establish specific management standards and guidelines for floodplains and wetlands as a part of watershed planning actions | | | | | | | | | | | |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|----------|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | Evaluate including use restriction clauses in all permits, leases, or other documents authorizing use within the watershed. | \$6,000 | | | | | \$6,000 | | | | | \$6,000 |
| | Designate restricted municipal supply watersheds on maps prepared for public use. | | | | | | | | | | | |
| Rule | Identify, manage, and protect essential and critical habitats to meet legal requirements for State and federally listed species; identify, protect, and manage habitat necessary to meet sensitive species objectives | \$6,820 | \$6,820 | \$6,820 | \$6,820 | \$6,820 | \$6,820 | \$6,820 | \$6,820 | \$6,820 | \$6,820 | \$6,820 |
| | Prepare relevant regulations relating to development and operation of the creek system and similar water recreation opportunities | \$1,000 | | | | | \$1,000 | | | | | \$1,000 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| SAMP - AIS | Develop and implement a rapid response plan for detecting and eradicating AIS | | \$8,000 | \$3,000 | | | | | | | | |
| SAMP - AIS | Develop GIS maps showing coincidence of AIS and critical ecosystems | \$750 | | | | | | | | | | |
| | Develop or update Lake or resource specific management plans | \$1,400 | | \$1,400 | | \$1,400 | | \$1,400 | | | | |
| | Develop species and/or location-specific control plans | | \$4,000 | | \$4,000 | | \$4,000 | | | | | |
| | Develop species and/or location-specific rapid response plans | | \$4,000 | \$3,000 | | | | | | | | |
| | Evaluate and coordinate existing systems for reporting AIS sightings | \$2,100 | | | | | | | | | | |
| | Identify lead agencies for particular AIS, water bodies and invasion vector. | \$700 | | | | | | | | | | |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------|---|---------|------|------|---------|------|---------|---------|------|------|---------|---------|
| SAMP - AIS | Prioritize control efforts for existing and new organisms of concern | \$2,400 | | | \$2,400 | | | \$2,400 | | | \$2,400 | |
| | Prioritize ecologically sensitive areas at risk for AIS impacts | \$4,200 | | | | | \$4,200 | | | | | \$4,200 |
| | Quantify and assess bait as an AIS vector | \$2,000 | | | | | | | | | | |
| | Quantify and assess construction activities as an AIS vector | \$2,000 | | | | | | | | | | |
| | Quantify and assess recreational boating as an AIS vector | \$2,000 | | | | | | | | | | |
| | Quantify and assess recreational fishing as an AIS vector | \$2,000 | | | | | | | | | | |
| SAMP - AIS | Quantify and assess research, resource management and educational activities as AIS vectors | \$2,000 | | | | | | | | | | |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|----------------|--|---------|---------|---------|---------|---------|------|------|------|------|------|------|
| | Quantify and assess restoration activities as an AIS vector | \$2,000 | | | | | | | | | | |
| | Rank AIS vector importance | | \$2,000 | | | | | | | | | |
| SAMP: Wildlife | Determine distribution, status, and trend of threatened, endangered, proposed, and sensitive species and their habitats on Watershed lands | | | \$8,000 | \$8,000 | \$8,000 | | | | | | |
| SAMP: Wildlife | During review of the District rule, ensure that legal and biological requirements for the conservation of endangered, threatened, and proposed plants and animals are met in Watershed land and resource management planning; ensure compliance with procedural and biological requirements for sensitive species. | \$600 | | | | | | | | | | |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|----------------------------------|---|------|------|---------|---------|---------|---------|---------|---------|---------|------|------|
| Soil | Develop and implement a soil management program that maintains or improves soil productivity and watershed health | | | | | | | \$1,000 | \$1,000 | \$1,000 | | |
| Special Study: Drinking Water | Develop & Maintain measures necessary for management of municipal supply watersheds | | | | \$1,000 | \$1,000 | \$1,000 | | | | | |
| | Develop and coordinate measures necessary for management of municipal supply watersheds | | | \$1,500 | \$1,500 | \$1,500 | \$1,500 | | | | | |
| | Develop Municipal water supply watershed plans where needed | | | | | | | \$1,500 | \$1,500 | | | |
| | Estimate groundwater storage & supply within the watershed | | | \$4,000 | | | | | | | | |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|----------------------------------|--|---------|-------|-------|-------|------|-------|------|--------|-------|-------|------|
| Special Study: Drinking Water | Identify and map drainage sections and drainage areas that serve or influence municipal water supplies | * | | | | | | | | | | |
| | Identify minor sub-watersheds providing water within the drinking water supply management area as defined in the City's well-head protection plan or 1 year travel time of municipal and other public wells and water supplies during land management planning | * | | | | | | | | | | |
| | Maintain an inventory of municipal supply watersheds. | | \$300 | | \$300 | | \$300 | | \$ 300 | | \$300 | |
| | Review Conservation Water Fees with TAC | | | | | | | | \$ 800 | \$800 | | |
| | Support Anoka County Geologic Atlas | \$800 | \$800 | \$800 | | | | | | | | |
| SWPPP | Update SWPPP | \$4,000 | | | | | | | | | | |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| WRAPP | Classify drainage system and waterways by human influence | \$1,000 | | | | | | | | | | |
| WRAPP | Phased | \$32,702 | \$87,646 | \$130,579 | | | | | | | | |

**Public and
Governmental
Relations
(9605)**

The purpose of the public and governmental relation program is to ensure that the continuing planning and management of the Coon Creek 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 four activities has been developed to carry out District policies. The components are:

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| Conservation Education | |
| Water Resource Issue Education | 203 |
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**Public Information
Program**

The purpose of this program is to reach as large and diverse an audience as possible. Increase the public interest in and support for the Watershed's management programs and provide information to the public and decision makers and maintain this interest and support throughout the implementation period.

- Objectives**
1. Identify public affairs tasks needed to meet Watershed District management objectives and clearly communicate the District Mission both internally and externally.
 2. Integrate these tasks and objectives into the District planning, budgeting, and management processes.
 3. To use appropriate audiovisual communication methods in providing information on Watershed District programs, policies, projects, and activities to the public and internal audiences.
 4. To provide the public, through the news media, with factual, accurate, and timely information about the Watershed District's policies, programs, and activities as they relate to the management, protection, and use of watershed lands, and to the State and local water management, Research and Monitoring, and other Programs.

5. To ensure that the publicly accessible District Web site effectively contributes to the District's mission.
6. The adoption of a common look and navigation to create and maintain the impression that we are one, cohesive agency.
7. Leverage the Web to enhance the District's ability to provide services and information to citizens and other key stakeholders.
8. Simplify the delivery of District services and information using the Web.
9. Increase efficiency and accountability in the delivery of District Web solutions.

Policies The Coon Creek Watershed District will:

- A. Identify public affairs and public involvement objectives to accomplish the District's management and program objectives, and to support overall state policies and objectives.
- B. Ensure that the District's public affairs and public involvement objectives are set out in a Communication Strategy and are carried out professionally and in a timely, efficient manner, with follow-up monitoring and evaluation.
- C. Convey information about District programs and activities through a combination of communication techniques, including audiovisual media, appropriate for each intended audience.
- D. Make information about District policies, programs, and activities readily and equally available to all news media, consistent with the Freedom of Information Act, Privacy Act, and other legal requirements. Do not release information that would clearly threaten personal privacy or safety of a District employee or member of the public.
- E. Answer requests for information from the news media as responsively, fully, and rapidly as possible. Do not withhold information in response to legitimate requests merely to protect the Government from criticism and embarrassment. When misinformation about the Watershed District appears in the news media, take the appropriate action to provide correct information to the source of the misinformation.
- F. Coordinate public affairs/communication planning with the Cities, Anoka County and other Government agencies as needed to expedite

the flow of information to the public and to the news media.

- G. Provide the news media with factual, accurate, and timely information on potential or current challenges, problems, and issues related to the management, protection, and use of the Watershed and other agency programs and activities.
- H. Ensure that Watershed District employees facilitate media opportunities, which may include interviews, statements, panel discussions, and other appropriate news-related activities.
- I. Ensure that Watershed District employees are adequately prepared and are made available to support and participate in interviews, statements, panel discussions, and other appropriate news-related media activities.
- Consistent “Look and Feel” J. The District’s publicly accessible Web site, which includes all publicly accessible Web pages within the Coon Creek Watershed District, will adopt a consistent and standardized “look and feel” for all Web pages and navigational objects. In order to provide our Web audiences instant recognition of District Web content, all District programs must use official templates when publishing content to the Web. Therefore, official templates must be used by all District programs to help prepare content for publishing to the Web. While these templates and even the tools used to manage, maintain and leverage these templates, change or evolve over time, all District programs must adhere to a single uniform template as directed by the Public and Governmental Relations Coordinator under the authority of the District Administrator.
- K. Content on the District Web site must be organized around categories or topics that are meaningful to Watershed District audiences.
- Official Business L. All information disseminated on the internet by the District must be directly related to the official duties and responsibilities of individuals and offices fulfilling their assigned missions consistent with District policy.
- Support of Mission M. Web pages created on behalf of the District must have a clearly defined purpose that supports the strategic mission of the Coon Creek Watershed District.
- Content Responsibility N. The Watershed District will only publish information:
 - Which it creates;
 - Which it has direct responsibility; or
 - That it has been authorized to publish by partner agencies or

organizations.

Education Program Greater public awareness of watershed resources, the appropriate use of resources, and the issues and conflicts that arise when managing resources are major needs of the District. Increasing awareness is the first step in enhancing public commitment to sound natural resource management. The District also makes several presentations each year to high school students and civic organizations. These presentations focus on the establishment of the District, its purposes and policies, and the issues facing the watershed. The response from these groups has been more positive since the discussion was redirected from a scientific evaluation of District issues to a more policy-oriented approach.

The Education Program has the following components:

1. Conservation education
2. Water Resource Issue program
3. Water Resource Management education

Conservation Education The educational process that deals with human relationships to natural and human made surroundings, including the relationships to population; pollution; resource allocation, depletion, and conservation; transportation; technology; and urban and rural planning.

- Objectives**
1. To promote public awareness and understanding of the importance of water resources and call attention to particular issues related to forest productivity, protection, and use.
 2. To provide leadership in conservation education.
 3. To enlist the cooperation of institutions and organizations in developing broad public understanding of and support for the wise management and use of water and related resources.
 4. To assist agency employees in better understanding water resource issues.
 5. To assist resource managers in meeting resource management goals.

- Policies**
- Use the Conservation Education Program to help agency employees better understand and communicate information about water resource issues to the public. Whenever appropriate, link presentations to global resource problems and potential solutions.
 - Cooperate with and encourage educators, Federal, State, and local agencies, underserved communities, and private organizations to

develop educational concepts, methods, and materials to teach ecological, water resource, and conservation principles, focusing on pre-kindergarten through 12th grade students and their educators, formal and informal.

- Provide information about relevant water resource issues to the public, using appropriate education techniques and methods.
- Use volunteers to conduct Conservation Education Program activities.
- Conduct educational activities jointly with other agencies and groups interested in fostering improvement in the understanding of ecological and water resource interrelationships and the related human effects.
- Ensure that the Conservation Education Program reaches nontraditional audiences, such as urban groups, minorities, and underserved communities.
- Encourage Watershed District involvement in education programs and activities and in education councils and organizations at the State, and local levels.

Water Resource Issue Education Is the process of identifying and understanding issues, problems, or conditions that constrain the range of management practices as identified by the public through the land management planning process or similar processes.

Objectives To help the public better understand the factors that influence water resource issues so that members of the public may effectively participate in water resource decision making activities.

Policies In conducting water resource issue education activities, Watershed District employees shall:

1. Provide objective information about current water resource issues to the public and provide ample opportunity for discussing these issues, analyzing data, and drawing conclusions.
2. Help target audiences to understand the physical, biological, ecological, water resource, social, and economic elements of an issue and to learn how these elements affect the formulation of options.

Determining Need and Content Select resource issues from Watershed planning and related activities, research results, and State and Private cooperative activities. Candidate issues should be those that the public has identified or that are important

to water resource managers and may be selected at the watershed, State, Regional, or national level. Issues to consider for selection may be either existing or emerging.

Target Audiences Target water resource education activities to decision makers and others who are affected by or who can affect the issue.

Recreation visitors and other user groups may be contacted by District interpreters carrying out “interpretation-for-management” activities similar to activities in water resource issue education.

The Conservation Education Program is encouraged to cooperate with interpretive, research and development, and public affairs personnel in these related activities as appropriate.

Methods Select education methods that aid communication and assist in educating audiences on water resource issues in a variety of locations and settings. Appropriate methods for the Water Resource Issue Education Program include briefing sessions, forums, workshops, town meetings, seminars, classroom presentations, service-learning projects, and field-learning activities.

Match media and teaching techniques with the selected methods and with appropriate audiences.

Use such media as slides, films, video tapes, photos, computer graphics, simulations, educational curricula, activity guides, and other printed educational materials to enhance the learning process.

Where appropriate, such as in workshops or town meetings, use facilitators who have knowledge of the subject matter and basic skills in education, training, and group involvement.

Material Development When appropriate, integrate State and Private Watershed and Research and Development topics, results, and objectives into water resource issue materials.

Seek opportunities to coordinate development of water resource conservation issue materials with other groups and Federal, State, and local agencies; and organizations early in the process because many issues transcend watershed, regional, and national boundaries in interest and effect.

Use networking procedures and processes to establish lines of communication and to determine the roles that District employees and persons from outside the District can play in developing and using the materials. Evaluate the effectiveness of these roles during and after the

development cycle for materials.

Use the module concept to develop water resource issue material; that is, a central building block or unit from which related materials may be developed or adapted for use with different audiences to achieve multiple objectives.

Role of District Employees Involve employees in the natural resource issue education process to serve as subject matter experts in material development; to test and evaluate materials and concepts; and to use the completed materials.

Water Resource Management Education Is the process of teaching about the manager's relationship to the land and its resources and the responsibility for stewardship through planning, conservation, and management.

Objectives The objectives of water resource management education is to:

1. Alert people to their dependency on water resources and their responsibility for their stewardship.
2. Provide people with the skills needed to make informed decisions about water resources.
3. Help educators incorporate water resource education processes and concepts into their curricula in various subject areas and grade levels.

Policies It is the policy of the Coon Creek Watershed District to:

- Promote understanding of water resource management through water resource investigations.
- Stress the teaching of ecological and water resource interrelationships while emphasizing the development of skills in collecting, recording, and interpreting data, and in drawing individual conclusions.

Program Elements Consider the following for use in water resource management education:

- A. Conducting science-based educational activities using appropriate materials to teach ecological, water resource, and conservation principles, focusing on prekindergarten to 12th grade students and their educators, through formal and informal venues. It also includes workshops for the public and Watershed District employees, to provide the awareness, understanding, knowledge, skill, and motivation needed for making thoughtful contributions to water resource management.
- B. Using personnel from the Watershed District; other Federal, State,

and local agencies; private organizations; industries; and educational institutions that have the potential and motivation to plan and carry out conservation education activities.

- C. Identifying and using water resource study areas within the Watershed, research sites, interpretive facilities, and other sites.
- D. Helping colleges, universities, and other schools incorporate conservation education into their curricula.
- E. Using techniques that help the Watershed District meet its program goals.
- F. In cooperation with public affairs and interpretive services, develop media presentations about wise resource management, protection, and use.

Target Audiences Direct water resource management education activities toward:

- Students at the pre-kindergarten through 12th grade levels and their educators, through formal and informal venues.
- Those who have the chance to pass along awareness, knowledge, skill, and motivation to others (multiplier effect) with particular emphasis on those who reach underserved audiences as described in paragraph 5 below.
- Those most affected by actions and programs of agencies that manage water resources.
- Those who make decisions regarding problems or issues related to the environment or to water resource management.
- Those who have the interest in and motivation for continued involvement. These include Federal, State, and local officials; legislators; educators; conservation organizations; citizen groups; industry and business groups; labor and civic organizations; and professional associations.

Workshops Design conservation education workshops to help participants accomplish defined learning objectives. Vary the format so that participants are involved in developing the understanding and skills that allow them to collect and interpret data and draw their own conclusions regarding water resource issues, problems, relationships, and solutions.

Workshop 1. For each workshop, assign at least one trained facilitator whose

Facilitator primary responsibility is to plan and set goals for the workshop; facilitate parts of the workshop; and consult on program elements.

2. Encourage training and use of non-District facilitators.

Water resource Study Areas Water resource study areas include school grounds, District special project sites, demonstration areas, and environmental education centers. Study areas may also include areas located at visitor centers and may make use of the services of the interpreters working there.

Material Development Develop conservation education materials in the following categories:

1. Content material: Facts and figures about the environment or its management with suggestions for use of the material in ongoing programs.
2. Process materials: Instructions for participating in various tasks and activities. Include content material as needed.

Public Involvement Program

The Coon Creek Watershed District Public Involvement Program is an organized effort to ensure public involvement in District planning and decision-making processes.

The Watershed District carries out public involvement activities and programs pursuant to various statutory and permit authorities that require the District to give the public notice of and an opportunity to comment on proposed actions and decisions. The major actions are set forth here:

- Watershed Management Planning
- Environmental Analysis of Proposed District Action and Projects
- Funding Priorities and Methods
- District Rule Making
- Other Water Resource Management Proposals

Objectives The Watershed District conducts public involvement activities in order to:

1. Accommodate the public's desire to know about Watershed District plans and proposals and to obtain the public's views.
2. Encourage public involvement in planning and decision making.
3. Become aware of and respond to the values expressed by the public.
4. Reach all affected and interested publics, especially underserved communities.

- Policies** It is the policy of the Coon Creek Watershed District to:
- A. Ensure that public involvement is an integral part of any District resource planning process, not a separate procedure.
 - B. Incorporate public involvement into long-range, programmatic planning, program management, and project planning activities early in the process to identify public concerns and to create a forum for people to communicate their ideas, thoughts, and opinions regarding policies, programs, and activities.
 - a. Identify adequate and appropriate opportunities in which the internal and external publics may participate.
 - b. Recognize social, economic, cultural, and geographic circumstances that influence involvement by affected and interested publics, especially the underserved individuals and communities.
 - c. Consider the agency's needs and requirements to exchange information with the public regarding specific projects or programs.
 - C. Develop and maintain a continuing dialogue between agency employees and the public to hear a variety of viewpoints and attitudes.
 - D. Notify the public in advance of planned programs and activities. Include in such notices an invitation to participate and an adequate description of actions involved. Give specific notice to potentially interested and affected publics (including public agencies, and other groups not traditionally contacted).
 - E. Provide both the general public and selected publics with useful and understandable information to help them understand the decision to be made, the significant factors influencing the decision, the decision making process, and the opportunities for them to participate. Provide the public with adequate time to respond.
 - F. Objectively report and analyze comments received from the public
 - G. Document public involvement plans, activities, and analyses of public comments in the decision making process
 - H. Inform those who participate of the final decision and the rationale for the decision
 - I. To the extent practicable, provide the public with environmental analysis documents, decision notices, and records of decision free of charge.

Public Involvement Plans Prepare public involvement plans as early as possible for proposed actions, policy changes, or programs determined to be of public interest. Develop plans in the degree of detail that reflects the magnitude and significance of the decision under consideration and the degree of public interest in the proposal. Through a logical step-by-step process, integrate public involvement plans with proposed actions, policy changes, or program development.

Monitoring and Evaluation Monitor ongoing public involvement plans to ensure they meet District objectives and public needs. Evaluate completed plans for accomplishment of stated objectives and compliance with law, regulation, and policy. Use evaluation results as an aid in developing future public involvement plans.

Coordination of Public Involvement Plans Coordinate District public involvement activities with those of other Federal, State, and local governments; citizen groups; and organizations. Where possible, schedule public involvement activities to avoid multiple agency requests that involve the same publics in similar programs during the same time period.

As appropriate, include representatives of agencies, governments, and organizations in the development of public involvement plans; in exchange of public involvement informational and educational material; and in conferences or training sessions on public involvement.

Advisory Committees Minnesota Statutes 103B and 103D sets forth special mandatory procedures to follow when the District establishes or utilizes groups for the purpose of obtaining advice or recommendations for the Board of Managers or District officials on issues or policies within the scope of District responsibility

Principles of Public Participation The following are the District’s principles of effective public participation

Legitimacy: Establish and maintain the legitimacy of your agency, the project and your approach.

Make It Timely. The process allows enough time for the public to participate fully, with enough advance notice for all activities and crucial points in the process.

Make Your Process “Free.” The public is able to participate at minimum cost and commitment of time, while meeting your public involvement objectives.

Emphasize Fairness. Participants agree that the process is fair, that all views offered are considered.

Practice Openness. Dialogue is welcomed and facilitated among all interests. Anyone who wishes to participate can. Information to the public (documents and so forth) is accessible to all and is in language and format that people can understand.

Make Involvement Early and Continuous. The public is involved from beginning to end, and relationships are built over the long term.

Make It Tangible. Results of the public's input are clearly demonstrated, and the public understands how public involvement affected the decision or outcome.

Technical Assistance

The guiding principle in furnishing assistance is to help attain the landowner's objectives, consistent with benefits that accrue to the general public from improved water resource management. If the landowner's objectives are not consistent with the public interest, withhold assistance. Similarly, technical advice that would result in violation of the intent of Federal, State or local legislation or regulations, such as the Endangered Species Act, is prohibited.

- Objective**
1. To advance water resource management by ensuring that both the individual landowner's objectives and the public need for goods and services are met now and in the future.
 2. To maintain or improve soil productivity and the quality, quantity, and timing of water yield on private and public lands within the watershed.
 3. To help citizens and local governments to plan for and implement the protection, development, and management of water and related resources within and near urban and urbanizing areas of the watershed. These efforts should result in water resource protection and improvement, and enhance the quality of life for people living in District.

- Policy**
- A. Make available to city engineers, or equivalent municipal or county staff, and other cooperating State and Local agencies soils, watershed, hydrology, technology, and expertise in support of the following activities:
 - a. Local Water Planning
 - b. Storm Water Pollution Prevention Planning
 - c. Preparation of water management plans for owners and

- managers of public and private lands.
 - d. Special projects affecting soil productivity and water production.
 - e. Development of monitoring and evaluating criteria and joint implementation of evaluation programs for wetlands, stormwater, water quality, floodplain management and groundwater
 - f. Rehabilitation of surface mined areas through land treatments and BMPs
 - g. Enhancement of water yields and timing of runoff through land management activities
- B. Help Cities and Anoka County coordinate their soil and water management efforts with Federal and State agencies

Qualifying Land Public and private lands within the Coon Creek Watershed.

Qualifying Recipients The following are eligible for technical management assistance from the District:

1. Owners, leasees, managers, and operators of qualifying lands
2. Landowner associations or cooperatives organized for the purpose of accomplishing water and related resource management.
3. Nonprofit organizations, such as places of worship, Boy Scouts and Girl Scouts of America, and Extension 4-H Youth, owning or leasing qualifying lands.
4. Vendors of water management services

Delivery of Technical Assistance The Coon Creek Watershed District provides technical assistance in water resource management to qualifying recipients through the District staff and service providers. The District provides administrative and specialized technical support to the cities and Anoka County upon request..

Kinds of Technical Assistance

Soil Management When managing soils, take into consideration the basic soil resource and understand the planned activities, which may impact the soil quality and reduce the capacity of the soil to produce vegetative growth. Most water management activities are influenced by or have an impact on the soil. In providing technical assistance, consider maintenance or enhancement of soil productivity.

Watershed Management When providing technical assistance in water management, take into consideration two major areas of water-related concern:

1. Water quality,
2. Water yield and timing of runoff.

Water Quality: In technical assistance and activities, take into consideration the knowledge and understanding of the characteristics of nonpoint source pollution. Emphasize preventative measures rather than corrective measures in the maintenance and enhancement of water quality.

Water Yield and Timing: In the development of water resource management plans or as required by statute, regulation, or agreement at the Federal, State, or local level, take into consideration the potentials for water yield increases and timing of runoff.

Performance Measure / Outcome Input Measures: Number of

- Articles
- Contacts
- Meeting

Output Measures:

- Trained Individuals
- Increased involvement
- Local programs

Means and Strategies Staff
 Professional Services
 Non-Governmental Organizations (NGOs) such as Lake & Neighborhood Associations
 Citizen Advisory Committee monthly meetings
 Technical Advisory Committee quarterly and as needed meetings
 Community Service Organization Volunteers, at least 3-4 events per year

Potential Partners/ Collaborators Cities and County
 ACD
 State and Federal Agencies

Potential Funding Sources Funding for the Public and Governmental Relations program is expected to be primarily through the District's annual property tax levy.

Cost Average annual cost is expected to be \$125,000

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Education | Biomonitoring - Andover HS: Coon Creek at Crosstown | \$ 825 | \$ 842 | \$ 858 | \$ 875 | \$ 893 | \$ 911 | \$ 929 | \$ 948 | \$ 967 | \$ 986 | \$ 1,006 |
| | Create and train a citizen monitoring network for AIS | \$ 4,200 | | \$ 2,100 | | \$ 2,100 | | \$ 2,100 | | \$ 2,100 | | |
| | Decrease waste of groundwater | \$ 8,800 | \$8,800 | \$ 8,800 | \$ 8,800 | \$ 8,800 | \$ 8,800 | \$ 8,800 | \$ 8,800 | \$ 8,800 | \$ 8,800 | \$ 8,800 |
| | Develop posters, brochures and articles for industry sectors and user groups | | \$2,400 | | \$ 1,200 | | \$ 1,200 | | \$ 1,200 | | \$ 1,200 | |
| | Educate shoreline property owners about AIS | \$ 2,400 | | \$ 2,400 | | \$ 2,400 | | \$ 2,400 | | \$ 2,400 | | \$ 2,400 |
| | Encourage use of native species | \$ 480 | \$ 480 | \$ 480 | \$ 480 | \$ 480 | \$ 480 | \$ 480 | \$ 480 | \$ 480 | \$ 480 | \$ 480 |
| | Establish a training program to provide several levels of understanding and knowledge in landscape aesthetics and scenery management commensurate with the different land and resource | | | | | | | | | | \$ 3,000 | \$ 3,000 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------|---|----------|---------|------|------|------|------|------|------|------|----------|----------|
| | management needs and the different levels of responsibility of managers and operational personnel. | | | | | | | | | | | |
| Education | Establish a training program, incorporating elements specifically related to landscape aesthetics and scenery management challenges and opportunities. | | | | | | | | | | \$ 2,200 | \$ 2,200 |
| | Establish integrated Information and education and educational plans and programs that: a. Support strategic communication of resource management priorities, b. Ensure cost-effectiveness, and c. Avoid duplication of effort, services, and products | \$ 9,000 | \$1,100 | | | | | | | | | |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Education | Increase education and outreach efforts to ensure awareness of the threats and management priorities throughout the Coon Creek Watershed | \$ 600 | \$ 606 | \$ 612 | \$ 618 | \$ 624 | \$ 631 | \$ 637 | \$ 643 | \$ 650 | \$ 656 | \$ 663 |
| | Provide for the placement of appropriate signs to enhance public awareness of and knowledge about flood hazards | | | \$22,400 | \$22,400 | | | | | | | |
| Information | Agenda Distribution | \$ 240 | \$ 240 | \$ 240 | \$ 240 | \$ 240 | \$ 240 | \$ 240 | \$ 240 | \$ 240 | \$ 240 | \$ 240 |
| | Assist in informing the public of restrictions in municipal supply watersheds | | | | | | \$ 800 | | | | | |
| | Brief decision makers and legislators on AIS management progress | \$ 4,000 | \$3,920 | \$ 3,842 | \$ 3,765 | \$ 3,689 | \$ 3,616 | \$ 3,543 | \$ 3,473 | \$ 3,403 | \$ 3,335 | \$ 3,268 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | Develop a bait outreach and management program | | | \$ 1,200 | | | | | | | | |
| | Develop a construction outreach and management program | | | \$ 1,200 | | | | | | | | |
| | Develop a recreational boating outreach and management program | | | \$ 2,400 | | | | | | | | |
| | Develop a recreational fishing outreach and management program | | | \$ 2,400 | | | | | | | | |
| Information | Develop a restoration outreach and management program | | | | \$ 2,400 | | | | | | | |
| | Encourage groundwater recharge | \$ 550 | \$ 550 | \$ 550 | \$ 550 | \$ 550 | \$ 550 | \$ 550 | \$ 550 | \$ 550 | \$ 550 | \$ 550 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | Encourage use of renewable water supplies | \$ 550 | \$ 550 | \$ 550 | \$ 550 | \$ 550 | \$ 550 | \$ 550 | \$ 550 | \$ 550 | \$ 550 | \$ 550 |
| | Ensure that Information and Education Services are accurately represented in budget documents, performance measures, and accountability reports. | \$ 330 | \$ 330 | \$ 330 | \$ 330 | \$ 330 | \$ 330 | \$ 330 | \$ 330 | \$ 330 | \$ 330 | \$ 330 |
| | Increase local TV, radio and newspaper media coverage | \$ 1,200 | \$ 1,212 | \$ 1,224 | \$ 1,236 | \$ 1,249 | \$ 1,261 | \$ 1,274 | \$ 1,287 | \$ 1,299 | \$ 1,312 | \$ 1,326 |
| | Inventory education and outreach efforts and develop a District AIS communication strategy | \$ 2,400 | | | | | | | | | | |
| | Notify individuals and communities of potential flood situations when such conditions are known | \$ 525 | \$ 525 | \$ 525 | \$ 525 | \$ 525 | \$ 525 | \$ 525 | \$ 525 | \$ 525 | \$ 525 | \$ 525 |
| Information | Number of | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Information | Brochures | | | | | | | | | | | |
| | Number of News Paper Articles | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| | Number of Newsletters | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| | Number of Posters | | 1 | | 1 | | 2 | | 2 | | 3 | |
| | Number of Radio Ads (PSAs) | 1 | | 1 | | 2 | | 2 | | 3 | | 3 |
| | Number of Specific Messages for each MCM (MCN=5) | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 5 |
| | Number of Television Ads (PSAs) | | 1 | | 1 | | 2 | | 2 | | 3 | |
| | Present AIS information at public gatherings | \$ 640 | \$ 646 | \$ 653 | \$ 659 | \$ 666 | \$ 673 | \$ 679 | \$ 686 | \$ 693 | \$ 700 | \$ 707 |
| Prioritize the review and replacement of Information and Education exhibits and media, and submit proposals for permanent, wayside, temporary and traveling exhibits | \$ 2,880 | \$2,880 | \$ 2,880 | \$ 2,880 | \$ 2,880 | \$ 2,880 | \$ 2,880 | \$ 2,880 | \$ 2,880 | \$ 2,880 | \$ 2,880 | \$ 2,880 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | Provide a recommendation to the District Administrator, for the approval or denial of proposals for permanent and temporary exhibits | \$ 1,080 | \$1,091 | \$ 1,102 | \$ 1,113 | \$ 1,124 | \$ 1,135 | \$ 1,146 | \$ 1,158 | \$ 1,169 | \$ 1,181 | \$ 1,193 |
| Involvement | Cooperate and participate to the extent feasible in Federal and State developed flood forecasting and flood warning systems. | \$ 1,000 | \$1,000 | | | | | | | | | |
| | Cooperate in the development of innovative technologies that enhance soil quality and help achieve other water resource management goals. | \$ 440 | \$ 440 | \$ 440 | \$ 440 | \$ 440 | \$ 440 | \$ 440 | \$ 440 | \$ 440 | \$ 440 | \$ 440 |
| Involvement | Coordinate activities and interchange of floodplain and wetlands information with other concerned Federal, State and Local and State agencies | \$ 200 | \$ 200 | \$ 200 | \$ 200 | \$ 200 | \$ 200 | \$ 200 | \$ 200 | \$ 200 | \$ 200 | \$ 200 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | Coordinate district activities with interested state and federal agencies, groups, and individuals concerned with the conservation of threatened, endangered, proposed, and sensitive species | \$ 200 | \$ 200 | \$ 200 | \$ 200 | \$ 200 | \$ 200 | \$ 200 | \$ 200 | \$ 200 | \$ 200 | \$ 200 |
| | Coordinate Information and Education Services with other programs, such as Planning, Engineering, Development Regulation, Grants and Agreements, Operations and Maintenance. | \$ 550 | \$ 550 | \$ 550 | \$ 550 | \$ 550 | \$ 550 | \$ 550 | \$ 550 | \$ 550 | \$ 550 | \$ 550 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Involvement | Coordinate the review process and make recommendations to the District Administrator, Information and Education sites and other Information and Education infrastructure | \$ 1,100 | \$1,100 | \$ 1,100 | \$ 1,100 | \$ 1,100 | \$ 1,100 | \$ 1,100 | \$ 1,100 | \$ 1,100 | \$ 1,100 | \$ 1,100 |
| | Coordinate Watershed District land management planning with water quality management planning by State and local agencies | \$12,000 | \$12,000 | \$12,000 | \$12,000 | \$12,000 | \$12,000 | \$12,000 | \$12,000 | \$12,000 | \$12,000 | \$12,000 |
| | Coordinate Watershed programs with other federal agencies, states, and other groups and individuals concerned with the conservation of threatened, endangered, proposed, and sensitive species | \$ 200 | \$ 200 | \$ 200 | \$ 200 | \$ 200 | \$ 200 | \$ 200 | \$ 200 | \$ 200 | \$ 200 | \$ 200 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Involvement | Coordinate with user groups, other agencies and members of the legislature when necessary | \$ 2,000 | \$2,000 | \$ 2,000 | \$ 2,000 | \$ 2,000 | \$ 2,000 | \$ 2,000 | \$ 2,000 | \$ 2,000 | \$ 2,000 | \$ 2,000 |
| | Develop and maintain cooperative relations with other staffs and agencies involved in hydrology and sedimentation | \$15,000 | \$15,000 | \$15,000 | \$15,000 | \$15,000 | \$15,000 | \$15,000 | \$15,000 | \$15,000 | \$15,000 | \$15,000 |
| | Develop watershed wide priorities, policies, and coordinate regional organizational units in accordance with District policy and guidelines | \$16,000 | \$16,000 | \$16,000 | \$16,000 | \$16,000 | \$16,000 | \$16,000 | \$16,000 | \$16,000 | \$16,000 | \$16,000 |
| | Facilitate installation of AIS warning and information signs in infested areas. | \$ 1,000 | \$1,000 | | \$ 1,000 | | \$ 1,000 | | \$ 1,000 | | | |
| Involvement | Hearings | \$ 250 | \$ 250 | \$ 250 | \$ 250 | \$ 250 | \$ 250 | \$ 250 | \$ 250 | \$ 250 | \$ 250 | \$ 250 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | Improve coordination and collaboration among people, agencies, lake associations and activities involved with AIS | \$ 560 | \$ 571 | \$ 583 | \$ 594 | \$ 606 | \$ 618 | \$ 631 | \$ 643 | \$ 656 | \$ 669 | \$ 683 |
| | Increase video, animation, symbols and diagrams for enhancing information & education | \$ 880 | \$ 889 | \$ 898 | \$ 907 | \$ 916 | \$ 925 | \$ 934 | \$ 943 | \$ 953 | \$ 962 | \$ 972 |
| | Invite community groups and NGOs for AIS planning and education | \$ 280 | \$ 286 | \$ 291 | \$ 297 | \$ 303 | \$ 309 | \$ 315 | \$ 322 | \$ 328 | \$ 335 | \$ 341 |
| | Open Mike | \$ 575 | \$ 575 | \$ 575 | \$ 575 | \$ 575 | \$ 575 | \$ 575 | \$ 575 | \$ 575 | \$ 575 | \$ 575 |
| | Partner with ongoing outreach programs | \$ 700 | \$ 707 | \$ 714 | \$ 721 | \$ 728 | \$ 736 | \$ 743 | \$ 750 | \$ 758 | \$ 766 | \$ 773 |
| | Partner with stakeholders and interest groups to broaden education efforts | \$ 700 | \$ 707 | \$ 714 | \$ 721 | \$ 728 | \$ 736 | \$ 743 | \$ 750 | \$ 758 | \$ 766 | \$ 773 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|----------------------|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Involvement | Reduce unauthorized stocking of non-native species | \$ 1,400 | \$1,414 | \$ 1,428 | \$ 1,442 | \$ 1,457 | \$ 1,471 | \$ 1,486 | \$ 1,501 | \$ 1,516 | \$ 1,531 | \$ 1,546 |
| | Regular Board Meetings | \$ 6,750 | \$6,750 | \$ 6,750 | \$ 6,750 | \$ 6,750 | \$ 6,750 | \$ 6,750 | \$ 6,750 | \$ 6,750 | \$ 6,750 | \$ 6,750 |
| | Use Citizen and Technical Advisory Committees for consultation process on actions concerning AIS | \$ 9,000 | \$9,090 | \$ 9,181 | \$ 9,273 | \$ 9,365 | \$ 9,459 | \$ 9,554 | \$ 9,649 | \$ 9,746 | \$ 9,843 | \$ 9,942 |
| | Use volunteer monitors to conduct AIS inspections | \$ 3,360 | \$3,394 | \$ 3,428 | \$ 3,462 | \$ 3,496 | \$ 3,531 | \$ 3,567 | \$ 3,602 | \$ 3,638 | \$ 3,675 | \$ 3,712 |
| | Engage professional & recreational divers in early detection work. | \$ 1,120 | \$1,131 | \$ 1,143 | \$ 1,154 | \$ 1,165 | \$ 1,177 | \$ 1,189 | \$ 1,201 | \$ 1,213 | \$ 1,225 | \$ 1,237 |
| Technical Assistance | Coordinate with other programs and units of government on requests for meteorological assistance and related research | \$ 240 | \$ 242 | \$ 245 | \$ 247 | \$ 250 | \$ 252 | \$ 255 | \$ 257 | \$ 260 | \$ 262 | \$ 265 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|----------------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Technical Assistance | Develop guideline for: 1. Disposal of AIS at boat landings and fishing piers 2. Cleaning out fishing gear and equipment 3. Disposal of live bait | \$ 700 | | | | | | | | | | |
| Technical Assistance | Directly alert home and property owners occupying possible flood paths | \$ 175 | \$ 175 | \$ 175 | \$ 175 | \$ 175 | \$ 175 | \$ 175 | \$ 175 | \$ 175 | \$ 175 | \$ 175 |
| | Encourage Boat washing stations and disposal facilities at infested waters | \$ 560 | | \$ 560 | | \$ 560 | | \$ 560 | | | | |
| | Ensure that District personnel and collaborators have an appropriate awareness and understanding of laws, regulations, and direction related to the management of landscape aesthetics and | \$ 788 | \$ 788 | \$ 788 | \$ 788 | \$ 788 | \$ 788 | \$ 788 | \$ 788 | \$ 788 | \$ 788 | \$ 788 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|----------------------|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | scenery | | | | | | | | | | | |
| Technical Assistance | Grant & Funding Search & Application | \$ 1,725 | \$1,760 | \$ 1,795 | \$ 1,831 | \$ 1,867 | \$ 1,905 | \$ 1,943 | \$ 1,981 | \$ 2,021 | \$ 2,062 | \$ 2,103 |
| | Provide hydrologic data and analyses for lands where the Coon Creek Watershed District has watershed planning responsibilities. | 1,000 | \$1,000 | \$ 1,000 | \$ 1,000 | \$ 1,000 | \$ 1,000 | \$ 1,000 | \$ 1,000 | \$ 1,000 | \$ 1,000 | \$ 1,000 |
| | Provide leadership during planning, development and management of parks and open space adjacent to public drainageways and waters | | | \$ 330 | | | \$ 660 | | | \$ 330 | | |
| | Provide liaison among weather program coordinators, Computer Sciences and Telecommun. Staffs | \$ 480 | \$ 480 | \$ 480 | \$ 480 | \$ 480 | \$ 480 | \$ 480 | \$ 480 | \$ 480 | \$ 480 | \$ 480 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|----------------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Technical Assistance | Provide technical assistance to Cities, Lake Associations and Homeowner Associations | \$ 2,000 | \$2,020 | \$ 2,040 | \$ 2,061 | \$ 2,081 | \$ 2,102 | \$ 2,123 | \$ 2,144 | \$ 2,166 | \$ 2,187 | \$ 2,209 |
| | Represent the Watershed District on weather related interagency committees | \$ 880 | \$ 880 | \$ 880 | \$ 880 | \$ 880 | \$ 880 | \$ 880 | \$ 880 | \$ 880 | \$ 880 | \$ 880 |
| | Respond to agency requests for weather and climatic information and meteorological expertise | \$ 220 | \$ 220 | \$ 220 | \$ 220 | \$ 220 | \$ 220 | \$ 220 | \$ 220 | \$ 220 | \$ 220 | \$ 220 |

Research and Monitoring (9606) The purpose of the research, monitoring and data collection program is to gather and analyze data that will result in increased efficiency and effectiveness of watershed management and District programs.

The research, monitoring, and data collection program provides integrated resource information used in planning, evaluating, and decision-making within the Coon Creek Watershed District. Program activities include:

Precipitation Monitoring: To monitor precipitation amounts and frequencies within the watershed. Precipitation data is used in conjunction with other data to determine hydrological conditions in many circumstances, including delineations, inspections and water level elevations.

Stream: Monitor actual hydrology (quantity and quality) of the drainage system. Flow data collected from the continuous flow gauges will be utilized to produce a calibration technical addendum to the District's XPSWMM and water budget models. Also monitor for signs of potential impairment of Coon Creek (including biota and riparian lands). Involves regular collection and analysis of water quality on both a composite basis and through grab samples.

Lakes: To monitor and track fluctuations in lake levels over time as well as signs of potential impairment and aquatic invasive species.

Wetlands: To monitor wetland hydrology on the edge of known wetlands. A second goal is to follow and document the beginning of the growing season (0o C). The data are used to establish the normalcy of the hydrologic circumstances and general water levels throughout the season.

Performance Measure Measurable date on the quantity and quality of the waters of the District

Means and Strategies Anoka Conservation District annual contract for services
Volunteers
Staff

Partners/ Collaborators District cities
State and Federal Agencies

Potential Funding Sources Funding for the Research and Monitoring program is expected to be primarily through the District's annual property tax levy and grants.

Value Projected average value is\$69,812 per year.

Cost Average annual cost – minus equipment is expected to be\$18,890

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-------------------------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| AIS - Citizen | Develop and maintain a monitoring program that ensures early detection of new AIS and the monitoring of existing AIS | | \$ 450 | \$ 459 | \$ 468 | \$ 478 | \$ 487 | \$ 497 | \$ 507 | \$ 517 | \$ 527 | \$ 538 |
| | Use volunteer monitors to conduct AIS inspections | | \$ 450 | \$ 459 | \$ 468 | \$ 478 | \$ 487 | \$ 497 | \$ 507 | \$ 517 | \$ 527 | \$ 538 |
| Biomonitoring | Coon Creek at 131st* | \$1,275 | \$1,294 | | \$1,333 | \$1,353 | | \$1,394 | \$1,415 | | \$1,458 | \$1,480 |
| | Coon Creek at Egret | \$1,275 | \$1,294 | | \$1,333 | \$1,353 | \$1,373 | | \$1,415 | \$1,436 | | \$1,479 |
| | Coon Creek at TH 65* | \$1,275 | \$1,294 | | \$1,333 | \$1,353 | \$1,373 | | \$1,415 | \$1,436 | | \$1,479 |
| | D58 at Andover Bld* | \$1,275 | \$1,294 | | \$1,333 | \$1,353 | | \$1,394 | \$1,415 | | \$1,458 | \$1,480 |
| | Sand Creek at Olive* | \$1,275 | \$1,294 | \$1,314 | | \$ - | \$1,373 | \$1,394 | | \$1,436 | \$1,458 | |
| | Sand Creek at TH 65 | \$1,275 | \$1,294 | \$1,314 | | \$ - | \$1,373 | \$1,394 | | \$1,436 | \$1,458 | |
| Lake Level Monitoring | Crooked Lake | \$ 200 | \$ 204 | \$ 208 | \$ 212 | \$ 216 | \$ 221 | \$ 225 | \$ 230 | \$ 234 | \$ 239 | \$ 244 |
| | Ham Lake | \$ 200 | \$ 204 | \$ 208 | \$ 212 | \$ 216 | \$ 221 | \$ 225 | \$ 230 | \$ 234 | \$ 239 | \$ 244 |
| | Lake Netta | \$ 200 | \$ 204 | \$ 208 | \$ 212 | \$ 216 | \$ 221 | \$ 225 | \$ 230 | \$ 234 | \$ 239 | \$ 244 |
| Lake Water Quality Monitoring | Crooked Lake | | \$1,275 | \$1,301 | | \$1,354 | \$1,381 | | \$1,437 | \$1,466 | | \$1,525 |
| | Ham Lake | \$1,250 | \$1,275 | | \$1,327 | \$1,354 | | \$1,409 | \$1,437 | | \$1,495 | \$1,525 |
| | Lake Netta | \$1,250 | | \$1,301 | \$1,327 | | \$1,381 | \$1,409 | | \$1,466 | \$1,495 | |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--------------------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Lakes | Assess current and long-term monitoring of the District's waters for early detection opportunities | \$1,600 | | | | | | | | | | |
| | Monitor locations with a high invasion rate | | \$ 200 | | | | | | | | | |
| | Support increased research on the baseline biology of AIS, the ecological and economic impacts of invasions, and control options to improve management | | \$5,000 | \$5,000 | \$5,000 | \$5,000 | | | | | | |
| Precipitation Monitoring | ACD Office | \$ 575 | \$ 598 | \$ 622 | \$ 647 | \$ 673 | \$ 700 | \$ 728 | \$ 757 | \$ 787 | \$ 818 | \$ 851 |
| | Analysis | \$ 850 | \$ 867 | \$ 884 | \$ 902 | \$ 920 | \$ 938 | \$ 957 | \$ 976 | \$ 996 | \$1,016 | \$1,036 |
| | Andover Public Works | \$ 575 | \$ 598 | \$ 622 | \$ 647 | \$ 673 | \$ 700 | \$ 728 | \$ 757 | \$ 787 | \$ 818 | \$ 851 |
| | Blaine Public Works | \$ 575 | \$ 598 | \$ 622 | \$ 647 | \$ 673 | \$ 700 | \$ 728 | \$ 757 | \$ 787 | \$ 818 | \$ 851 |
| | Coon Rapids City Hall | \$ 575 | \$ 598 | \$ 622 | \$ 647 | \$ 673 | \$ 700 | \$ 728 | \$ 757 | \$ 787 | \$ 818 | \$ 851 |
| | Coordinate weather data collection activities within the Watershed District and with cooperators | | | | | | | | | | | |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--------------------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Precipitation Monitoring | Design, coordinate, and maintain a weather information management system that will meet land and resource management needs of the Watershed District | \$2,500 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 |
| | Ensure that the location of weather stations meets multiple-use management and/or research needs of the Watershed District | \$ 480 | | | \$ 480 | | | | \$ 480 | | | |
| | Ensure the installation, operation, and maintenance of weather stations | \$ 160 | \$ 162 | \$ 163 | \$ 165 | \$ 166 | \$ 168 | \$ 170 | \$ 172 | \$ 173 | \$ 175 | \$ 177 |
| | Establish formal weather program leadership and management at the sub-watershed level. | \$3,300 | \$3,350 | \$4,250 | \$4,313 | \$4,378 | \$4,444 | \$4,510 | \$4,578 | \$4,647 | \$4,716 | \$4,787 |
| | Evaluate and interpret data | \$ 850 | \$ 863 | \$1,095 | \$1,111 | \$1,128 | \$1,145 | \$1,162 | \$1,179 | \$1,197 | \$1,215 | \$1,233 |
| | Hoffman Sod Farm | \$ 575 | \$ 598 | \$ 622 | \$ 647 | \$ 673 | \$ 700 | \$ 728 | \$ 757 | \$ 787 | \$ 818 | \$ 851 |
| | Maintain a Watershed District Weather Data Library | \$ 750 | \$ 750 | \$ 750 | \$ 750 | \$ 750 | \$ 750 | \$ 750 | \$750 | \$ 750 | \$ 750 | \$ 750 |
| | No. Natural Gas Substation (Bunker & Lexington) | \$ 575 | \$ 598 | \$ 622 | \$ 647 | \$ 673 | \$ 700 | \$ 728 | \$ 757 | \$ 787 | \$ 818 | \$ 851 |
| | Springbrook Nature Center | \$ 575 | \$ 598 | \$ 622 | \$ 647 | \$ 673 | \$ 700 | \$ 728 | \$ 757 | \$ 787 | \$ 818 | \$ 851 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Reference Wetland Monitoring | Analysis | \$ 325 | \$ 332 | \$ 338 | \$ 345 | \$ 352 | \$ 359 | \$ 366 | \$ 373 | \$ 381 | \$ 388 | \$ 396 |
| | Andover Ilex Wetland | \$ 560 | \$ 571 | \$ 583 | \$ 594 | \$ 606 | \$ 618 | \$ 631 | \$ 643 | \$ 656 | \$ 669 | \$ 683 |
| | Bannochie | \$ 560 | \$ 571 | \$ 583 | \$ 594 | \$ 606 | \$ 618 | \$ 631 | \$ 643 | \$ 656 | \$ 669 | \$ 683 |
| | Bunker Wetland | \$ 560 | \$ 571 | \$ 583 | \$ 594 | \$ 606 | \$ 618 | \$ 631 | \$ 643 | \$ 656 | \$ 669 | \$ 683 |
| | Camp Three Road | \$ 560 | \$ 571 | \$ 583 | \$ 594 | \$ 606 | \$ 618 | \$ 631 | \$ 643 | \$ 656 | \$ 669 | \$ 683 |
| | Pioneer Park | \$ 560 | \$ 571 | \$ 583 | \$ 594 | \$ 606 | \$ 618 | \$ 631 | \$ 643 | \$ 656 | \$ 669 | \$ 683 |
| | Sannerud Wetland | \$ 560 | \$ 571 | \$ 583 | \$ 594 | \$ 606 | \$ 618 | \$ 631 | \$ 643 | \$ 656 | \$ 669 | \$ 683 |
| Reference Wetland Monitoring - Vegetation Transects | Bunker Wetland | \$ 380 | \$ 388 | \$ 395 | \$ 403 | \$ 411 | \$ 420 | \$ 428 | \$ 437 | \$ 445 | \$ 454 | \$ 463 |
| | Sannerud Wetland | \$ 380 | \$ 388 | \$ 395 | \$ 403 | \$ 411 | \$ 420 | \$ 428 | \$ 437 | \$ 445 | \$ 454 | \$ 463 |
| Riparian Lands | Monitor the implementation and effectiveness of management and protection of riparian areas | | | | | | | | \$2,700 | \$2,727 | \$2,754 | \$2,782 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--|--|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|
| Soils Study | Assess, analyze, and monitor the soil resource to detect changes in soil properties resulting from implementation of land management plans. Determine how changes in soil properties will affect desired soil conditions and objectives related to ecosystem function. | | | | | | | | \$11,200 | | | |
| Stream – E coli Monitoring - Grab Samples | Coon Creek at 131st | \$ 420 | \$ 428 | \$ 437 | \$ 446 | \$ 455 | \$ 464 | \$ 473 | \$ 482 | \$ 492 | \$ 502 | \$ 512 |
| | Coon Creek at Coon Hollow | \$ 420 | \$ 428 | \$ 437 | \$ 446 | \$ 455 | \$ 464 | \$ 473 | \$ 482 | \$ 492 | \$ 502 | \$ 512 |
| | Coon Creek at Lexington | \$ 420 | \$ 428 | \$ 437 | \$ 446 | \$ 455 | \$ 464 | \$ 473 | \$ 482 | \$ 492 | \$ 502 | \$ 512 |
| | Coon Creek at Lions Park | \$ 420 | \$ 428 | \$ 437 | \$ 446 | \$ 455 | \$ 464 | \$ 473 | \$ 482 | \$ 492 | \$ 502 | \$ 512 |
| | Coon Creek at Naples | \$ 420 | \$ 428 | \$ 437 | \$ 446 | \$ 455 | \$ 464 | \$ 473 | \$ 482 | \$ 492 | \$ 502 | \$ 512 |
| | Coon Creek at Shadowbrook | \$ 420 | \$ 428 | \$ 437 | \$ 446 | \$ 455 | \$ 464 | \$ 473 | \$ 482 | \$ 492 | \$ 502 | \$ 512 |
| | Ditch 58 at Andover Bld | \$ 420 | \$ 428 | \$ 437 | \$ 446 | \$ 455 | \$ 464 | \$ 473 | \$ 482 | \$ 492 | \$ 502 | \$ 512 |
| | Pleasure Creek at 86th St (Mississippi river) | \$ 420 | \$ 428 | \$ 437 | \$ 446 | \$ 455 | \$ 464 | \$ 473 | \$ 482 | \$ 492 | \$ 502 | \$ 512 |
| | Sand Creek at Morningside Cemetery | \$ 420 | \$ 428 | \$ 437 | \$ 446 | \$ 455 | \$ 464 | \$ 473 | \$ 482 | \$ 492 | \$ 502 | \$ 512 |
| | Sand Creek at Outlet of the Lakes | \$ 420 | \$ 428 | \$ 437 | \$ 446 | \$ 455 | \$ 464 | \$ 473 | \$ 482 | \$ 492 | \$ 502 | \$ 512 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Stream – E coli Monitoring - Grab Samples | Sand Creek at TH 65 | \$ 420 | \$ 428 | \$ 437 | \$ 446 | \$ 455 | \$ 464 | \$ 473 | \$ 482 | \$ 492 | \$ 502 | \$ 512 |
| | Sand Creek at Xeon | \$ 420 | \$ 428 | \$ 437 | \$ 446 | \$ 455 | \$ 464 | \$ 473 | \$ 482 | \$ 492 | \$ 502 | \$ 512 |
| | Springbrook at 79th (Mississippi river) | \$ 420 | \$ 428 | \$ 437 | \$ 446 | \$ 455 | \$ 464 | \$ 473 | \$ 482 | \$ 492 | \$ 502 | \$ 512 |
| Stream Hydrology Monitoring - Continuous Stage Monitoring | Coon Creek at Coon Hollow | \$ 575 | \$ 584 | \$ 592 | \$ 601 | \$ 610 | \$ 619 | \$ 629 | \$ 638 | \$ 648 | \$ 657 | \$ 667 |
| | Coon Creek at Lions Park | \$ 575 | \$ 584 | \$ 592 | \$ 601 | \$ 610 | \$ 619 | \$ 629 | \$ 638 | \$ 648 | \$ 657 | \$ 667 |
| | Coon Creek at Naples | \$ 575 | \$ 584 | \$ 592 | \$ 601 | \$ 610 | \$ 619 | \$ 629 | \$ 638 | \$ 648 | \$ 657 | \$ 667 |
| | Ditch 58 at Andover Bld | \$ 575 | \$ 584 | \$ 592 | \$ 601 | \$ 610 | \$ 619 | \$ 629 | \$ 638 | \$ 648 | \$ 657 | \$ 667 |
| | Pleasure Creek at 86th St (Mississippi river) | \$ 575 | \$ 584 | \$ 592 | \$ 601 | \$ 610 | \$ 619 | \$ 629 | \$ 638 | \$ 648 | \$ 657 | \$ 667 |
| | Sand Creek at Morningside Cemetery | \$ 575 | \$ 584 | \$ 592 | \$ 601 | \$ 610 | \$ 619 | \$ 629 | \$ 638 | \$ 648 | \$ 657 | \$ 667 |
| | Sand Creek at Xeon St | \$ 575 | \$ 584 | \$ 592 | \$ 601 | \$ 610 | \$ 619 | \$ 629 | \$ 638 | \$ 648 | \$ 657 | \$ 667 |
| | Springbrook at 79th (Mississippi river) | \$ 575 | \$ 584 | \$ 592 | \$ 601 | \$ 610 | \$ 619 | \$ 629 | \$ 638 | \$ 648 | \$ 657 | \$ 667 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--|---------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Stream Hydrology Monitoring - Rating Curve Development | Coon Creek at Lexington | \$1,200 | | | | | \$1,300 | | | | | \$1,400 |
| | Coon Creek at Lions Park | \$1,200 | | | | | \$1,300 | | | | | \$1,400 |
| | Coon Creek at Naples | \$1,200 | | | | | \$1,300 | | | | | \$1,400 |
| | Ditch 41 at TH 65 | \$1,200 | | | | | \$1,300 | | | | | \$1,400 |
| | Ditch 58 at Andover Bld | \$1,200 | | | | | \$1,300 | | | | | \$1,400 |
| | Ditch 59-4 at Bunker | \$1,200 | | | | | \$1,300 | | | | | \$1,400 |
| | Sand Creek at Xeon | \$1,200 | | | | | \$1,300 | | | | | \$1,400 |
| Stream Water Quality Monitoring - Grab Samples | Coon creek at 131st | \$1,350 | \$1,377 | \$1,405 | \$1,433 | \$1,461 | \$1,491 | \$1,520 | \$1,551 | \$1,582 | \$1,613 | \$1,646 |
| | Coon Creek at Coon Hollow | \$1,350 | \$1,377 | \$1,405 | \$1,433 | \$1,461 | \$1,491 | \$1,520 | \$1,551 | \$1,582 | \$1,613 | \$1,646 |
| | Coon Creek at Lexington | \$1,350 | \$1,377 | \$1,405 | \$1,433 | \$1,461 | \$1,491 | \$1,520 | \$1,551 | \$1,582 | \$1,613 | \$1,646 |
| | Coon Creek at Lions Park | \$1,350 | \$1,377 | \$1,405 | \$1,433 | \$1,461 | \$1,491 | \$1,520 | \$1,551 | \$1,582 | \$1,613 | \$1,646 |
| | Coon Creek at Naples | \$1,350 | \$1,377 | \$1,405 | \$1,433 | \$1,461 | \$1,491 | \$1,520 | \$1,551 | \$1,582 | \$1,613 | \$1,646 |
| | Coon Creek at Shadowbrook | \$1,350 | \$1,377 | \$1,405 | \$1,433 | \$1,461 | \$1,491 | \$1,520 | \$1,551 | \$1,582 | \$1,613 | \$1,646 |
| | Ditch 58 at Andover Bld | \$1,350 | \$1,377 | \$1,405 | \$1,433 | \$1,461 | \$1,491 | \$1,520 | \$1,551 | \$1,582 | \$1,613 | \$1,646 |

| Activity | Measure | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | Pleasure Creek at 86th St (Mississippi river) | \$1,350 | \$1,377 | \$1,405 | \$1,433 | \$1,461 | \$1,491 | \$1,520 | \$1,551 | \$1,582 | \$1,613 | \$1,646 |
| | Sand Creek at Morningside Cemetery | \$1,350 | \$1,377 | \$1,405 | \$1,433 | \$1,461 | \$1,491 | \$1,520 | \$1,551 | \$1,582 | \$1,613 | \$1,646 |
| | Sand Creek at Outlet of the Lakes | \$1,350 | \$1,377 | \$1,405 | \$1,433 | \$1,461 | \$1,491 | \$1,520 | \$1,551 | \$1,582 | \$1,613 | \$1,646 |
| | Sand Creek at TH 65 | \$1,350 | \$1,377 | \$1,405 | \$1,433 | \$1,461 | \$1,491 | \$1,520 | \$1,551 | \$1,582 | \$1,613 | \$1,646 |
| | Sand Creek at Xeon | \$1,350 | \$1,377 | \$1,405 | \$1,433 | \$1,461 | \$1,491 | \$1,520 | \$1,551 | \$1,582 | \$1,613 | \$1,646 |
| | Springbrook at 79th (Mississippi river) | \$1,350 | \$1,377 | \$1,405 | \$1,433 | \$1,461 | \$1,491 | \$1,520 | \$1,551 | \$1,582 | \$1,613 | \$1,646 |
| Stream Water Quality Monitoring - Hydrolab Continuous Monitoring | Coon Creek at Coon Hollow | \$1,350 | \$1,377 | \$1,405 | \$1,433 | \$1,461 | \$1,491 | \$1,520 | \$1,551 | \$1,582 | \$1,613 | \$1,646 |
| | Pleasure Creek at 86th St (Mississippi river) | \$1,350 | \$1,377 | \$1,405 | \$1,433 | \$1,461 | \$1,491 | \$1,520 | \$1,551 | \$1,582 | \$1,613 | \$1,646 |
| | Springbrook at 79th (Mississippi river) | \$1,350 | \$1,377 | \$1,405 | \$1,433 | \$1,461 | \$1,491 | \$1,520 | \$1,551 | \$1,582 | \$1,613 | \$1,646 |

Policies and Procedures

The District's Policies and Procedures contain detailed procedures, standards, practices, and techniques to be used in the field. Watershed District Policies and Procedures include both those prepared internally as well as widely used external directives such as the Wetland Conservation Act and related manuals.

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Goal

To provide in one location all continuing, basic, and broad direction needed by Watershed District and key collaborator staff to implement and control, monitor, and adjust Watershed District programs and activities.

The policies and procedures are the basic and ruling components of the District's rule and the principal administrative source of continuing direction for the conduct of Watershed District programs and activities. Specific objectives, policies and standards are next reviewed for each of those resource areas. Program coordinators, collaborators and staff shall ensure that the direction issued in this section has applicability to all employees involved in water and related resource management.

Authority

Minnesota Statutes Section 103B.201
Minnesota Statutes Section 103B.231
Minnesota Statutes Section 103D.201
Minnesota Statutes Section 103D.335
Minnesota Statutes Section 103D.341

Objectives

The objectives of these policies and procedures is to:

1. Manage the watershed's water and related land resources so they remain clean.
2. Prevent public health and safety hazards.
3. Prevent property damage.
4. Promote beneficial uses.

5. Reduce the discharge of pollutants from stormwater to the maximum extent practicable (MEP).
6. Identify waterways, floodplains and wetlands in which land disturbance activity should be restricted, and, in appropriate cases, prohibited.
7. Give due consideration to alternatives and creative solutions in planning and using the water and related land resources of the watershed to encourage and pursue low impact development.

These objectives apply to the water and related resources of the Watershed that are often the subject or target for management actions and practices. They are:

- Ditches and water courses
- Floodplains
- Groundwater
- Soils and erosion control
- Stormwater
- Water quality
- Wetlands
- Wildlife

DITCHES and WATER COURSES

Objectives

1. To maintain ditch and conveyance systems.
2. To promote, preserve and enhance the water and related land resources of the Coon Creek Watershed.
3. To protect the water and related land resources of the Coon Creek Watershed from the adverse effects resulting from poor or incompatible land use activities.
4. To encourage compatibility between land use activities upstream and downstream and natural resource capacity.
5. To regulate land-disturbing activities affecting the course, current or cross section of ditches and water courses.
6. Regulate improvements by riparian property owners of the bed, banks, and shores of lakes, streams, and wetlands for preservation and beneficial use.

Policy

Construction, improvement or repair of a public or private drainage system in the District must:

1. Identify all public drainage ditches on the site, including ditch number and year of establishment;
2. Identify the acres of agricultural land directly affected by the ditch.
3. Identify the trend in land use for the affected drainage area.
4. Determine the drainage needs and flooding characteristics for land upstream and downstream.
5. Determine the primary role of the ditch in providing for agricultural

- drainage and/or stormwater conveyance.
6. Provide the approved/as-built elevations and grades of the public ditch through the subject property.
 7. Demonstrate that such proposed activity will not adversely impact downstream water quality or quantity.
 8. Provide stable channel and outfall.
 9. Comply with all federal, state and District wetland protection rules and regulations.
 10. Demonstrate concurrence with regional pond or subdivision drainage plans approved by the District, if applicable.
 11. If a drainage system is proposed to outlet a landlocked basin, provide sufficient dead storage volume to retain back-to-back 100-year, twenty-four-hour rainfalls and runoff.

Standards

1. Public ditches shall be inspected using the following criteria:
 - Presence of a 16.5 foot grass strip (Where required)
 - Stabilization of spoil banks
 - Presence of obstructions
 - Variation from approved plans
 - Sufficient hydraulic capacity (Manning's Coefficient)
2. Prior to realignment or repair, alternative measures to conserve, allocate and use the water should be considered (versus removing it from the area and watershed).

In upper 2/3s of watershed (All lands tributary to Coon Creek, upstream from Main Street in Coon Rapids) provision and/or discussion of alternative stormwater designs and attempts to avoid or minimize removing water from the site.

3. The need for repair of the ditch shall be determined. Based on the inspection standards above, the need for ditch repair will be determined as follows:

| Condition Rating | Timing of Action |
|-------------------------|---|
| Obstruction | Immediate repair |
| Poor | Immediate repair |
| Fair | Budget for next fiscal year |
| Good | Assess condition during next fiscal year |
| Excellent | Monitor condition through routine inspections |

FLOODPLAINS

Objectives

1. To secure safety from floods.
2. To prevent loss of life, property damage, and the losses and risks associated with flood conditions.
3. To preserve the location, character, and extent of natural drainage courses.
4. To preserve the natural integrity of drainage patterns
5. To provide a storm and surface water system capable of handling a 100 year storm.
6. To provide flood event water storage and flowage.

Policy

1. Maintain ditch and conveyance systems within the watershed to fulfill the role identified within the District's Comprehensive Management Plan and the drainage law.
2. Promote, preserve and enhance the water and related land resources of the Coon Creek Watershed.
3. Protect the water and related land resources of the Coon Creek Watershed from the adverse effects resulting from poor or incompatible land use activities.
4. Encourage compatibility between land use activities upstream and downstream.
5. Regulate land-disturbing activities affecting the course, current, cross section and quality of ditches and water courses.
6. Regulate improvements by riparian property owners of the bed, banks, and shores of lakes, streams, and wetlands for preservation and beneficial use.
7. Protect stream channels from degradation.
8. To regulate crossings of ditches and watercourses in the District to maintain channel profile stability and conveyance capacity.

Standards

1. The existence of floodplain on the property must be determined.
2. Proposed floodplain impacts must be identified and quantified
 - a. Such encroachment cannot lie within the floodway and cannot result in a violation of State or District floodplain, shoreland or wetland policies.
 - b. Construction or development subject to flood damage will have a minimum floor elevation of at least 1 foot above the 100-year flood profile.
 - c. Any structures, facilities, or embankments within the floodplain shall be capable of passing the 100-year flood without increasing the elevation of the 100-year flood profile or creating excessive velocities as determined by the District.
3. The floodplain storage volume after encroachment must be equal to

or greater than the floodplain storage volume prior to encroachment within the relevant reach (Compensatory storage must be provided).

GROUNDWATER

Objectives

1. To protect, preserve, and use natural surface and ground water storage and retention systems
2. To identify and plan for means to effectively protect and improve surface and groundwater quality
3. To establish uniform local policies and controls for surface and groundwater management
4. To promote ground water recharge
5. To secure the other benefits associated with the proper management of surface and ground water
6. Provide for the protection of groundwater and regulate its use to preserve it for beneficial purposes
7. To consider the availability of shallow ground water before establishing a drainage project.
8. Decrease Waste of Groundwater
9. Protect the ecological processes and biodiversity of ground water-dependent resources such as lakes and wetlands
10. Manage ground water-dependent ecosystems to satisfy legal mandates, including but not limited to, those associated with floodplains, wetlands, water quality and quantity, dredge and fill material, and endangered, threatened and special concern species.

Policy

It is the policy of the District to

1. To implement the purpose and intent of the water quality provisions of the District's Comprehensive Management Plan as they may relate to ground water.
2. To maintain the present and natural rate of recharge to the surficial aquifer, and when possible, enhance the rate of recharge.
3. To ensure a dependable water supply and ensure the integrity of natural drainage patterns.
4. To protect fresh water supplies from the dangers of drought, overdraft, pollution, or mismanagement.
5. To define the roles and responsibilities of governmental units in implementing land use controls for the protection of groundwater quality
6. To prevent property damage, and the losses and risks associated with flood conditions that may arise from high water tables. Surficial groundwater levels must be known before any appropriation of groundwater or excavation into the surficial aquifer.

7. Surficial groundwater extraction rates and recharge rates should be established to minimize local impacts on groundwater dependent resources.

Standards

Land use actions must demonstrate compliance with the following standards:

1. The quality of water infiltrated to the water table or surficial aquifer shall remain unchanged or improved by the land disturbance activity.
2. Water shall not be infiltrated within wellhead protection zone or drinking water supply management areas.
3. Low floors must be at least 2 feet above high water table elevation or mottled soils, whichever is higher, unless the applicant can show that the potential for property damage, and the losses and risks associated with high water table conditions are nonexistent or acceptably remote or as required by local ordinance
4. Ground water may not be discharged in a manner that causes erosion or flooding of the site or receiving channels or a wetland.
5. Water pumped from a project site shall be treated by temporary sedimentation basins, grit chambers, sand filters or other appropriate controls designed and used to remove particles of 100 microns or greater for the highest pumping rate.
6. The withdrawal from the Surficial Aquifer and the location of the place of discharge thereof shall conform to the standards of the Minnesota Pollution Control Agency and the Department of Natural Resources.
7. Buffer zones should be established around groundwater dependent resources within which extraction of surficial groundwater is prohibited or limited.

SOILS AND EROSION CONTROL

Objectives

1. To encourage land occupiers to conserve soil and water resources through the implementation of practices to that effectively reduce or prevent erosion, sedimentation, siltation and agriculturally related pollution.
2. To insure continued soil productivity.
3. To prevent soil erosion into surface water systems
4. Control or alleviate soil erosion and siltation of watercourses or water bodies.

Policy

It is the policy of the District to:

1. To reduce the siltation into, and the pollution of water bodies and streams.
2. To guide, regulate and control the design, construction, use and

maintenance of development to promote water quality and prevent pollution.

3. To control and minimize pollution caused by erosion and sedimentation.
4. To reduce siltation to, and the pollution of, water bodies and streams.

Standards

An applicant for an erosion and sediment control permit must demonstrate compliance with the following standards:

1. The Soils affected by the proposal must be identified
2. Soils with a soil-erodibility factor of 0.15 or greater need special attention through the use of best management practices
3. Disturbed areas must be stabilized with vegetation within 14 days.
4. Adjacent properties must be protected from sediment deposition.
5. Sedimentation, skimming, and nutrient removal are to be provided to the maximum extent practical for stormwater runoff prior to discharge to waters of the District. It is understood that there are occasions when it may be necessary to use a portion of a protected basin to serve as a sediment trap and to provide skimming facilities.
6. Plans and specifications must conform to the provisions of all pertinent Minnesota Pollution Control Agency Manuals.
7. All erosion and sediment controls proposed for compliance must be in place before any land-disturbing activity begins.
8. Any area of land from which the natural vegetative cover has been either partially or wholly cleared or removed by development activities shall be stabilized within 14 days from the substantial completion of such clearing and construction. The following criteria shall apply to vegetation efforts:
 - a) Reseeding must be done with an annual or perennial cover crop accompanied by placement of straw mulch or its equivalent of sufficient coverage to control erosion until such time as the cover crop is established over ninety percent (90%) of the seeded area.
 - b) Replanting with native woody and herbaceous vegetation must be accompanied by placement of straw mulch or its equivalent of sufficient coverage to control erosion until the plantings are established and are capable of controlling erosion.
 - c) Any area of vegetation must exhibit survival of a minimum of seventy percent (70%) of the cover crop throughout the year immediately following vegetation. Vegetation must be repeated in successive years until the minimum seventy percent (70%) survival for one (1) year is achieved.

STORMWATER

Objectives

1. To protect, preserve, and use natural surface and ground water storage and retention systems.

2. To secure the other benefits associated with the proper management of surface and ground water.
3. Regulate the flow of streams and conserve stream water.
4. Divert or change all or part of a watercourse.
5. Repair, improve, relocate, modify, consolidate, and abandon all or part of drainage systems within a watershed district.
6. To regulate improvements by riparian property owners of the bed, banks, and shores of lakes, streams, and wetlands for preservation and beneficial use.
7. To construct and maintain drainage systems.
8. To deepen, widen, straighten, or change the channel or bed of a natural drainage way that is part of the drainage system or is located at the outlet of the drainage system.
9. To extend the drainage system into or through a municipality for a suitable outlet.
10. To construct dikes, dams, and control structures.
11. Before establishing a drainage project consider:
 - a. Private and public benefits and costs of the project
 - b. The present and anticipated agricultural land acreage availability and use
 - c. The present and anticipated land use within the drainage project or system
 - d. Flooding characteristics of property in the drainage project or system and downstream for the 5-, 10-, 25-, and 50-year flood events
 - e. The waters to be drained and alternative measures to conserve, allocate, and use the waters including storage and retention of drainage waters.

Policy

It is the policy of the District to

1. To promote, preserve and enhance the water and related land resources of the Coon Creek Watershed.
2. To implement the nondegradation requirements of the NPDES program using 1988 as the baseline year and load allocation reductions or management practices noted in a District adopted Total Maximum Daily Loads (TMDLs) implementation plan.
3. To protect water and related land resources of the Coon Creek Watershed from the adverse effects resulting from poor or incompatible land use activities.
4. To implement applicable TMDLs.
5. To encourage compatibility between land use activities upstream and downstream and natural resource capacity.
6. To regulate land-disturbing activities affecting the course, current or cross section of ditches and water courses.
7. Regulate improvements by riparian property owners of the bed, banks, and shores of lakes, streams, and wetlands for

preservation and beneficial use.

Bridge and culvert crossings must:

8. Provide equivalent hydraulic capacity as existing condition.
9. Retain existing navigational capacity.
10. Not adversely affect water quality.
11. Represent the minimal impact solution to a specific need with respect to all other alternatives.
12. Be constructed to allow for future erosion, scour and sedimentation considerations.

Standards

1. Stormwater leaving the site must be routed to a public drainage system.
2. Drainage sensitive uses downstream from the proposed site must be accounted for and their ability to discharge in a timely manner must be assured. (Drainage Sensitive Uses are those land uses that require less than saturated conditions to grow or for the land to be used and therefore are dependent upon the subsurface, lateral effect of drainage ditches. A map of drainage sensitive lands can be found in Appendix C: page 55).
3. Stormwater plans must ensure that discharge rates from the proposal are controlled such that within Drainage-Sensitive Uses Areas the post-development 100-year peak flow rate shall not exceed predevelopment 25-year peak flow rate (by subwatershed).
4. In Non-Drainage Sensitive Uses Areas the post-development 100-year peak flow rate shall not exceed predevelopment 100-year peak flow rate (by subwatershed).
5. The proposal must infiltrate the first one inch of precipitation.

WATER QUALITY

Objectives

1. To control and minimize pollution caused by erosion and sedimentation.
2. To reduce siltation to, and the pollution of, water bodies and streams.
3. To protect and improve the quality of the lakes and wetlands within the watershed.
4. Improve the quality of the surface and subsurface discharges to the lakes and wetlands within the watershed by limiting nutrients and other contaminants.
5. To protect and, where needed, improve the physical, chemical, biological, and aesthetic quality of the water resource consistent with

the purposes of the Watershed District and State and National Water quality goals.

6. To produce water of a quality suitable for the beneficial uses identified in the land and resource management planning process.
7. To ensure safe drinking water subject to public use on National Forests, whether the source is a natural or developed water supply. Where State standards do not exist, observe EPA water quality criteria.
8. To ensure safe water quality for designated primary contact recreation areas. Where State standards do not exist, observe EPA water quality criteria.

Policy

It is the policy of the District to

1. To control and minimize pollution caused by erosion and sedimentation.
2. To reduce siltation to, and the pollution of water bodies and streams.
3. To preserve and improve the quality of the lakes and wetlands within the watershed.
4. Improve the quality of the surface and subsurface discharges to the lakes and wetlands within the watershed by limiting nutrients and other contaminants.
5. To pursue non-degradation of the waters of the District.
6. Promote and apply approved best management practices to all management activities as the method for control of non-point sources of water pollution, and for compliance with established state or national water quality goals.
7. Consider water quality needs of local, regional, and national public interests both in and outside the Watershed District in determining appropriate water quality management activities.
8. Establish objectives for managing the quality of the water resource in local water management plans and Storm Water Pollution Prevention Plans.
9. Include a water quality evaluation for all permit reviews and environmental analyses. Identify the water quality implications of proposed and alternative land management practices.
10. Evaluate the data collection activities of other agencies before additional water quality inventories or monitoring efforts are

undertaken.

11. Conduct water quality data collection activities within the guidelines of an inventory or monitoring plan reviewed by the Technical Advisory Committee.
12. Specify the accuracy, precision and threshold limits of detection for each parameter or test conducted by water quality analytical laboratories used by the Watershed District.
13. For potable water, all water quality testing laboratories used by the Watershed District shall be certified by either the State.
14. Use the Environmental Protection Agency's (EPA) STORET/ Equis system as the primary depository for stream and lake water quality data. Ensure that all water quality data placed on the STORET/Equis system is:
 - a. collected and analyzed by procedures recognized as standard methods or
 - b. entered with descriptive qualifiers which specify the method of collection or analysis.
15. Monitor all water provided for public domestic purposes and primary contact water sports, to ensure public health and safety. Design monitoring systems consistent with applicable State or Federal regulations for the specific water use.

Standards

The Watershed District is required to review its water quality standards at least once every 5 years as part of the new NPDES permit and revise them as necessary. The District will participate in review of State standards and work toward change where consideration is not given to the following factors:

1. Standards should reflect local water quality objectives; be related to beneficial uses, and recognize natural background and variability.
2. Compliance with approved best management practices for control of nonpoint sources should constitute compliance with water quality standards and these practices should be based upon site-specific conditions and should include a consideration of political, social, economic, and technical feasibility.
3. Water quality standards that reflect nonpoint source conditions should be used to measure effectiveness of best management practices.

4. Consideration should be given to evaluating certain water quality concerns, such as sediment, by observing a surrogate such as channel condition.
5. Anti-degradation policy should include a consideration of both time and space and should not be based on change at a single point.

It is presumed that a Best Management Practice (BMP) complies with this performance standard if it is:

1. Sized to capture the prescribed water quality volume
2. Designed in accordance with specific design standards outline in an approved stormwater design manual
3. Constructed properly
4. Maintained properly.

WETLANDS Objectives

1. To achieve no net loss in the quantity, quality and biological diversity of Minnesota's existing wetlands
2. To increase the quantity, quality and biological diversity of Minnesota's existing wetlands by restoring or enhancing diminished or drained wetlands
3. To avoid direct or indirect impacts from activities that destroy or diminish the quantity, quality and biological diversity of wetlands
4. To replace wetland values where avoidance of activity is not feasible and prudent
5. Increase the quantity, quality, and biological diversity of Minnesota's wetlands by restoring or enhancing diminished or drained wetlands
6. To protect, preserve, and use natural surface and ground water storage and retention systems
7. To minimize public capital expenditures needed to correct flooding and water quality problems
8. To establish uniform local policies and controls for surface and groundwater management
9. To reclaim or fill wet or overflowed land
10. To regulate improvements by riparian property owners of the bed, banks, and shores of lakes, streams, and wetlands for preservation and beneficial use.

Policy

It is the policy of the District to

1. To provide for the protection, preservation, proper maintenance and beneficial use of wetlands.
2. To minimize the disturbance to wetlands and to prevent damage from excessive sedimentation, eutrophication or pollution.

3. To protect and enhance the ecological function of wetlands and the benefits and values they provide to society.

Standards

The Minnesota Wetland Conservation Act (WCA), as amended and its implementing rules contained in Minnesota Rules chapter 8420, as amended.

Any person proposing to impact a wetland in the District is subject to and must establish compliance with the Wetland Conservation Act, as amended.

Within area(s) delineated as wetland, the applicant and property owner shall not:

1. Fill or place materials, substances or other objects, nor erect or construct any type of structure, temporary or permanent, except as permitted through the Wetland Conservation Act.
2. Drain or cause to be drained through ditching, pumping or alteration of the wetlands water source or engage in any other actions which adversely change the wetlands hydroperiod beyond normal circumstances such that a wetland can become nonwetland, except as permitted through the Wetland Conservation Act.
3. Excavate or dig within a jurisdictional wetland except as permitted through the Wetland Conservation Act.
4. Clear vegetation, pond water or alter the landscape position in a manner that results in adverse environmental impact.

Discharges into wetlands should not cause extreme fluctuations of water levels. Discharges that exceed the standards below shall be considered and regulated as adverse impact.

| Wetland Type | Type 8 -Sedge Meadows -Seasonally Flooded Basins | Type 4 &5 -Scrub-Shrub -Wet-Meadow -Seasonally - Permanently Flooded | Type 4 &5 -Floodplain forests -Seasonally - Permanently Flooded | Cultivated hydic soil or Sand/gravel pit |
|----------------------------|---|--|---|--|
| Standard | | | | |
| Storm Bounce | Existing | Existing + 0.5 ft. | Existing + 1 ft. | No limit |
| Discharge Rate | Existing | Existing | Existing or less | Existing or less |
| Inundation on 1-2yr event | Existing | Existing + 1 day | Existing + 2 days | Existing + 7 days |
| Inundation for 10 yr event | Existing | Existing + 7 days | Existing + 14 days | Existing + 21 days |
| Run out control | No change | No change | 0'-1 ft above RO | 0-4 ft above RO |

WILDLIFE

Objectives

1. To preserve wildlife.
2. Protect and enhance fish and wildlife habitat and water recreational facilities.
3. Consider the effect on fish and wildlife before establishing a drainage project.
4. Improve and manage habitat to benefit at-risk and declining species and discourage invasive species.
5. To maintain and improve wildlife and fish habitat.
6. To cooperate with other agencies, conservation organizations, concerned landowners, and individuals in all appropriate aspects of wildlife, fish, and threatened, endangered, and sensitive species habitat management.
7. To protect, manage, and improve riparian areas while implementing land and resource management activities.
8. To manage riparian areas in the context of the environment in which they are located, recognizing their unique values.
9. To protect Watershed District resources from animal damage.
10. To protect activities taking place within the watershed and to reduce threats to human health and safety from animal damage.

Policy

It is the policy of the District to:

1. To prevent loss of wildlife and vegetation and the habitats on which they depend.
2. To protect, preserve and manage unique resource areas and unique and/or endangered species of plants and animals that populate these areas from adverse impacts associated with land use change.
3. Recognize the Minnesota Department of Natural Resources as the public agency with management responsibilities for fish & wildlife within the Coon Creek Watershed District and include them as partners in planning and implementation of activities that effect wildlife and fish.
4. Generally rely upon a contracted expert to provide the expertise and conduct nuisance control within the Watershed District to determine property losses, and to determine methodology for animal damage management.
5. Use an integrated approach to the prevention of animal damage and management of animal damage control programs.
6. Watershed District resources must be adequately protected during animal damage management activities authorized by the State of Minnesota and conducted by the District's Animal Damage Control program.
7. When the Watershed District conducts animal damage management activities, such as beaver removal, the District must comply fully with state and federal laws.

Standards

1. Establish the presence of endangered, threatened or special concern species or communities on-site and the source of that information.
2. Assess the potential effect on wildlife and vegetation and the habitats on which they depend.
3. The District may require applicant to provide a habitat management plan when the District determines applicant cannot avoid direct or indirect impacts on the habitat in question.

Assessment of significant adverse impacts should be based on the following factors:

1. The amount of vegetation/habitat removal and/or alteration within the development site
2. The amount of habitat of similar type and quality within the development site that remains contiguous
3. The existing and proposed amount of lot coverage
4. The existence of contiguous habitat of similar type and quality on adjoining land
5. Mitigation efforts that directly address the negative effects of the proposed land use on wildlife habitat.

In carrying out animal damage management activities, Watershed District employees shall:

1. Rely upon the District's Animal Damage Control program or private contractors to provide the expertise and conduct animal control on public ditches, to determine methodology for animal damage management.
2. Conduct animal damage management, such as controlling beaver populations in stormwater ponds, and necessary environmental analysis and disclosure on watershed lands consistent with the Comprehensive plans.
3. Coordinate with the Minnesota Department of Natural Resources and other local and state agencies to improve effectiveness of control program activities conducted in the Watershed District.
4. Use an integrated approach to the prevention of animal control and management. Consider a full range of methods, including physical barriers, repellents, habitat manipulation, biological controls, pesticides, and hunting and trapping. Use licensed hunting, fishing, and trapping as a control technique where practicable.

Partnerships and Collaboration

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Introduction

Partnerships between local, State and Federal agencies are essential in the planning, development and operation of water and related resource management facilities and infrastructure (Appendix F). These partnerships have helped resolve many conflicts and problems within the Coon Creek Watershed. To fully comprehend and evaluate relationships between these entities, it is important to first understand each entity's current role in water management.

The Coon Creek Watershed District has responsibilities as a land manager in development of water resource projects within the District. These projects occur within one or more of the cities that lie wholly or partially within the watershed. In addition, efficiently and effectively accomplishing these projects depends to the great degree on partnerships and collaboration with the cities.

Specific issues pertinent to partnerships included:

- Cooperative relationships between all governmental units managing water within the watershed are vital to Minnesota's and Coon Creek's Watershed District's water resources.
- The quantity and quality of future water resources will impact stakeholders across municipal and watershed district jurisdictions.
- Clear and frequent communication is necessary to identify operational and procedural flaws and avoid financial issues.

- High legal costs required to settle disputes related to water and related land resource use issues must be avoided.
- Effective communication between entities is necessary to avoid constraining future collaborative efforts.

Goals

1. To integrate water resource management with Watershed District land and resource management planning and to coordinate Watershed District water resource protection, development, and improvement programs with similar programs of other Federal, State, and local agencies.
2. To assess effectiveness of management in meeting legislative mandates, such as those pertaining to pollution control and to the securing of favorable conditions of streamflow.
3. To plan and execute a coordinated program of water resource development to maximize public benefits within the Watershed.

Objectives

- Address water resource management in land and resource planning, program planning and budgeting.
- Coordinate programs and activities, such as ditch inspection and repair, which can produce effects outside as well as within the subwatershed, with all affected interests.
- Support properly designed and technically sound water related activities of cooperators within the Watershed District, provided those activities and anticipated results are not in conflict with any applicable law or regulation governing the administration and management of these lands.

Current Situation

At present, the Coon Creek Watershed District is committed to a strategy of cultivating and relying on the collaboration and cooperation of the cities within the District. Most of this collaboration and cooperation occurs in the day to day operation of both the Cities stormwater and drainage systems and the District's operation of the public ditch system. Cooperation and collaboration is also frequent in review and inspection of regulated activities and during enforcement actions where care is taken to not 'overwhelm' individuals who have made honest mistakes or oversights and fully intend on remedying the situation.

The District also provides news and other articles tailored to the

specifics of the District, for circulation in municipal news letters or posting on the City websites.

The State of Minnesota Board of Water Resources and Pollution Control Agency has encouraged and requested that the Coon Creek Watershed District enter into a coordinated water and related resource management effort with the local units of government and Municipal Separate Storm Sewer Systems (MS4s) that are partially or wholly within the Coon Creek Watershed District.

Anoka Conservation District (ACD)

The Anoka Conservation District was organized in 1946 as a Soil and Water Conservation District pursuant to Minnesota Statutes 103C. The Conservation District was organized as a governmental subdivision of the State of Minnesota, to exercise public powers in connection with soil conservation and erosion control within its boundaries.

Since its organization, the District has adopted plans and programs outlining in general its long-time objectives. The District has, or may in the future have, under its control funds, services, and facilities, contributed from Federal, State, local, and private sources for use in carrying on its work.

At present, the resource priorities of the Anoka Conservation District are:

1. Water Quality
 - Maintain high quality surface waters
 - Improve impaired surface waters
 - Participate in local planning for preserving clean drinking water
2. Water Quantity
 - Minimize long term depletion of the surficial aquifer
 - Establish practices for water reclamation
3. Natural Habitats
 - Provide leadership in open space planning and protection
 - Address invasive species in high quality natural areas
 - Promote open space protection during the development process
 - Meet annually with P&Z commissions regarding development review process
 - Ensure there is an entity able to accept and manage easements on high priority parcels
4. Wetlands
 - Prevent wetland loss and degradation by enforcing the WCA and recognizing the importance of wetland quality as well as quantity.
5. Soils
 - Maintain and enhance the quality of soil.

- Promote sound agricultural practices through conservation planning.

Management programs and services provided by the ACD are:

1. Monitoring
2. Inventory
3. Assessment
4. Planning
5. Land Protection
6. Technical Assistance
7. Financial Assistance
8. Products & Equipment
9. Education

The Coon Creek Watershed District contracts for all or parts of 24 of the 32 (75%) programs and activities annually provided by the ACD.

The programs and services not utilized are geared towards land protection and technical assistance to individual property owners. These activities include such things as

- Conservation easements
- Land ownership
- Backyard habitat improvement efforts
- Individual assistance with water quality BMPs

The Watershed District is authorized, under the terms of various statutes it administers, to cooperate with and assist soil conservation districts in achieving erosion control and soil conservation. Such cooperation can be mutually helpful to the ACD and the CCWD in achieving their objectives.

In view of these considerations, the CCWD recognizes the enduring basis for such cooperation and assistance.

At present, the Coon Creek Watershed District, through its various programs and activities, consistent with its statutory authority and available resources, and in accordance with CCWD regulations cooperates with and assists the ACD in carrying on erosion control and soil conservation work.

The ACD will prepare and adopt a work plan, which it will keep current, as a guide to show how it will carry on its activities in the interest of erosion control and soil conservation within the County.

Where the aid to be furnished by the ACD to owners and operators of land in carrying out conservation plans involves assistance from the

CCWD, the ACD will enter into agreements with those owners and operators, fixing the responsibilities of the parties in carrying out those plans. The forms of such agreements are to be acceptable to the CCWD and the City involved.

The ACD will be responsible for determining the kind and amount of erosion control and soil conservation work to be performed by it on individual parcels of land, and for seeing that the provisions of agreements it enters into with owners and operators of land are carried out.

The ACD will provide such funds, personal services, and facilities as it is able to obtain for carrying on its work.

Within ninety (90) days after December 31 of each year, the ACD will submit to the CCWD a report on the District's activities and accomplishments for the year ending December 31. The ACD will keep its records in such a way that the agencies of the District cooperating with the ACD may obtain adequate information as to the ACD activities more frequently than once a year by examining these records.

The ACD will inform all cooperating agencies of any substantial changes in its program and its work plan, in order to avoid possible conflicts in carrying out its work.

Strategies to Achieve the Goals

Strategies to facilitate cooperative watershed management will include organized efforts focused on providing for the study, planning, and implementation of actions to achieve a pattern of land use that enhances or conserves water and soil and that meets identified needs of people.

Policies

- The District will administer cooperative watershed programs in accordance with the laws rules and regulations governing the watershed and consistent with the goals and objectives of the District.
- The District will seek to provide leadership and technical assistance for the planning and implementation of the watershed and subwatershed aspects of the cooperative programs.
- The District will give full attention to protecting and improving the ecological and environmental values of the water and related resources of the District where feasible and where measurable impacts can result.

- The District will cooperate with and provide general assistance to the Anoka Conservation District in pursuing their objectives. Adherence to this policy should enable the CCWD to more quickly to reach its objectives of desirable watershed management within the watershed.

The Watershed District will pursue the above goals and policies through the following activities:

- Cooperative Relations
- Cooperative Management
- Watershed Protection
- Subwatershed and Special Area Management Studies
- Flood Prevention
- Emergency Watershed Protection and Natural Disasters Response
- Interagency Programs and Projects
- Hydrologic Monitoring, Surveys and Analysis

Cooperative Relations

Objective To develop and maintain partnerships with the cities and appropriate State agencies to jointly establish and meet water and related resource goals, objectives, and standards.

To cooperate with other agencies, conservation organizations, concerned landowners, and individuals in all appropriate aspects of water and related resource management.

- Policies**
- Recognize the role of the Federal and State authority to manage and regulate water and related resources within their jurisdictions and authority.
 - Recognize the Cities and Anoka County as public agencies with water management responsibilities within the District and include them as partners in planning and implementation of activities that effect water and related resources.
 - Provide leadership in water management within the Coon Creek Watershed to meet resource objectives of the District and its cooperators.
 - Maintain processes for resolving water management issues of the Watershed District and its cooperators.
 - Involve other agencies and participate with agencies,

organizations, and individuals in fostering support for natural resources management within the Coon Creek Watershed.

- Communicate water and related resource status and trends on a regular basis to people within the District to show result of the water management programs.

Cooperative Management

Objective To promote sound integrated planning, development, and utilization of water and related resources on public and private lands within the watershed.

To encourage communication and active participation of local staff in decision making.

To establish coordinated water management practices on geographically interrelated public and private lands.

- Policy**
- Provide leadership in applying principles inherent in the concept of Coordinated Resource Management and Planning.
 - Encourage interested developers, individuals, partnerships, or corporations to develop low or minimum impact development and resource management plans for developable land, including wetland under their control including new, redevelopment and linear projects.
 - Develop and maintain a close working relationship with the development and construction industry through professional organizations.
 - Cooperate with other public and private agencies to encourage cooperative water resource management on interrelated public and private lands and to promote sustainable development.
 - Exchange information with other Government agencies and with all institutions and organizations interested in management of water resources.
 - Provide technical information and advice to private landowners, consultants, and users of the watershed.
 - Demonstrate sound water management within the watershed System and associated public and private lands.

- Approach water and related resource cooperation in a way that will achieve the objectives and spirit of the Watershed Act and the Metropolitan Watershed Management Act.
- Develop Memoranda of Understanding (MOA) with all cities Anoka County and the Anoka Conservation District, that states the responsibilities and relationships of the City and the Coon Creek Watershed District (Potential principles and concepts for an MOA are provided at the end of this chapter).

Watershed Protection

Objective To meet the landowners and City or County objectives and ensure the evaluation and consideration of all water and related resources from a multiple-use standpoint to solve resource, environmental, and socioeconomic problems in watersheds.

- Policy**
- Assist project sponsors to develop and implement plans and proposals that include water and related resource management land treatment activities that contribute toward solving watershed problems such as:
 - 1) Erosion,
 - 2) Floodwater,
 - 3) Water quality and sediment
 - 4) Water conservation, development, utilization, and disposal.

Subwatershed Studies and Special Area Management Plans

Subwatershed studies and special area management plans deal with specific water management needs consistent with the mission and responsibilities of the District. Generally, the studies are limited in scope and provide specific information needed for problem solving. They include retrofit studies and modeling studies for floodplain and water quality.

- Objectives**
1. To ensure the proper role of water management and recognize the benefits from, and the impacts on public and private watershed lands within the watershed.
 2. To improve the well-being of people and the quality of life through planned use of the District's water and related land resources.
 3. To identify and analyze alternative plans for the protection, management, and development of water and related resources.
 4. To provide water and related land resources information to meet Watershed District and other agencies' or entities' planning needs.

- Policy**
- The District will provide technical and planning assistance to other agencies, in water-related resources matters pertaining to Coon Creek Watershed District and the subwatersheds therein.

Flood Prevention

Objective To restore and preserve desirable watershed conditions that will help prevent floods and control sediment transport from watershed lands.

- Policy**
- Install approved flood prevention and watershed protection treatment measures as rapidly as funds permit to solve watershed problems that cause downstream threats to life and property.
 - After installation, ensure that these measures are maintained.
 - Install authorized work as a part of the management and administration of these resources.
 - Use the full authority and facilities of ongoing Watershed District programs to support and supplement flood prevention objectives that are consistent with Watershed District objectives.

Emergency Protection and Natural Disaster Response

Objective Assist in relieving imminent hazards to life and or property from floods and the products of erosion created by natural disasters that cause a sudden impairment of watershed condition.

- Policies**
- Emergency Watershed Protection efforts are intended to be used only in instances when existing local, State, and Federal programs do not provide adequate facilities and funds for immediate remedial action. To be eligible for assistance, the threat to life or property must significantly exceed that which existed before the impairment.

Interagency Programs and Projects

Objective To aid cooperative watershed projects and programs to the maximum extent possible, consistent with other Watershed District responsibilities.

To further the development of water and related resource projects within the District.

- Policies**
- Foster the development of water and related land resources and encourage such development by when public interests can be served.
 - Provide assistance equally to non-public and public programs and projects.

Hydrologic Surveys and Analysis

Objective To develop storm hydrographs, predicted erosion rates, sediment-source areas, and predicted sediment delivery rates for tributary drainages of watershed under investigation.

To develop a cost effective plan to reduce storm water runoff, erosion, and sediment production and to show the costs and benefits of the plan.

- Policies**
- Provide hydrologic data and analyses for lands where the Watershed District has watershed planning responsibilities.

Additional District Program Actions

Development Regulation

Help project proponents select the best project site for water resource development projects. Use the environmental analysis process to identify significant issues and concerns associated with proposed water resource development projects.

Enhance watershed benefits affected by the construction, operation, and maintenance of the proposed project in a way compatible with the project.

Maintain effective and timely communication with the project proponent.

Identify claims of project opponents and prepare a position in response to the claims. Work for modification if project is not consistent with Watershed District position.

Maintain a case folder of Watershed District obligations, plans, and

accomplishments for each water resource development project.

Coordinate law enforcement efforts with the other water and related resources programs within the Coon Creek Watershed District.

Upon request, and depending upon availability, assign Watershed District Enforcement personnel to work with the City on specific enforcement problems.

When available and within budget constraints, assign Watershed District employees to work with Cities and MS4 personnel during specific time periods, such as construction season or periods when heavy violations may be occurring.

Coordinate with City and County personnel in developing prevention programs aimed at reducing enforcement problems within the Coon Creek Watershed District.

When available, furnish such equipment, materials, and labor as the Watershed District determines are needed in rendering assistance.

Provide adequate lead time to review with the City Engineering Department and obtain concurrence for water and related resources development projects.

Operation and Maintenance

Provide adequate lead time to review with the City Engineering Department and obtain concurrence for water and related resources maintenance, repair and improvement projects.

When surplus to its needs, make available to representatives of the City such Coon Creek Watershed District improvements, facilities, and equipment as would normally be used in water and related resources work.

In cooperation with other uses and values, to practice those forms of water and related land management that will benefit water and related resources.

Give technical guidance in connection with the establishment and operation of water demonstration projects.

When available, furnish such equipment, materials, and labor as the Watershed District determines are needed in rendering assistance.

To enter into supplemental cooperative agreements with the Cities for the construction and maintenance of water management and control

structures within the Public Ditch system where they are deemed necessary to facilitate management activities of the City; provided such structures meet the requirements of the Coon Creek Watershed District and their intended use conforms with Watershed District goals and policy.

Assist in making surveys for developing Coon Creek Watershed District management plans for private lands to the extent personnel are available.

**Planning,
Programming and
Budgeting**

Establish a framework to coordinate water resource management activities among the seven cities planning, engineering and public works departments.

To seek advice of the appropriate city department concerning water and related resources needs in carrying out the management of Coon Creek Watershed water resource system.

Consult with the Cities in connection with changes or improvements in the water or related resources or the District's Comprehensive Plan or work plan.

The watershed district and the Minnesota Pollution Control Agency should enhance dialogue among the cities to ensure consistency in rule application.

Assure resolution of issues and concerns.

Obtain information from functional units responsible for implementing a part of the total Watershed District program associated with a water resource development project.

Participate in flood forecasting and warning services with interested agencies, organizations, local communities, and the general public.

Conduct water resource inventories and investigations, prepare prescriptions and investigation reports for water resource protection and improvement, and make floodplain evaluations.

Ensure that the proper type and level of technical support service and expertise is applied and scheduled in a timely manner to the planning, implementation, quality control and monitoring of all management activities.

Maintain liaison with local representatives of State and Federal agencies on watershed management matters, including Watershed System water

use and water quality protection.

Assist the Cities in the preparation of Local Water Plans and Storm Water Pollution Prevention Plans and the training of Planning, Engineering and Public Works Departments.

Give technical assistance in the preparation of water management plans within the watershed.

**Public &
Governmental
Relations**

Cooperate with the Local Units of Government in the coordination of the Coon Creek Watershed District program, on the following measures as may be mutually agreed upon: Watershed protection, Emergency and Natural Disaster management, erosion control, flood prevention, and such other conservation measures common to the interests of the Watershed District.

Conduct semi-annual meetings among key staff of the cities, watershed district, Conservation District, DNR and the Minnesota Pollution Control Agency.

Increase partnership opportunities at various association conferences/workshops.

Conduct meetings with members of the Minnesota legislature to further the discussion on water issues.

Develop an effective sustainable communication plan among water stakeholders.

Annual meetings should be held within each city to include participation of all key stakeholders.

Cooperate with other water resource agencies for water measurements on Watershed System lands in accordance with Regional cooperative agreements.

Notify individuals and communities of potential flood situations where they are known to exist.

Assist in carrying on educational work with the Cities.

Give technical guidance in connection with the establishment and operation of water demonstration projects.

When available, furnish such equipment, materials, and labor as the Watershed District determines are needed in rendering assistance.

Recognize the appropriate department or section within the City as the agency responsible for managing the City water and related resources within the City; and to seek advice of the appropriate city department concerning water and related resources needs in carrying out the management of Coon Creek Watershed water resource system.

**Research and
Monitoring**

Establish monitoring programs which will provide information on the need for and the results of management activities.

Conduct water measurements in cooperation with Federal and State water resource agencies.

Cooperate with the ACD and responsible Local Governmental Units, and other agencies in water and related resources surveys and plans.

**Concepts and Notes on a
MEMORANDUM OF UNDERSTANDING
BETWEEN
THE COON CREEK WATERSHED DISTRICT
AND
THE COUNTY OF ANOKA
AND
CITIES OF ANDOVER, BLAINE, COLUMBUS, COON RAPIDS,
FRIDLEY, HAM LAKE AND SPRING LAKE PARK**

Background

The Coon Creek Watershed District (District) has been created under the laws of the State of Minnesota to provide an adequate and flexible system of control, protection, regulation, management, or use of all water and related resources within the District.

The District is authorized by the State of Minnesota to regulate the water and related resources of the Coon Creek Watershed and other areas to maintain proper conditions for the beneficial uses of those water and related resources, and for ensuring proper use of those resources compatible with other land uses within the District.

The State of Minnesota Board of Water and Soil Resources and Pollution Control Agency has encouraged and requested that the District enter into a coordinated water and related resource management effort with the local units of government and Municipal Separate Storm Sewer Systems (MS4s) that are partially or wholly within the Watershed.

It is the desire of the District to work in harmony with the Cities, County and Conservation District within the District and Anoka County for the common purpose of developing, conserving and maintaining all water and related resources for the best interests of the people of the Watershed and the Cities therein.

Purpose

The intent of this MOA is to organize the sharing of personnel, information, monies and equipment to facilitate the efficient and effective management of water and related resources within the watershed. The purpose of this memorandum is to state the responsibilities and relationships of the Cities, Anoka County, the

Conservation District and the Coon Creek Watershed District, in the implementation of a coordinated water and related resource management program and to lay a foundation for any Memorandum's of Understanding or agreements that result from the implementation of this plan.

An implied requirement of both the Watershed Act (M.S. 103D) and the Metropolitan Water Management Act (M.S. 103B) is to cooperate and aid in the enforcement of the laws of the District and Local Governmental Units with regard to water resource use and land disturbing activities for:

- The beneficial use of the District's water resources and,
- The protection of water and related resources, and
- Provide aid, once requested, in the performance of the duties imposed on them by laws.

The Watershed District's Policies and Procedures; and Rules and Regulations designate certain officers and employees of the Watershed District to enforce the laws and regulations relating to Water and related resources within the watershed.

The Cooperation Ethic

It is the understanding of all agencies operating within the Coon Creek Watershed District that:

1. A basic intent of the Comprehensive Plan is to strengthen the cooperative approach to the management of water and related resources within the Coon Creek Watershed District at all levels of the respective agencies.
2. Cooperation cannot be forced by this or any other document. It can only come from the recognized need and desire to cooperate.
3. The Watershed District/Municipal/County relationship will be on a professional basis, as two cooperators attempting to achieve common goals.
4. A basic need of all agencies is to be kept informed on matters of mutual interest. This means the Cities should be informed in a timely manner and their recommendations solicited on matters of Coon Creek Watershed District management that may affect water and related resources management within their jurisdiction; and the Coon Creek Watershed District should be informed in a timely manner and its recommendations solicited on water and related resources programs of the Cities that may affect Coon Creek Watershed District lands.

**Mutual
Commitments**

All parties managing water and related resources within the Coon Creek will seek:

1. To encourage a united and professional approach by personnel of all involved agencies in seeking solutions to problems that may arise in water and related resources management.
2. To cooperate in the formulation and application of practical plans and programs to manage water and related resources.
3. Each party will name an overall coordinator to communicate and facilitate the handling of the agencies' responsibilities under this supplement to the Memorandum of Understanding.
4. To meet annually and more often if desirable, to evaluate the effectiveness of this enforcement effort and to strengthen the program where needed.
5. To meet annually and more often if desirable, for discussion of matters relating to management of water and related resources in or affecting Coon Creek Watershed lands and to provide for other meetings at various administrative levels for discussion of matters relevant to the management of water and related resources
6. To meet annually with the Coon Creek Watershed District Administrator and staff to discuss any work the Coon Creek Watershed District plans for the ensuing fiscal year that will affect Water and related resources work or lands within the City.
7. Parties will coordinate all phases of inspection, enforcement and field work.
8. To provide each other with reports and copies of basic correspondence essential in cooperating effectively in relevant work.
9. To encourage a united and professional approach by personnel of both agencies in seeking solutions to problems that may arise in water and related resources management.
10. That whenever a specific area of a Coon Creek Watershed District is set aside for a program of intensive cooperative water and related resources management, which in part or whole is to be financed by deposits in a cooperative funding, individual cooperative agreements will be entered into by the parties involved hereto covering the management of each such Coon Creek Watershed District and portion thereof.

11. To assist each other in enforcement of laws under their respective jurisdiction by promptly reporting violations to local officers of the cooperating agency.
12. Watershed District law enforcement efforts will be limited to Watershed District water and related resource rule and law violations that occur within the Coon Creek Watershed District.

**Watershed
District
Commitments**

The Coon Creek Watershed District will:

1. Provide City and County Engineering Departments and MS4s adequate lead time for review and to obtain concurrence for water and related resources maintenance, repair and improvement projects.
2. Recognize the appropriate department or section within the City as the agency responsible for managing the City water and related resources within the City; and to seek advice of the department concerning water and related resources needs in carrying out the management of Coon Creek Watershed water resource system.
3. Consult with the Cities in connection with changes or improvements in the water or related resources or the District's Comprehensive Plan or work plan.
4. When surplus to its needs, make available to representatives of the City such Coon Creek Watershed District improvements, facilities, and equipment as would normally be used in water and related resources work.
5. Coordinate law enforcement efforts with the other water and related resources programs within the Coon Creek Watershed District.
6. Upon request, and depending upon availability, assign Watershed District Enforcement personnel to work with the City on specific enforcement problems.
7. When available and within budget constraints, assign Watershed District employees to assist Cities and MS4 personnel during specific time periods, such as construction season or periods when heavy violations may be occurring.
8. Coordinate with City and County personnel in developing prevention programs aimed at reducing enforcement problems within the Coon Creek Watershed District.

9. In cooperation with other uses and values, to practice those forms of water and related land management that will benefit water and related resources.
10. Cooperate with the Anoka Conservation District and responsible Local Governmental Units, and other agencies in water and related resources surveys and plans.
11. Assist the Cities in the preparation of Local Water Plans and Storm Water Pollution Prevention Plans and the training of Planning, Engineering and Public Works Departments.
12. Assist in carrying on educational work with the Cities.
13. Assist the CCWD in keeping records and preparing reports for those projects of the City for which the CCWD provides formal technical assistance.
14. Cooperate with the Local Units of Government in the coordination of the Coon Creek Watershed District program, on the following measures as may be mutually agreed upon: Watershed protection, Emergency and Natural Disaster management, erosion control, flood prevention, and such other conservation measures common to the interests of the Watershed District.
15. Give technical assistance in the preparation of water management plans within the watershed.
16. Give technical guidance in connection with the establishment and operation of water demonstration projects.
17. When available, furnish such equipment, materials, and labor as the Watershed District determines are needed in rendering assistance.
18. To enter into supplemental cooperative agreements with the Cities for the construction and maintenance of water management and control structures within the Public Ditch system where they are deemed necessary to facilitate management activities of the City; provided such structures meet the requirements of the Coon Creek Watershed District and their intended use conforms with Watershed District goals and policy.
19. Assist in making surveys for developing Coon Creek Watershed District management plans for private lands to the extent personnel are available.

20. Within the context of its multiple use objectives, manage the Watershed District drainage and conveyance system to help minimize water and related resources enforcement problems.

City & County Commitments

The Cities of the District and Anoka County agree to:

1. Extend to the Watershed District an invitation to attend regular and special meetings of their Council or Board.
2. Furnish representatives to serve on advisory committees established by the Coon Creek Watershed District
3. To neither make nor sanction any release, introduction, or establishment of water, water-related resource, or aquatic species which may adversely affect water management within the Coon Creek Watershed, until a joint investigation has been made and a mutual agreement reached regarding its possible effect upon other resources.
4. To notify the Coon Creek Watershed District Administrator of changes in the Local Governmental Units water and related resources laws and regulations.
5. To recognize the Watershed District as the agency, primarily responsible for water and related resources management on the public ditch system.
6. Enter into cooperative agreements with owners and operators of land, based on plans for the development, maintenance, protection, and utilization of water and related resources on which the assistance of the Watershed District will be used.
7. To provide enforcement of City water and related resource, and other laws and regulations which are applicable to the management of water in the Coon Creek Watershed District, and where the City or County has the authority.
8. Upon request, and when practicable, aid in the enforcement of District rules and regulations with regard to the administration of Coon Creek Watershed District Comprehensive Plan.
9. Upon request, provide training to Watershed District personnel in City or County water and related resources laws ordinances and

regulations.

10. In a further effort to coordinate programs and policies, submit grading, drainage and erosion control plans and SWPPPs for work within the Watershed for the review and approval of the Coon Creek Watershed District.
11. Cooperate in educational work with the Coon Creek Watershed District in matters of conservation.
12. Cooperate with the District in programs to revegetate denuded and partly denuded lands within the Coon Creek Watershed District for the purpose of Watershed protection.
13. Work closely with the Watershed District to attain objectives in securing protection and, in some cases, rehabilitation of highly valuable lands that have a direct bearing upon the economic life of communities.
14. Assist the Watershed District in protecting the Watershed from damage, including close cooperation in the use of personnel and equipment in flood or natural disaster, and closely cooperate in educational work pertaining to water and related resources.
15. To make available to the Watershed District such facilities, equipment, and personnel for the prevention and suppression of Coon Creek Watershed District floods or in the solution of other emergency situations within the Watershed insofar as mutually agreed upon by the City and Coon Creek Watershed District.
16. Cooperate with the Watershed District in programs of prevention of property damage within the watershed.

Capital Improvement Program

Coon Creek’s Capital Improvement Program is intended to provide the Board of Managers and District staff with a process for identifying and prioritizing capital projects and large Repair and Rehabilitation projects in order to coordinate the financing, timing of improvements which maximize the return to the public. The process will enable the District to evaluate long-term cost and benefits of projects being adapted for the coming year against those projects planned between now and 2023.

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Capital Improvement Program Goals

1. Acknowledge and communicate water and related resource infrastructure priorities and dynamics.
2. Ensure appropriate responses to changing infrastructure needs and demands.
3. Develop a financial assessment of capital resources available to meet future capital project planning needs.
4. Institute a strategic vision predicated on maintaining a high quality service infrastructure capable of meeting the needs of the watershed for today and tomorrow.

Objectives

The objectives of the 2013 - 2023 Capital Improvement Plan are to

present a comprehensive capital improvement program that communicates efforts:

1. To ensure that watershed priorities are reflected in the capital investment plans of each District program.
2. To provide a consolidated financial picture of anticipated expenditures and outline recommended funding strategies to underwrite anticipated capital improvements.
3. To document and communicate capital improvement processes for District projects that will ensure consistency, a full appreciation of both the costs and benefits of proposed capital investments, and raises the level of public understanding regarding the District's public improvement processes.
4. To provide information on the fiscal impacts of capital investment plans on total District finances.
5. To effectively plan for public improvements that support watershed needs in the areas of drainage, flood control, stormwater and water quality infrastructure, through fiscally and environmentally responsible projects.

Accordingly, this document attempts to recognize known or perceived capital improvement needs, but as with any plan recognizes that social, economic and political considerations will by necessity determine final project outcomes.

Purpose

The purpose of the District's Capital Improvement Plan (CIP) is to identify, prioritize and address watershed needs through careful long-term capital planning and balanced public investment in supporting physical infrastructure and knowledge. To ensure that this commitment is both meaningful and achievable, appropriate capital improvement factors were given significant consideration in developing a CIP that addresses watershed priorities over the next ten (10) years. The CIP will also provide a planning foundation for future needs assessments to ensure the District is appropriately responding to the critical infrastructure needs necessary for sustainable future growth. The CIP represents a beginning in terms of producing a Watershed Management Planning response to address changing capital needs by developing a project schedule that will lead to timely and cost-effective project completions.

Discussion

The 2013 - 2023 CIP has been prepared as a strategic planning tool to assist the Board of Managers in identifying proposed capital improvement projects over the next ten years. With the inclusion of

preliminary financing sources, appropriate background information citing needs and projected cost estimates, the CIP will provide the Board with the needed information to begin the process of planning improvements that meet the District's physical infrastructure and knowledge needs. Consequently, the CIP serves as a flexible guide plan to properly identify the critical components of the District's natural and man-made infrastructure, yet maintain flexibility in determining project timeframes, project scope and possible funding sources. The 2013 - 2023 CIP continues the emphasis of judiciously managing the District's limited resources by prudently planning for known and/or anticipated future capital expenditures.

A critical step in the plan adoption process is the collaborative nature of plan review that involves the Board of Managers, the input of appointed Advisory Committees and staff, and most importantly, affected residents of the watershed. Consequently, the strategic value of this plan lies in the acknowledgement of future needs by watershed District and the effective communication of those needs to the general public during project development stages. Likewise, the availability and preliminary designation of fiscal resources to serve both current and future needs is critical to the achievement of plan outcomes that meet with Board of Managers approval. Following the approval of the plan, feasibility studies are performed, affected constituencies are notified to formally disseminate and receive public feedback on proposed project plans. This process culminates with the District Board of Managers considering all relevant information and making a final decision on whether to proceed with the proposed capital improvement.

Public Participation

The public process that supports the advancement of these projects from inception to completion is engendered in the CIP project development and authorization schedule. Formalizing the steps in the CIP project advancement process serves a number of purposes and ensures that the Board of Managers and public are kept well informed regarding project purposes and desired outcomes, estimated project costs, funding sources, progress and final status. It should be emphasized that projects will require approval in various stages of project development by the District Board in accordance with approved policies.

Capital Expenditure Categories

The major categories of expenditures that are identified in the CIP include, but are not limited to:

1. New drainage, stormwater or water quality facilities
2. Ditch and Streambank Repair, Maintenance or Reconstruction
3. Stormwater Treatment Device (STD) Construction, Maintenance or Reconstruction
4. Capital Improvement or Retrofits to Existing Facilities

5. Capital Equipment (To be determined through normal budgetary process)
6. Studies and Special Area Management Plans.

The Board of Managers consequently accepts this plan with the provision that capital improvement planning is subject to the physical, social and political dynamics of the watershed and acknowledges that other unanticipated needs may take precedence over planned projects.

Capital Project Authorization Process

Unless a project is to be conducted specifically under the Drainage Act (M.S. 103E), the following process is a Board/staff guideline for authorizing public improvement projects. Drainage projects petitioned or conducted under MS 103E will follow the appropriate process identified in that statute. As this process is influenced by State Statute and other influencing environmental factors, it is subject to change and should be viewed as a guide to assist the Board and public in understanding the public improvement process used by District staff. A separate Board meeting would facilitate each step in the process, and accomplishment of respective activities. As a result, the process time frame is a significant factor affecting District staff's ability to properly manage and complete approved Board ordered projects within budget and on time.

Board Approval of Annual CIP

Board Approval of Annual CIP Projects will authorize the following outcomes:

- 1) Staff and/or Consultant preparation of project feasibility studies
- 2) Staff preparation of detailed financial review of project funding sources
- 3) Advisory Committee review may be held prior to Feasibility Study subject to need and type of project
- 4) Neighborhood Meeting may be held prior to Feasibility Study subject to need and type of project.

Feasibility Study

Presentation of Feasibility Study

Feasibility Study Components:

- a) Review of Project Engineering and Construction Estimates
- b) Total Project Costs (All related project costs, i.e. land, soft costs)
- c) Project Financial Plan/Fiscal Implications
- d) Authorization to develop a Preliminary Assessment Roll, if any, for the Public Hearing.

If Board accepts Feasibility Study, A Resolution "Accepting Feasibility Study and Setting Date for Public Hearing on the Project" when appropriate would initiate the following:

- 1) Notices mailed to affected Residents per statute requirements

- no less than 10 days before Public
- 2) Hearing.
- 3) Public Hearing Notice is published, if needed. Two publications one week apart, with the second publication no less than three days before the hearing.

Neighborhood Meeting District staff will hold neighborhood project meetings in collaboration with city staff from the communities in which the proposed project will occur, when appropriate, to review and present Project Feasibility Studies, answer questions and meet with affected property owners. The purpose of the meeting is to determine whether or not the project has merit. These meetings will include a question and answer component designed specifically to bring awareness to the property owner, obtain citizen input and produce an understanding of the purposes behind the District’s attempts to construct public improvements in the affected area.

Public Hearing Board holds a Public Hearing when appropriate for following purposes:

- 1) Presentation of Project
- 2) Presentation of Preliminary Special Assessment Rolls and Financing Implications
- 3) Board to hear Affected Resident Input
- 4) Board determines whether to “order” the public improvement.

A Board Resolution is drafted “Ordering the Project and Authorizing Preparation of Plans and Specifications”. Board may ORDER THE IMPROVEMENT after the public hearing is closed or at a subsequent Board Meeting within 6 months of the public hearing date.

If Board decides to reject the project as presented, a Board vote should be taken to officially determine the final status of the project.

Plans and Specifications Plans and Specifications are reviewed by appropriate Technical Advisory Committee members and then presented to the presented to the Board for approval.

A Board Resolution is drafted authorizing the following:

- a) Accepting and Approving Project Plans and Specifications
- b) Authorizing the Advertisement for Project Bids. Bids are developed and invitation to Bid is processed. Bid opening date is no less than 3 weeks after publication.
- c) Authorize staff to pursue an appropriate funding mechanism to underwrite project costs.

Acceptance of Project Bids and Awarding of Contracts Board Acceptance of Project Bids and Awarding of Contracts would authorize the following outcomes:

- 1) A Board Resolution is drafted “Accepting Project Bids and Awarding Contracts”
- 2) Initiation of Project Construction and work

Project Completion Project Completion

Board Acceptance of Project
Final Presentation and Review of Project Costs versus Project Budget.

Time Frame

| | Months | | | | | | | | | | | | | | |
|---|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N |
| Approve CIP | * | - | - | | | | | | | | | | | | |
| Feasibility Study | | | * | * | * | | | | | | | | | | |
| Neighborhood Meeting | | | | * | * | * | | | | | | | | | |
| Public Hearing | | | | | * | * | * | | | | | | | | |
| Final Plans & Specifications | | | | | | * | * | * | | | | | | | |
| Award Bid & Contract | | | | | | | * | * | * | * | * | * | * | | |
| Project Construction | | | | | | | | * | * | * | * | * | * | * | |
| Project Completion | | | | | | | | | | * | * | * | * | * | * |

Capital Improvement Policies

1. A Capital Improvement Plan (CIP) will be developed for a period of ten (10) years and included in the District Watershed Management Plan. As resources are available, the most current year of the CIP will be incorporated into the current year operating budget as the Capital Improvement Budget (CIB). The CIP will be reviewed and updated annually. Years two through ten are for planning purposes only.
2. The District will maintain physical assets in a manner, adequate to protect the District’s capital investment and to minimize future maintenance and replacement costs. The District will provide maintenance and replacement from current revenues where possible.
3. To be considered in the Capital Improvement Program, a project must have an estimated cost of at least \$4,500 in one of the calendar years of the project. Projects may not be combined to meet the minimum standard unless they are dependent upon each other. Items that are operating expense (such as maintenance agreements, personal

computer upgrades, etc.) will not be considered within the CIP.

4. Capital projects which duplicate other public and/or private services will not be considered.
5. The District will identify the estimated costs and potential funding sources for each capital project prior to inclusion in the CIP. The operating costs to maintain capital projects shall be considered prior to the decision to undertake the capital projects.
6. Capital projects and/or capital asset purchases will receive a higher priority if they meet a majority of the following criteria:
 - a. Mandatory project
 - b. Maintenance project (approved replacement schedules)
 - c. Improve efficiency
 - d. Improve effectiveness
 - e. Elimination of Hazards (improves public safety)
 - f. Replacement due to disaster or loss
 - g. Policy area project
 - h. Prior Commitment (Comp Plan/ SWPPP)
 - i. Complete existing project
 - j. Positive effect on operation and maintenance costs
 - k. New Service or Facility
 - l. Availability of Local/State/Federal grants.
7. The CIP is to be presented by the District Administrator annually to the Board of Managers for approval. This presentation will be pursuant to review and comment by the District's Advisory Committees. Any substantive change to the CIP after approval must be approved by the Board of Managers.

Implementation Schedule

The implementation schedule provides a summary of key information about each implementation initiative including cost estimates, scheduling, specific issues areas that each implementation initiative addresses, potential partners, and level of financial commitment by the District. Where applicable, implementation initiatives and their associated cost estimates were taken from previous studies. In other cases, the indicated costs are planning-level estimates based on current understanding of the scope of the initiative. In general, the table provides a planning-level projection that can be used as a guide or starting point for the more detailed annual budgeting process.

The implementation plan table includes a general timeline of how the implementation initiatives could be implemented over the 10 years of the Plan. Cost estimates are shown as either a one-time cost (typical of

feasibility studies and CIPs) or as annual costs in the case of on-going programs. An annual interest rate (i) of 3% has been applied to account for the expected increase in costs for initiatives which occur later in the schedule.

Any project in the implementation plan that requires the use of private landowner rights (including any future additions) will be implemented only with landowner concurrence and, as appropriate, a formal agreement.

**Coon Creek Watershed District
Capital Plan
2013 to 2023
PROGRAM SUMMARY**

| Program | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Administration | 10,500 | - | - | 10,500 | - | - | 10,500 | - | - | 10,500 | - |
| Projects | | | | | | | | | | | |
| Equipment | | | | | | | | | | | |
| Computers & Software | 10,500 | | | 10,500 | | | 10,500 | | | 10,500 | |
| Telecommunications | | | | | | | | | | | |
| Monitoring & Field Equipment | | | | | | | | | | | |
| Office Equipment | | | | | | | | | | | |
| Development Regulation | 2,600 | - | - | 2,300 | - | - | 2,300 | - | - | 2,300 | ,300 |
| Projects | | | | | | | | | | | |
| Equipment | | | | | | | | | | | |
| Computers & Software | 2,100 | | | 2,100 | | | 2,100 | | | 2,100 | |
| Telecommunications | 200 | | | 200 | | | 200 | | | 200 | |
| Monitoring & Field Equipment | 300 | | | | | | | | | | 300 |
| Office Equipment | | | | | | | | | | | |
| Operations & Maintenance | 513,300 | 402,633 | 483,857 | 706,927 | 440,351 | 447,487 | 463,141 | 377,710 | 81,480 | 613,820 | 922 |
| Projects | 510,078 | 402,633 | 483,857 | 704,627 | 440,351 | 446,565 | 460,841 | 377,710 | 81,480 | 611,520 | |
| Equipment | | | | | | | | | | | |
| Computers & Software | 2,100 | | | 2,100 | | | 2,100 | | | 2,100 | |
| Telecommunications | 200 | | | 200 | | | 200 | | | 200 | |
| Monitoring & Field Equipment | 922 | | | | | 922 | | | | | 922 |
| Office Equipment | | | | | | | | | | | |

| Program | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Planning | 2,250 | - | - | - | - | 2,250 | - | - | - | - | 2,250 |
| Projects | | | | | | | | | | | |
| Equipment | | | | | | | | | | | |
| Computers & Software | 2,250 | | | | | 2,250 | | | | | 2,250 |
| Telecommunications | | | | | | | | | | | |
| Monitoring & Field Equipment | | | | | | | | | | | |
| Office Equipment | | | | | | | | | | | |
| Public & Governmental Relations | - | - | - | - | - | - | - | - | - | - | - |
| Projects | | | | | | | | | | | |
| Equipment | | | | | | | | | | | |
| Computers & Software | | | | | | | | | | | |
| Telecommunications | | | | | | | | | | | |
| Monitoring & Field Equipment | | | | | | | | | | | |
| Office Equipment | | | | | | | | | | | |
| Research & Monitoring | 11,200 | - | - | - | - | 11,200 | - | - | - | - | 11,200 |
| Projects | | | | | | | | | | | |
| Equipment | | | | | | | | | | | |
| Computers & Software | | | | | | | | | | | |
| Telecommunications | | | | | | | | | | | |
| Monitoring & Field Equipment | 11,200 | | | | | 11,200 | | | | | 11,200 |
| Office Equipment | | | | | | | | | | | |
| Yearly Total | 539,850 | 402,633 | 483,857 | 719,727 | 440,351 | 460,937 | 475,941 | 377,710 | 81,480 | 626,620 | 14,672 |

Capital Project Categories

This Section Presents the CIP by Category. There are, or will be, six categories of Capital Projects:

1. New drainage, stormwater or water quality facilities
2. Ditch and Streambank Repair, Maintenance or Reconstruction
3. Stormwater Treatment Device (STD) Construction, Maintenance or Reconstruction
4. Capital Improvements or Retrofits to Existing Facilities
5. Capital Equipment
6. Studies and Research

New Drainage, Stormwater or Water Quality Facilities

Coon Creek Watershed District does not have any current plan for “new” drainage, stormwater or water quality facilities

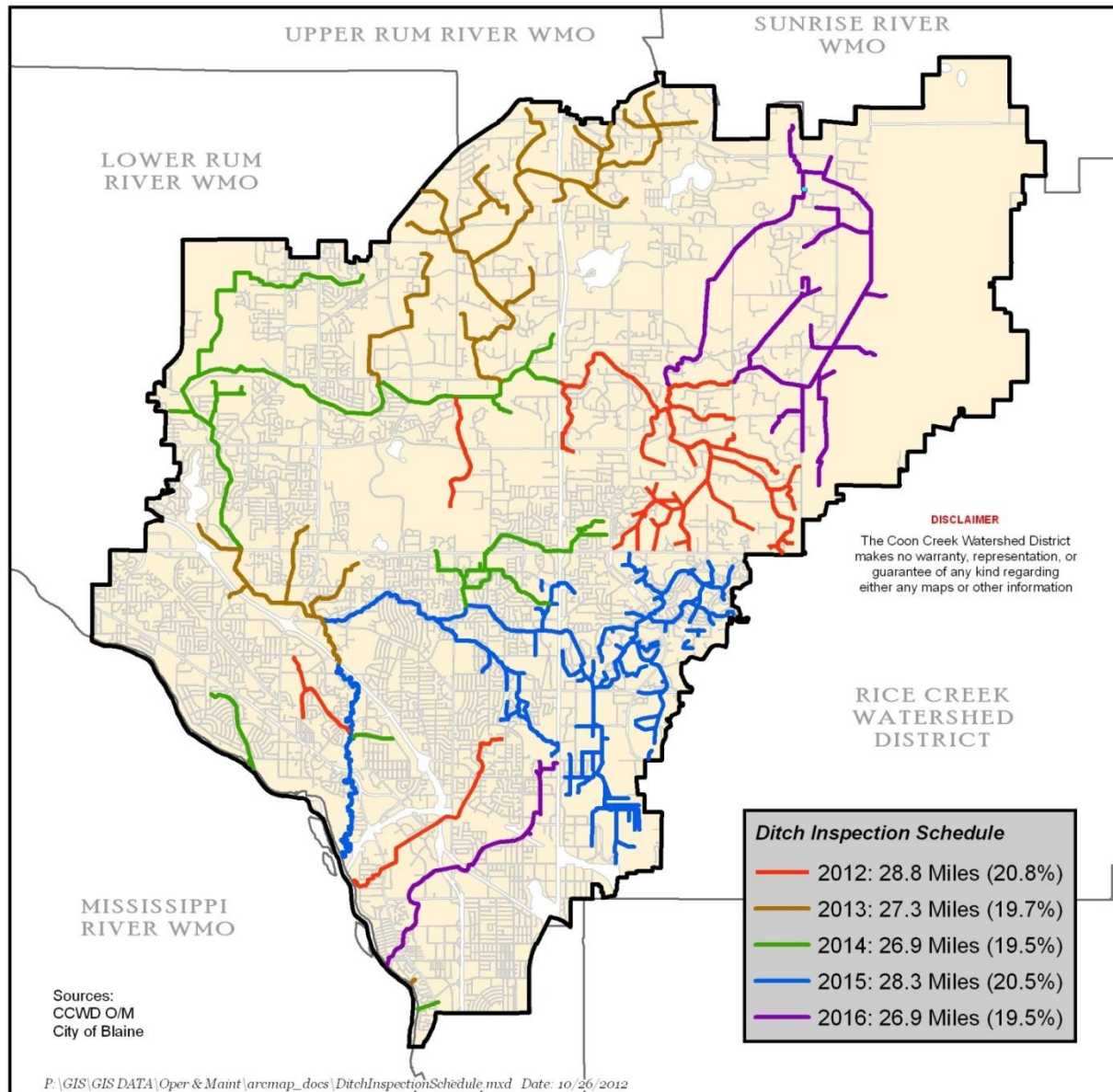
**Coon Creek Watershed District
Capital Plan
2013 to 2023
Ditch & Streambank Repair & Maintenance**

Ditch and Stream Channel Repair and Maintenance:

Ditch repair and maintenance is one of the most fundamental activities of the watershed district and has its foundation in the original motivation for petitioning the District's formation. The objective of this activity is to maintain ditch and conveyance systems as nearly as practicable to the same condition as originally constructed and subsequently improved. Repair and maintenance involves restorative construction work typically involving forestry practices and or heavy excavating equipment.

Projects are identified from the annual ditch inspections done as part of the Districts routine maintenance program. Projects are prioritized based on a scoring of the following:

1. Project Scope: Watershed wide – subwatershed, minor subwatershed or catchment.
2. Project Benefits: Which and how many beneficial uses the project addresses and improves.
3. Project Need: As determined using the criteria in policy 6 of the capital improvement policies.
4. Condition and Severity of the Site: Based on inspection is the project need to be addressed immediately, Can it be scheduled, or can it be monitored.



| Year | Project Number | Name | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------|----------------|-------------------------------|--------|--------|---------|--------|--------|------|--------|---------|---------|--------|------|
| 13 | | Ditch 17 Repair | 7,500 | 40,814 | 6,125 | | | | | | 105,000 | | |
| 13 | | Pleasure Creek Repair | 10,500 | | 4,000 | 30,500 | 19,750 | | | | 7,500 | | |
| 13 | | Ditch 44 Repair | 16,500 | | | 9,000 | 7,500 | | | | 52,150 | | |
| 14 | | LCC Maintenance | | 84,480 | | | | | 42,240 | | | | |
| 15 | | Tronson Creek Repair | | | 7,603 | | | | | 3,802 | | | |
| 15 | | Stoneybrook Creek Maintenance | | | 13,200 | | | | | 6,600 | | | |
| 15 | | Ditch 11 Repair | | | 20,000 | | | | | | | 85,000 | |
| 15 | | Ditch 54 Repair | | | 107,712 | | | | | 53,856 | | | |
| 15 | | Ditch 58 Repair | | | 293,040 | | | | | 146,520 | | | |
| 16 | | Riverview Creek Maintenance | | | | 1,690 | | | | | 845 | | |
| 16 | | Woodcrest Creek Maintenance | | | | 16,474 | | | | | 8,237 | | |
| 16 | | Ditch 57 Repair | | | | 38,650 | | | | | 19,325 | | |
| 16 | | Ditch 60 Repair | | | | 59,136 | | | | | 29,568 | | |
| 16 | | Ditch 37 Repair | | | | 66,528 | | | | | 33,264 | | |
| 17 | | Ditch 39 Repair | | | | | 69,696 | | | | | 34,848 | |

| Year | Project Number | Name | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-------------|-----------------------|----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 17 | | Oak Glen Creek Maintenance | | | | | 142,560 | | | | | 71,280 | |
| 17 | | Ditch 41 Repair | | | | | 174,240 | | | | | 87,120 | |
| 19 | | Ditch 23 Maintenance | | | | | | | 5,016 | | | | |
| 19 | | Ditch 52 Repair | | | | | | | 31,680 | | | | |
| 19 | | Ditch 59 Repair | | | | | | | 319,968 | | | | |

Project Name Ditch 17 Repair
Project Number 13-DR-01

Project Type Tree Removal & Channel Excavation
Program Operations and Maintenance
Useful Life (Yrs) 5 yrs
Activity Ditch Maintenance
Category Channel Repair
Contact Jon Janke

Description

1. Tree removal from lower ditch 17 from the BNRR to approximately 85th in Fridley & channel excavation from Jefferson to Van Buren. (2) Complete channel repair 97th to 98th (3) Channel repair Evergreen to Hwy 47

Justification/Need

Channel condition contains obstructions and inefficiencies which can contribute to flooding and water quality problems

| Funding Sources | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|--------------|---------------|--------------|-------------|-------------|-------------|-------------|-------------|----------------|-------------|-------------|
| Property Tax | 7,500 | 40,814 | 6,125 | | | | | | 105,000 | | |
| Special Assessment | | | | | | | | | | | |
| Fees/Escrows | | | | | | | | | | | |
| Grants | | | | | | | | | | | |
| Total | 7,500 | 40,814 | 6,125 | - | - | - | - | - | 105,000 | - | - |

| Project Expenditures | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------------|--------------|---------------|--------------|-------------|-------------|-------------|-------------|-------------|----------------|-------------|-------------|
| Salary & Benefits | | | | | | | | | | | |
| Professional Services | | | | | | | | | | | |
| Operating Expenses | | | | | | | | | | | |
| Program Costs | 7,500 | 40,814 | 6,125 | | | | | | 105,000 | | |
| Capital Equipment | | | | | | | | | | | |
| Total | 7,500 | 40,814 | 6,125 | - | - | - | - | - | 105,000 | - | - |

Project Name Pleasure Creek Repairs
Project Number 13-DR-02

Project Type Channel Repair **Program** Operations and Maintenance
Useful Life (Yrs) 5 years **Activity** Ditch Maintenance
Category **Contact** Jon Janke

Description

Found during the 2012 inspection- The 2013 work addresses issues identified as needing immediate repair. 2015 to 2017 work involves a variety of work throughout the system to bring the entire system to a level needed to safely convey clean water

Justification/Need

Pleasure creek has seen little to no maintenance in the past 50 years. Consequently flooding and water quality issues connected with the condition of the channel exist throughout the system.

| Funding Sources | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|---------------|-------------|--------------|---------------|---------------|-------------|-------------|-------------|--------------|-------------|-------------|
| Property Tax | 10,500 | | 4,000 | 30,500 | 19,750 | | | | 7,500 | | |
| Special Assessment | | | | | | | | | | | |
| Fees/Escrows | | | | | | | | | | | |
| Grants | | | | | | | | | | | |
| Total | 10,500 | - | 4,000 | 30,500 | 19,750 | - | - | - | 7,500 | - | - |

| Project Expenditures | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------------|---------------|-------------|--------------|---------------|---------------|-------------|-------------|-------------|--------------|-------------|-------------|
| Salary & Benefits | | | | | | | | | | | |
| Professional Services | | | | | | | | | | | |
| Operating Expenses | | | | | | | | | | | |
| Program Costs | 10,500 | | 4,000 | 30,500 | 19,750 | - | | | 7,500 | | |
| Capital Equipment | | | | | | | | | | | |
| Total | 10,500 | - | 4,000 | 30,500 | 19,750 | - | - | - | 7,500 | - | - |

Project Name Ditch 44
Project Number 13-DR-03

Project Type Channel Repair **Program** Operations and Maintenance
Useful Life (Yrs) 5 years **Activity** Ditch Maintenance
Category **Contact** Jon Janke

Description

Project involves both tree removal and cleaning of the main channel and several tributaries. Initial work (2013 involves tree removal from the upper parts of the Ditch 44 system. Work in 2016 & 17 involve cleaning the channel to the approved grade

Justification/Need

The upper part of Ditch 44 contains approximately 600 acres of drainage dependent agricultural land. In addition, in the last 10 years several housing developments have occurred. Maintenance is required to ensure the efficiency of the channel for agriculture and to prevent flooding of both agriculture and residential lands.

| Funding Sources | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|---------------|-------------|-------------|--------------|--------------|-------------|-------------|-------------|---------------|---------------|--------------|
| Property Tax | 25,500 | - | - | 9,000 | 7,500 | - | - | - | 52,150 | - | - |
| Special Assessment | - | - | - | - | - | - | - | - | - | 41,559 | 2,100 |
| Fees/Escrows | | | | | | | | | | | |
| Grants | | | | | | | | | | | |
| Total | 25,500 | - | - | 9,000 | 7,500 | - | - | - | 52,150 | 41,559 | 2,100 |

| Project Expenditures | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------------|---------------|-------------|-------------|--------------|--------------|-------------|-------------|-------------|---------------|---------------|--------------|
| Salary & Benefits | | | | | | | | | | | |
| Professional Services | | | | | | | | | | | |
| Operating Expenses | | | | | | | | | | | |
| Program Costs | 25,500 | - | - | 9,000 | 7,500 | - | - | - | 52,150 | 41,559 | 2,100 |
| Capital Equipment | | | | | | | | | | | |
| Total | 25,500 | - | - | 9,000 | 7,500 | - | - | - | 52,150 | 41,559 | 2,100 |

Project Name Lower Coon Creek Repair
Project Number 14-DR-01

Project Type Channel Repair **Program** Operations and Maintenance
Useful Life (Yrs) 5 years **Activity** Ditch Maintenance
Category **Contact** Jon Janke

Description

Project involves select hand removal of trees and woody debris from areas where flow is being retarded or deflected and creating a significant detrimental effect to property of equipment. Because much of the area is park and the creek is not "improved", care is taken to preserve as much fish and wildlife habitat as possible.

Justification/Need

Lower Coon Creek flows from US highway 10 to the Mississippi River. Most of the area is in City or County park. The area has accumulated considerable woody debris and downed trees which deflect flow and can damage private and public property.

| Funding Sources | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Property Tax | | 84,480 | | | | | 42,240 | | | | |
| Special Assessment | | | | | | | | | | | |
| Fees/Escrows | | | | | | | | | | | |
| Grants | | | | | | | | | | | |
| Total | - | 84,480 | - | - | - | - | 42,240 | - | - | - | - |

| Project Expenditures | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Salary & Benefits | | | | | | | | | | | |
| Professional Services | | | | | | | | | | | |
| Operating Expenses | | | | | | | | | | | |
| Program Costs | - | 84,480 | - | - | - | - | 42,240 | - | - | - | - |
| Capital Equipment | | | | | | | | | | | |
| Total | - | 84,480 | - | - | - | - | 42,240 | - | - | - | - |

Project Name Tronson Creek Repair
Project Number 14-DR-01

Project Type Ditch Repair **Program** Operations and Maintenance
Useful Life (Yrs) 5 years **Activity** Ditch Maintenance
Category **Contact** Jon Janke

Description

Involves excavating channel along lower 80% of the system

Justification/Need

Tronson creek drains two city parks and is the outlet for McKay lake. The creek is also the outlet for residential stormwater. Localized flooding is beginning to occur in the subwatershed. Neither the District nor the City of Coon Rapids have records of a systematic repair and cleaning of the system. Maintenance is budgeted for 5 years afterward

| Funding Sources | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Property Tax | | | 7,603 | | | | | 3,802 | | | |
| Special Assessment | | | | | | | | | | | |
| Fees/Escrows | | | | | | | | | | | |
| Grants | | | | | | | | | | | |
| Total | - | - | 7,603 | - | - | - | - | 3,802 | - | - | - |

| Project Expenditures | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Salary & Benefits | | | | | | | | | | | |
| Professional Services | | | | | | | | | | | |
| Operating Expenses | | | | | | | | | | | |
| Program Costs | - | - | 7,603 | - | - | - | - | 3,802 | - | - | - |
| Capital Equipment | | | | | | | | | | | |
| Total | - | - | 7,603 | - | - | - | - | 3,802 | - | - | - |

Project Name Stoneybrook Repair
Project Number 14-DR-02

Project Type Channel Maintenance
Useful Life (Yrs) 5 yrs
Category
Program Operations and Maintenance
Activity Ditch Maintenance
Contact Jon Janke

Description

Project involves tree and brush removal as well as channel excavation where needed along entire reach of the lower 1 mile of open channel

Justification/Need

Stoneybrook has been the recipient of an experimental bank stabilization project along the lower part. The subwatershed to is primarily urban in nature and comprehensive maintenance is needed to ensure the integrity of the bank stabilization project and water quality entering the Mississippi River

| Funding Sources | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Property Tax | - | - | 13,200 | - | - | - | - | 6,600 | - | - | - |
| Special Assessment | | | | | | | | | | | |
| Fees/Escrows | | | | | | | | | | | |
| Grants | | | | | | | | | | | |
| Total | - | - | 13,200 | - | - | - | - | 6,600 | - | - | - |

| Project Expenditures | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Salary & Benefits | | | | | | | | | | | |
| Professional Services | | | | | | | | | | | |
| Operating Expenses | | | | | | | | | | | |
| Program Costs | - | - | 13,200 | - | - | - | - | 6,600 | - | - | - |
| Capital Equipment | | | | | | | | | | | |
| Total | - | - | 13,200 | - | - | - | - | 6,600 | - | - | - |

Project Name Ditch 11 Maintenance & Repair
Project Number 15-DR-03

Project Type Channel Maintenance
Program Operations and Maintenance
Useful Life (Yrs) 5 yrs
Activity Ditch Maintenance
Category
Contact Jon Janke

Description

Channel excavation from Just south of Constance upstream to the sod fields. The 2022 projects involves a cleaning of the entire ditch system.

Justification/Need

The 2012 inspection identified the area between Naples and north of Constance as a special management area where because of the grade and soils, maintenance needs to occur on a frequency of approximately every 5 years

| Funding Sources | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Property Tax | | | | | | | | | | | |
| Special Assessment | - | - | 20,000 | - | - | - | - | - | - | 85,000 | - |
| Fees/Escrows | | | | | | | | | | | |
| Grants | | | | | | | | | | | |
| Total | - | - | 20,000 | - | - | - | - | - | - | 85,000 | - |

| Project Expenditures | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Salary & Benefits | | | | | | | | | | | |
| Professional Services | | | | | | | | | | | |
| Operating Expenses | | | | | | | | | | | |
| Program Costs | - | - | 20,000 | - | - | - | - | - | - | 85,000 | - |
| Capital Equipment | | | | | | | | | | | |
| Total | - | - | 20,000 | - | - | - | - | - | - | 85,000 | - |

Project Name Ditch 54 Repair
Project Number 15-DR-04

Project Type Channel Repair **Program** Operations and Maintenance
Useful Life (Yrs) 10 years **Activity** Ditch Maintenance
Category **Contact** Jon Janke

Description

Project involves excavation of the channel of Ditch 54 from US 10 to Ditch 57 at 131st Street. The 2020 project involves maintenance of the channel

Justification/Need

Ditch 54 is the main stem of Coon Creek and has not seen major maintenance or repair since the mid 80's.

| Funding Sources | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Property Tax | - | - | 107,712 | - | - | - | - | 53,856 | - | - | - |
| Special Assessment | | | | | | | | | | | |
| Fees/Escrows | | | | | | | | | | | |
| Grants | | | | | | | | | | | |
| Total | - | - | 107,712 | - | - | - | - | 53,856 | - | - | - |

| Project Expenditures | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Salary & Benefits | | | | | | | | | | | |
| Professional Services | | | | | | | | | | | |
| Operating Expenses | | | | | | | | | | | |
| Program Costs | - | - | 107,712 | - | - | - | - | 53,856 | - | - | - |
| Capital Equipment | | | | | | | | | | | |
| Total | - | - | 107,712 | - | - | - | - | 53,856 | - | - | - |

Project Name Ditch 58
Project Number 15-DR-05

Project Type **Program** Operations and Maintenance
Useful Life (Yrs) **Activity** Ditch Maintenance
Category **Contact** Jon Janke

Description

Excavation of channel along 80 percent of main stem of Coon Creek

Justification/Need

Ditch 58 was last cleaning in the mid 1990's. The Channel will be surveyed before the final project is scoped.

| Funding Sources | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Property Tax | - | - | 293,040 | - | - | - | - | 146,520 | - | - | - |
| Special Assessment | | | | | | | | | | | |
| Fees/Escrows | | | | | | | | | | | |
| Grants | | | | | | | | | | | |
| Total | - | - | 293,040 | - | - | - | - | 146,520 | - | - | - |

| Project Expenditures | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Salary & Benefits | | | | | | | | | | | |
| Professional Services | | | | | | | | | | | |
| Operating Expenses | | | | | | | | | | | |
| Program Costs | - | - | 293,040 | - | - | - | - | 146,520 | - | - | - |
| Capital Equipment | | | | | | | | | | | |
| Total | - | - | 293,040 | - | - | - | - | 146,520 | - | - | - |

| | | | |
|--------------------------|-----------------|-----------------|----------------------------|
| Project Name | Riverview Creek | | |
| Project Number | 16-DR-01 | | |
| Project Type | Channel | Program | Operations and Maintenance |
| Useful Life (Yrs) | Maintenance | Activity | Ditch Maintenance |
| Category | 5 years | Contact | Jon Janke |

Description

Project involves channel maintenance along approximately 0.6 miles of channel

Justification/Need

Riverview creek was stabilized by the City of Coon Rapids in 2010. This project is a scheduled follow up to that project. The 2021 project is the same on an expected smaller scope

| Funding Sources | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Property Tax | - | - | - | 16,896 | - | - | - | - | 8,448 | - | - |
| Special Assessment | | | | | | | | | | | |
| Fees/Escrows | | | | | | | | | | | |
| Grants | | | | | | | | | | | |
| Total | - | - | - | 16,896 | - | - | - | - | 8,448 | - | - |

| Project Expenditures | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Salary & Benefits | | | | | | | | | | | |
| Professional Services | | | | | | | | | | | |
| Operating Expenses | | | | | | | | | | | |
| Program Costs | - | - | - | 16,896 | - | - | - | - | 8,448 | - | - |
| Capital Equipment | | | | | | | | | | | |
| Total | - | - | - | 16,896 | - | - | - | - | 8,448 | - | - |

Project Name Woodcrest Creek
Project Number 16-DR-02

Project Type Channel Maintenance
Useful Life (Yrs) 5 years
Category
Program Operations and Maintenance
Activity Ditch Maintenance
Contact Jon Janke

Description

Project involves restoring and stabilizing the lower 80% of the channel. The 2021 project is scheduled maintenance

Justification/Need

Woodcrest Creek is a significant tributary and source of suspended solids

| Funding Sources | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Property Tax | - | - | - | 21,965 | - | - | - | - | 8,237 | - | - |
| Special Assessment | | | | | | | | | | | |
| Fees/Escrows | | | | | | | | | | | |
| Grants | | | | | | | | | | | |
| Total | - | - | - | 21,965 | - | - | - | - | 8,237 | - | - |

| Project Expenditures | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Salary & Benefits | | | | | | | | | | | |
| Professional Services | | | | | | | | | | | |
| Operating Expenses | | | | | | | | | | | |
| Program Costs | - | - | - | 21,965 | - | - | - | - | 8,237 | - | - |
| Capital Equipment | | | | | | | | | | | |
| Total | - | - | - | 21,965 | - | - | - | - | 8,237 | - | - |

Project Name Ditch 57 Repair
Project Number 16-DR-03

Project Type Channel Repair **Program** Operations and Maintenance
Useful Life (Yrs) 10 years **Activity** Ditch Maintenance
Category **Contact** Jon Janke

Description

Tree removal and channel excavation in approximately 60% of the channel's length

Justification/Need

Channel was cleaned in the mid 1990's and has seen tree removal resulting from storm damage. The channel grade is relatively flat and sediment removal should be in order

| Funding Sources | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Property Tax | - | - | - | 193,248 | - | - | - | - | 96,624 | - | - |
| Special Assessment | | | | | | | | | | | |
| Fees/Escrows | | | | | | | | | | | |
| Grants | | | | | | | | | | | |
| Total | - | - | - | 193,248 | - | - | - | - | 96,624 | - | - |

| Project Expenditures | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Salary & Benefits | | | | | | | | | | | |
| Professional Services | | | | | | | | | | | |
| Operating Expenses | | | | | | | | | | | |
| Program Costs | - | - | - | 193,248 | - | - | - | - | 96,624 | - | - |
| Capital Equipment | | | | | | | | | | | |
| Total | - | - | - | 193,248 | - | - | - | - | 96,624 | - | - |

Project Name Ditch 60 Repair
Project Number 16-DR-04

Project Type Channel Repair **Program** Operations and Maintenance
Useful Life (Yrs) **Activity** Ditch Maintenance
Category **Contact** Jon Janke

Description

Excavate channel along approximately 40 of the original channel length

Justification/Need

Ditch 60 was last repaired in the 1980's. Since that time several regional ponds and realignments have occurred. While small projects related to issues have been conducted the main portion of the channel has not been repaired sine the project in the 80s

| Funding Sources | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Property Tax | - | - | - | 59,136 | - | - | - | - | 29,568 | - | - |
| Special Assessment | | | | | | | | | | | |
| Fees/Escrows | | | | | | | | | | | |
| Grants | | | | | | | | | | | |
| Total | - | - | - | 59,136 | - | - | - | - | 29,568 | - | - |

| Project Expenditures | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Salary & Benefits | | | | | | | | | | | |
| Professional Services | | | | | | | | | | | |
| Operating Expenses | | | | | | | | | | | |
| Program Costs | - | - | - | 59,136 | - | - | - | - | 29,568 | - | - |
| Capital Equipment | | | | | | | | | | | |
| Total | - | - | - | 59,136 | - | - | - | - | 29,568 | - | - |

Project Name Ditch 37 Repair
Project Number 16-DR-05

Project Type Channel Repair **Program** Operations and Maintenance
Useful Life (Yrs) 10 years **Activity** Ditch Maintenance
Category **Contact** Jon Janke

Description

Repair channel through the central 60% of the system ending at Hanson Bld

Justification/Need

The ditch system has not been cleaned or repaired in in excess of 30 years. The central third of the system is now fully developed and need in cleaning

| Funding Sources | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Property Tax | - | - | - | - | 69,696 | - | - | - | - | 34,848 | - |
| Special Assessment | | | | | | | | | | | |
| Fees/Escrows | | | | | | | | | | | |
| Grants | | | | | | | | | | | |
| Total | - | - | - | - | 69,696 | - | - | - | - | 34,848 | - |

| Project Expenditures | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Salary & Benefits | | | | | | | | | | | |
| Professional Services | | | | | | | | | | | |
| Operating Expenses | | | | | | | | | | | |
| Program Costs | - | - | - | - | 69,696 | - | - | - | - | 34,848 | - |
| Capital Equipment | | | | | | | | | | | |
| Total | - | - | - | - | 69,696 | - | - | - | - | 34,848 | - |

Stream Bank Stabilization & Repair:

Streambank repairs are the formalization and back log of the District's bank stabilization program. Established in 1996 (Policy and Procedure 4.3: Bank Restoration) the District has operated a bank stabilization program on a first come first serve basis:

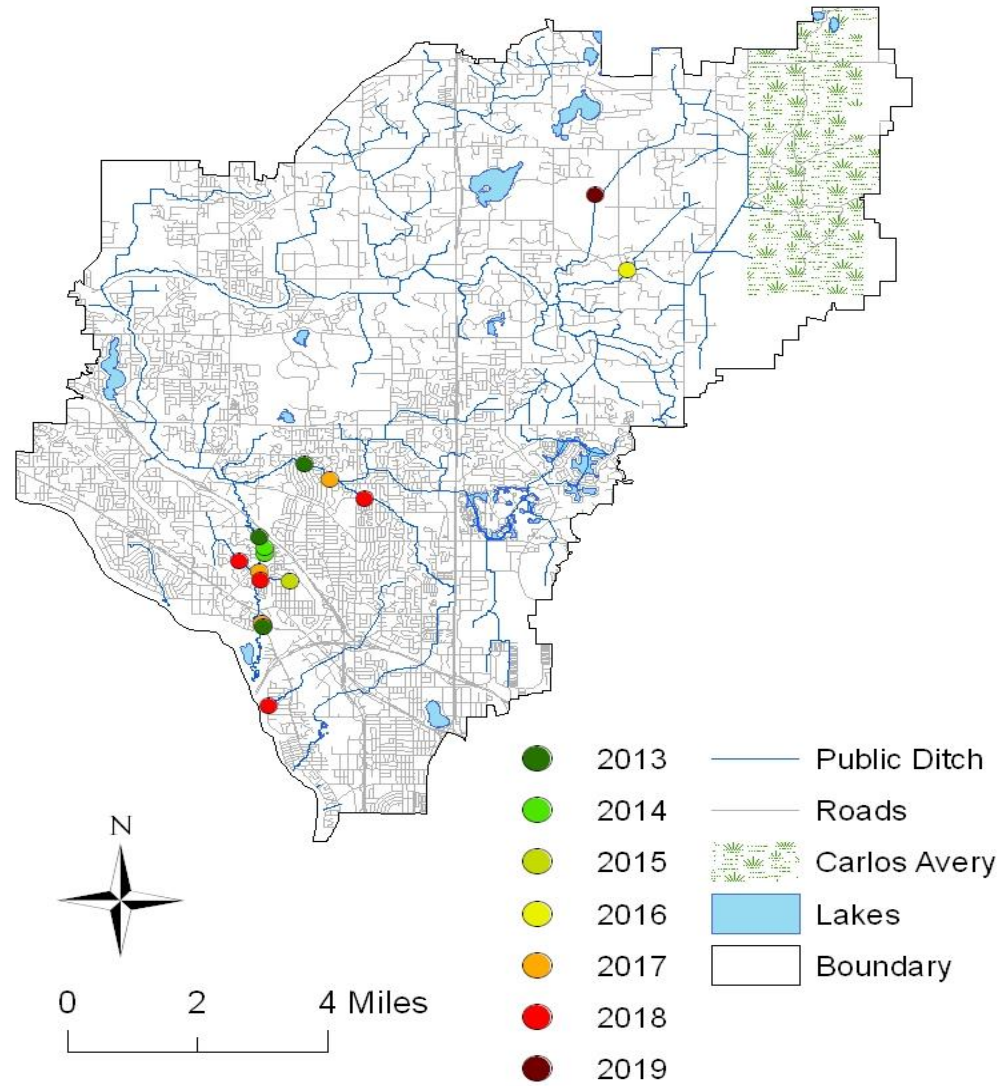
1. To solve local streambank erosion problems in a manner that minimizes the effect on stream behavior and impacts on affected property owners
2. To identify effective low cost methods of streambank protection as an alternate to more expensive, traditional means of erosion control
3. To understand the cause of streambank erosion problems, and to match the problem with a suitable bank protection method and to provide an organized, well planned approach to addressing and resolving streambank protection, restoration, maintenance and repair.

In recent years the District has needed to become more systematic, incorporating ditch bank condition into the annual ditch inspection program as well as the District's Issue Management activities. In 2013 the District will be initiating a GIS condition based model in an attempt to find other highly erodible and 'high probability of failure' conditions within the watershed that may not have been inspected or has yet to be reported.

Identified projects are evaluated as follows:

1. Identify Creek or Public Ditch Bank Erosion/Failure Situation
2. Inspect site and determine nature, scope & cause of the bank erosion/failure
3. Determine a bank repair/protection method & cost
4. Significance/Priority: Determine if the bank is worth protecting: using
 - a. The Wisconsin NRCS Rate Method
 - b. Current availability of funds (availability will be determined on a first-in, first-out basis, unless there is competition and/or funds are scarce).

Bank Stabilization Sites



| Year | Project Number | Name | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-------------|-----------------------|----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 13 | 10 | Sand Creek Trail | 13,500 | | | | | | | | | | |
| 13 | 24 | Cappiello | 20,250 | | | | | | | | | | |
| 13 | 41 | Perkins | 13,500 | | | | | | | | | | |
| 14 | 10 | Erlandson Park 1 | | 20,250 | | | | | | | | | |
| 14 | 15 | Kurt Carr | | 20,250 | | | | | | | | | |
| 14 | 20 | Erlandson Park 2 | | 2,700 | | | | | | | | | |
| 15 | 2 | Woodcrest | | | 135,000 | | | | | | | | |
| 16 | 4 | Ditch 44 | | | | 58,050 | | | | | | | |
| 17 | 2 | Creekside Estates | | | | | 13,500 | | | | | | |
| 17 | 3 | Brad Wehmoff | | | | | 12,150 | | | | | | |
| 17 | 8 | LaVay | | | | | 14,850 | | | | | | |
| 18 | 1 | Park of Four Seasons | | | | | | 9,450 | | | | | |
| 18 | 2 | Pleasure Creek | | | | | | 13,500 | | | | | |
| 18 | 3 | Larson | | | | | | 13,500 | | | | | |
| 18 | 8 | Woodcrest Confluence | | | | | | 2,700 | | | | | |
| 19 | 8 | Ditch 11 | | | | | | | 14,850 | | | | |

Project Name Sand Creek Trail
Project Number 13-BS01

Project Type Rip-rap Program Operation & Maintenance
 Useful Life (Yrs) 30 Years+ Activity Bank Stabilization
 Category Stream Bank Repair Contact Jon Janke



Description

Stabilize 100 feet of Sand Creek adjacent to city trail

Justification/Need

Securing the integrity of stream channel banks, reduction in total suspended solids, reduction in sediment accumulation downstream, reduction of property loss/damage

| Funding Sources | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Property Tax | 13,500 | - | - | - | - | - | - | - | - | - | - |
| Special Assessment | | | | | | | | | | | |
| Fees/Escrows | | | | | | | | | | | |
| Grants | | | | | | | | | | | |
| Total | 13,500 | - | - | - | - | - | - | - | - | - | - |

| Project Expenditures | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Salary & Benefits | | | | | | | | | | | |
| Professional Services | | | | | | | | | | | |
| Operating Expenses | | | | | | | | | | | |
| Program Costs | 13,500 | | | | | | | | | | |
| Capital Equipment | | | | | | | | | | | |
| Total | 13,500 | - | - | - | - | - | - | - | - | - | - |

Project Name Capiello Bank Stabilization
Project Number 13-BS02

Project Type Rip-rap Program Operations and Maintenance
 Useful Life (Yrs) 30 Years+ Activity Bank Stabilization
 Category Stream Bank Repair Contact Jon Janke



Description

Construct effective low cost BMP to stop, repair and prevent bank erosion along approximately 150 feet of Lower Coon Creek in Erlandson Park

Justification/Need

Securing the integrity of stream channel banks, reduction in total suspended solids, reduction in sediment accumulation downstream, reduction of property loss/damage

| Funding Sources | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Property Tax | 20,250 | | | | | | | | | | |
| Special Assessment | | | | | | | | | | | |
| Fees/Escrows | | | | | | | | | | | |
| Grants | | | | | | | | | | | |
| Total | 20,250 | - | - | - | - | - | - | - | - | - | - |

| Project Expenditures | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Salary & Benefits | | | | | | | | | | | |
| Professional Services | | | | | | | | | | | |
| Operating Expenses | | | | | | | | | | | |
| Program Costs | 20,250 | | | | | | | | | | |
| Capital Equipment | | | | | | | | | | | |
| Total | 20,250 | - | - | - | - | - | - | - | - | - | - |

Project Name Perkins Bank Stabilization
Project Number 13-BS03



Project Type Rip-rap Program Operations and Maintenance
 Useful Life (Yrs) 30 Years+ Activity Bank Stabilization
 Category Stream Bank Repair Contact Jon Janke

Description

Construct effective low cost BMP to stop, repair and prevent bank erosion along approximately 100 feet of Lower Coon Creek at 10945 Xeon St

Justification/Need

Securing the integrity of stream channel banks, reduction in total suspended solids, reduction in sediment accumulation downstream, reduction of property loss/damage

| Funding Sources | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Property Tax | 13,500 | | | | | | | | | | |
| Special Assessment | | | | | | | | | | | |
| Fees/Escrows | | | | | | | | | | | |
| Grants | | | | | | | | | | | |
| Total | 13,500 | - | - | - | - | - | - | - | - | - | - |

| Project Expenditures | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Salary & Benefits | | | | | | | | | | | |
| Professional Services | | | | | | | | | | | |
| Operating Expenses | | | | | | | | | | | |
| Program Costs | 13,500 | | | | | | | | | | |
| Capital Equipment | | | | | | | | | | | |
| Total | 13,500 | - | - | - | - | - | - | - | - | - | - |

Project Name Erlandson Park 1
Project Number 14-BS-01

Project Type Rip-rap Program Operations and Maintenance
 Useful Life (Yrs) 30 Years+ Activity Bank Stabilization
 Category Stream Bank Repair Contact Jon Janke

Description

Construct effective low cost BMP to stop, repair and prevent bank erosion along approximately 150 feet of Lower Coon Creek in Erlandson Park

Justification/Need

Securing the integrity of stream channel banks, reduction in total suspended solids, reduction in sediment accumulation downstream, reduction of property loss/damage

| Funding Sources | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Property Tax | | 20,250 | | | | | | | | | |
| Special Assessment | | | | | | | | | | | |
| Fees/Escrows | | | | | | | | | | | |
| Grants | | | | | | | | | | | |
| Total | - | 20,250 | - | - | - | - | - | - | - | - | - |

| Project Expenditures | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Salary & Benefits | | | | | | | | | | | |
| Professional Services | | | | | | | | | | | |
| Operating Expenses | | | | | | | | | | | |
| Program Costs | - | 20,250 | | | | | | | | | |
| Capital Equipment | | | | | | | | | | | |
| Total | - | 20,250 | - | - | - | - | - | - | - | - | - |

Project Name Kurt Carr
Project Number 14-BS-02

 Project Type Rip-rap Program Operations and Maintenance
 Useful Life (Yrs) 30 Activity Bank Stabilization
 Category Stream Bank Repair Contact Jon Janke

Description

Construct effective low cost BMP to stop, repair and prevent bank erosion along approximately 150 feet of Lower Coon Creek

Justification/Need

Securing the integrity of stream channel banks, reduction in total suspended solids, reduction in sediment accumulation downstream, reduction of property loss/damage

| Funding Sources | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Property Tax | | 20,250 | | | | | | | | | |
| Special Assessment | | | | | | | | | | | |
| Fees/Escrows | | | | | | | | | | | |
| Grants | | | | | | | | | | | |
| Total | - | 20,250 | - | - | - | - | - | - | - | - | - |

| Project Expenditures | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Salary & Benefits | | | | | | | | | | | |
| Professional Services | | | | | | | | | | | |
| Operating Expenses | | | | | | | | | | | |
| Program Costs | - | 20,250 | | | | | | | | | |
| Capital Equipment | | | | | | | | | | | |
| Total | - | 20,250 | - | - | - | - | - | - | - | - | - |

Project Name Erlandson Park 2
Project Number 14-BS-03

 Project Type Rip-rap Program Operations and Maintenance
 Useful Life (Yrs) 30 Activity Bank Stabilization
 Category Stream Bank Repair Contact Jon Janke

Description

Construct effective low cost BMP to stop, repair and prevent bank erosion along approximately 20 feet of Lower Coon Creek

Justification/Need

Securing the integrity of stream channel banks, reduction in total suspended solids, reduction in sediment accumulation downstream, reduction of property loss/damage

| Funding Sources | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Property Tax | | 2,700 | | | | | | | | | |
| Special Assessment | | | | | | | | | | | |
| Fees/Escrows | | | | | | | | | | | |
| Grants | | | | | | | | | | | |
| Total | - | 2,700 | - | - | - | - | - | - | - | - | - |

| Project Expenditures | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Salary & Benefits | | | | | | | | | | | |
| Professional Services | | | | | | | | | | | |
| Operating Expenses | | | | | | | | | | | |
| Program Costs | - | 2,700 | | | | | | | | | |
| Capital Equipment | | | | | | | | | | | |
| Total | - | 2,700 | - | - | - | - | - | - | - | - | - |

Project Name Woodcrest
Project Number 15-BS-01

 Project Type Rip-rap Program Operations and Maintenance
 Useful Life (Yrs) 30 Activity Bank Stabilization
 Category Stream Bank Repair Contact Jon Janke

Description

Construct effective low cost BMP to stop, repair and prevent bank erosion along approximately 1,000 feet of Woodcrest Creek between pedestrian bridge and pond

Justification/Need

Securing the integrity of stream channel banks, reduction in total suspended solids, reduction in sediment accumulation downstream, reduction of property loss/damage

| Funding Sources | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Property Tax | | | 135,000 | | | | | | | | |
| Special Assessment | | | | | | | | | | | |
| Fees/Escrows | | | | | | | | | | | |
| Grants | | | | | | | | | | | |
| Total | - | - | 135,000 | - | - | - | - | - | - | - | - |

| Project Expenditures | 2013 | 2014 | 2014 | 2014 | 2014 | 2014 | 2014 | 2014 | 2014 | 2014 | 2014 |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Salary & Benefits | | | | | | | | | | | |
| Professional Services | | | | | | | | | | | |
| Operating Expenses | | | | | | | | | | | |
| Program Costs | - | - | 135,000 | - | - | - | - | - | - | - | - |
| Capital Equipment | | | | | | | | | | | |
| Total | - | - | 135,000 | - | - | - | - | - | - | - | - |

Project Name Ditch 44
Project Number 16-BS-01

Project Type Rip-rap Program Operations and Maintenance
 Useful Life (Yrs) 30 Years+ Activity Bank Stabilization
 Category Stream Bank Repair Contact Jon Janke

Description

Construct effective low cost BMP to stop, repair and prevent bank erosion along approximately 430 feet of Ditch 44 in the vicinity of 3461 145th

Justification/Need

Securing the integrity of stream channel banks, reduction in total suspended solids, reduction in sediment accumulation downstream, reduction of property loss/damage

| Funding Sources | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Property Tax | | | | 58,050 | | | | | | | |
| Special Assessment | | | | | | | | | | | |
| Fees/Escrows | | | | | | | | | | | |
| Grants | | | | | | | | | | | |
| Total | - | - | - | 58,050 | - | - | - | - | - | - | - |

| Project Expenditures | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Salary & Benefits | | | | | | | | | | | |
| Professional Services | | | | | | | | | | | |
| Operating Expenses | | | | | | | | | | | |
| Program Costs | - | - | - | 58,050 | - | - | - | - | - | - | - |
| Capital Equipment | | | | | | | | | | | |
| Total | - | - | - | 58,050 | - | - | - | - | - | - | - |

Project Name Creekside Estates

Project Number 17-BS-01

Project Type Rip-rap Program Operations and Maintenance
30
Useful Life (Yrs) Years+ Activity Bank Stabilization
Category Stream Bank Repair Contact Jon Janke

Description

Construct effective low cost BMP to stop, repair and prevent bank erosion along approximately 100 feet of Lower Coon Creek at Creekside Estates

Justification/Need

Securing the integrity of stream channel banks, reduction in total suspended solids, reduction in sediment accumulation downstream, reduction of property loss/damage

| Funding Sources | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Property Tax | | | | | 13,500 | | | | | | |
| Special Assessment | | | | | | | | | | | |
| Fees/Escrows | | | | | | | | | | | |
| Grants | | | | | | | | | | | |
| Total | - | - | - | - | 13,500 | - | - | - | - | - | - |

| Project Expenditures | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Salary & Benefits | | | | | | | | | | | |
| Professional Services | | | | | | | | | | | |
| Operating Expenses | | | | | | | | | | | |
| Program Costs | - | - | - | - | 13,500 | - | - | - | - | - | - |
| Capital Equipment | | | | | | | | | | | |
| Total | - | - | - | - | 13,500 | - | - | - | - | - | - |

Project Name Brad Wehmoff

Project Number 17-BS-02

| | | | |
|-------------------|--------------------|----------|----------------------------|
| Project Type | Rip-rap 30 | Program | Operations and Maintenance |
| Useful Life (Yrs) | Years+ | Activity | Bank Stabilization |
| Category | Stream Bank Repair | Contact | Jon Janke |

Description

Construct effective low cost BMP to stop, repair and prevent bank erosion along approximately 90 feet of Sand Creek at 309 117th

Justification/Need

Securing the integrity of stream channel banks, reduction in total suspended solids, reduction in sediment accumulation downstream, reduction of property loss/damage

| Funding Sources | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Property Tax | | | | | 12,150 | | | | | | |
| Special Assessment | | | | | | | | | | | |
| Fees/Escrows | | | | | | | | | | | |
| Grants | | | | | | | | | | | |
| Total | - | - | - | - | 12,150 | - | - | - | - | - | - |

| Project Expenditures | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Salary & Benefits | | | | | | | | | | | |
| Professional Services | | | | | | | | | | | |
| Operating Expenses | | | | | | | | | | | |
| Program Costs | - | - | - | - | 12,150 | - | - | - | - | - | - |
| Capital Equipment | | | | | | | | | | | |
| Total | - | - | - | - | 12,150 | - | - | - | - | - | - |

Project Name Sonia LaVay Property
Project Number 17-BS-03

Project Type Rip-rap Program Operations and Maintenance
 30
 Useful Life (Yrs) Years+ Activity Bank Stabilization
 Category Stream Bank Repair Contact Jon Janke

Description

Construct effective low cost BMP to stop, repair and prevent bank erosion along approximately 110 feet of Lower Coon Creek at 9748 Vale St

Justification/Need

Securing the integrity of stream channel banks, reduction in total suspended solids, reduction in sediment accumulation downstream, reduction of property loss/damage

| Funding Sources | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Property Tax | | | | | 14,850 | | | | | | |
| Special Assessment | | | | | | | | | | | |
| Fees/Escrows | | | | | | | | | | | |
| Grants | | | | | | | | | | | |
| Total | - | - | - | - | 14,850 | - | - | - | - | - | - |

| Project Expenditures | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Salary & Benefits | | | | | | | | | | | |
| Professional Services | | | | | | | | | | | |
| Operating Expenses | | | | | | | | | | | |
| Program Costs | - | - | - | - | 14,850 | - | - | - | - | - | - |
| Capital Equipment | | | | | | | | | | | |
| Total | - | - | - | - | 14,850 | - | - | - | - | - | - |

Coon Creek Watershed District Capital Plan 2013 to 2023

Retrofits to Existing Stormwater Infrastructure

Stormwater Retrofit Assessment is a watershed management tool to help prioritize stormwater retrofit projects by performance and cost effectiveness. This process helps maximize the value of each dollar spent for water quality treatment in the older portion of the watershed. Detailed description of the scope and purpose of the project is available in the appropriate retrofit assessment.

| Year | Project Number | Name | Description | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------|----------------|---|------------------------------|---------|------|------|------|------|------|------|------|------|------|------|
| 13 | 13 | OGC-1 | Creek Corridor Stabilization | 425,000 | | | | | | | | | | |
| 13 | 20 | Pleasure | Retrofit Study | 33,000 | | | | | | | | | | |
| 13 | 26 | Pleasure Creek - Stormwater Assessment with Bacteria & TSS Estimation | Retrofit Study | 26,200 | | | | | | | | | | |
| 13 | 31 | Springbrook | Retrofit Study | 33,000 | | | | | | | | | | |
| 13 | 37 | Springbrook - Stormwater Assessment with Bacteria & TSS | Retrofit Study | 39,800 | | | | | | | | | | |

| Year | Project Number | Name | Description | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------|----------------|-----------------|---|--------|---------|--------|------|------|------|------|------|------|------|------|
| Estimation | | | | | | | | | | | | | | |
| 13 | 12 | WRAPP | Special Study | 60,000 | 60,000 | 30,000 | | | | | | | | |
| 14 | 3 | OGC-2* | Existing Wet Detention Pond Excavation | | 77,580 | | | | | | | | | |
| 14 | 11 | OGC-2* | Industrial Curb-cut Rain Garden Network | | 17,000 | | | | | | | | | |
| 14 | 4 | WC-9* | Infiltration/Retention WC-9 | | 4,620 | | | | | | | | | |
| 14 | 6 | SC-R2 | Neighborhood Retrofit SC-R2 | | 89,529 | | | | | | | | | |
| 14 | 12 | SC-R3 | Neighborhood Retrofit SC-R3 | | 77,500 | | | | | | | | | |
| 14 | 2 | WC-In-Stream | New Pond WC | | 136,500 | | | | | | | | | |
| 14 | 7 | WC-1 | Residential Rain Gardens WC-1 | | 77,240 | | | | | | | | | |
| 14 | 16 | Middle Ditch 41 | Retrofit Study | | 40,000 | | | | | | | | | |
| 14 | 17 | Woodcrest | Retrofit Study | | 15,000 | | | | | | | | | |
| 14 | 8 | OGC-6 | School Parking Lot Disconnect | | 950 | | | | | | | | | |

| Year | Project Number | Name | Description | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------|----------------|------------------------|---|------|------|---------|---------|------|------|------|------|------|------|------|
| 15 | 7 | OGC-2* | Industrial Parking Lot Rain Garden | | | 7,020 | | | | | | | | |
| 15 | 5 | SC-R3 | Neighborhood Retrofit | | | 282,105 | | | | | | | | |
| 15 | 3 | WC-4 | Residential Rain Gardens | | | 77,328 | | | | | | | | |
| 15 | 8 | Ditch 39 | WC-4 Retrofit Study | | | 25,000 | | | | | | | | |
| 15 | 9 | Ditch 54 | Retrofit Study | | | 20,000 | | | | | | | | |
| 15 | 10 | National Sports Center | Retrofit Study | | | 10,000 | | | | | | | | |
| 16 | 2 | OGC-2* | Existing Wet Detention Pond | | | | 794,920 | | | | | | | |
| 16 | 7 | OGC-2* | Expansion Industrial Parking Lot Depavement | | | | 17,696 | | | | | | | |
| 16 | 12 | OGC-8 | Industrial Parking Lot Rain Garden | | | | 7,020 | | | | | | | |
| 16 | 16 | OGC-7 | Industrial Parking Lot Rain Garden | | | | 7,020 | | | | | | | |
| 16 | 8 | SC-R4 | Neighborhood Retrofit | | | | 45,397 | | | | | | | |

| Year | Project Number | Name | Description | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------|----------------|-----------|--------------------------|------|------|------|--------|---------|------|------|------|------|------|------|
| 16 | 10 | SC-R4 | Neighborhood Retrofit | | | | 97,553 | | | | | | | |
| 16 | 13 | SC-R5 | Neighborhood Retrofit | | | | 41,385 | | | | | | | |
| 16 | 5 | WC-5 | Pond Modification | | | | 35,500 | | | | | | | |
| 16 | 9 | WC-7 | Residential Rain Gardens | | | | 26,960 | | | | | | | |
| 16 | 14 | WC-9* | Residential Rain Gardens | | | | 38,970 | | | | | | | |
| 16 | 3 | WC-8 | Residential Rain Gardens | | | | 51,492 | | | | | | | |
| 16 | 15 | Ditch 57 | WC-8 Retrofit Study | | | | 35,000 | | | | | | | |
| 16 | 17 | The Lakes | Retrofit Study | | | | 25,000 | | | | | | | |
| 16 | 11 | WC-5 | Stormwater Disconnects | | | | 7,600 | | | | | | | |
| 17 | 6 | WC-1 | Apt. Rain Garden | | | | | 31,000 | | | | | | |
| 17 | 9 | WC-3 | Apt./Office Rain Gardens | | | | | 22,180 | | | | | | |
| 17 | 1 | SC-R3 | Neighborhood Retrofit | | | | | 607,077 | | | | | | |
| 17 | 4 | SC-R5 | Neighborhood Retrofit | | | | | 85,817 | | | | | | |
| 17 | 5 | In-Stream | Pond Modification | | | | | 210,000 | | | | | | |

| Year | Project Number | Name | Description | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------|----------------|--------------------------------|--|------|------|------|------|--------|---------|---------|------|------|------|------|
| 17 | 7 | SC-R6 | Pond Modification | | | | | 7,104 | | | | | | |
| 17 | 10 | SC-R7 | Pond Modification | | | | | 14,400 | | | | | | |
| 17 | 11 | Anoka-Hennepin School District | Retrofit Study | | | | | 30,000 | | | | | | |
| 17 | 12 | Upper Ditch 41 | Retrofit Study | | | | | 30,000 | | | | | | |
| 18 | 4 | WC-6* | Bioretention | | | | | | 329,690 | | | | | |
| 18 | 5 | Ditch 37 | Retrofit Study | | | | | | 25,000 | | | | | |
| 18 | 7 | Evaluate Retrofit Priorities | Retrofit Study | | | | | | 1,600 | | | | | |
| 19 | 6 | WC-6* | Biofiltration | | | | | | | 404,432 | | | | |
| 19 | 7 | OGC-5 | High-rise Residential Parking Lot Rain Garden | | | | | | | 7,020 | | | | |
| 19 | 5 | OGC-5 | Hospital and High-rise Residential Parking Lot Rain Garden | | | | | | | 20,520 | | | | |
| 19 | 4 | OGC-5 | Office Park Parking Lot Rain Garden | | | | | | | 11,520 | | | | |

| Year | Project Number | Name | Description | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------|----------------|-----------|--|------|------|------|------|------|------|---------|---------|---------|---------|------|
| 19 | 2 | OGC-3 | Residential Curb-cut Rain Garden Network | | | | | | | 110,000 | | | | |
| 19 | 3 | OGC-1 | Residential Rain Garden Network | | | | | | | 52,200 | | | | |
| 20 | 1 | In-Stream | Channel Stabilization | | | | | | | | 210,000 | | | |
| 20 | 3 | WC-7 | Pond Modificatio n | | | | | | | | 67,930 | | | |
| 20 | 4 | WC-6* | Sand Filter | | | | | | | | 97,680 | | | |
| 20 | 2 | OGC-6 | School Parking Lot Rain Garden | | | | | | | | 7,020 | | | |
| 21 | 2 | OGC-4 | Hospital Parking Lot Permeable Asphalt | | | | | | | | | 327,470 | | |
| 21 | 1 | OGC-2 | Industrial Parking Lot Permeable Asphalt | | | | | | | | | 307,370 | | |
| 21 | 3 | WC-5 | Sand Filter | | | | | | | | | 15,800 | | |
| 21 | 4 | WC-3 | Sand Filter | | | | | | | | | 65,680 | | |
| 22 | 5 | WC-6* | Permeable Asphalt | | | | | | | | | | 611,520 | |

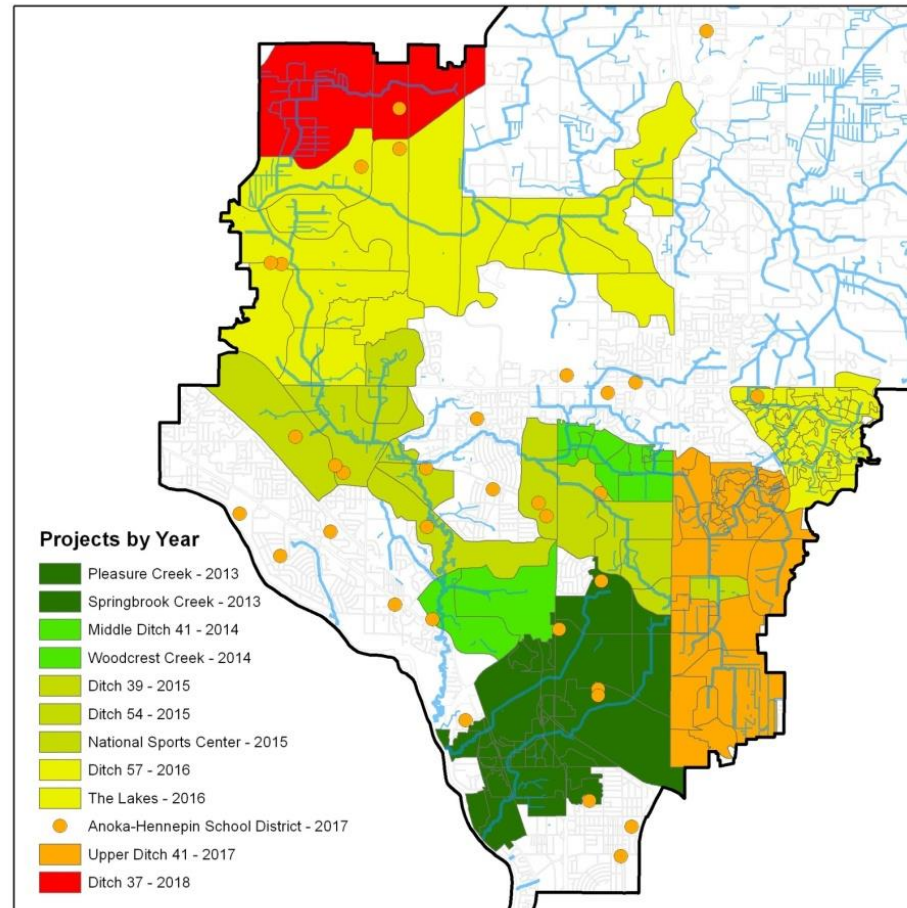
**Coon Creek Watershed District
Capital Plan
2013 to 2023**

Stormwater Treatment Device Construct, Maintain, Rehabilitation

| Year | Project Number | Name | Description | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-------------|-----------------------|--------------------|---------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 13 | 42 | Prairie Creek Weir | Repair Prairie Creek Weir | 1,500 | | | | | | | | | | |
| 13 | 39 | Timberline Weir | Repair Timberline Weir | 2,000 | | | | | | | | | | |

Coon Creek Watershed District Capital Plan 2013 to 2023

Studies and Special Area Management Plans



| Year | Project Number | Name | Description | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------|----------------|--|-------------------------------|-------|------|------|------|------|------|------|------|------|------|------|
| 13 | 14 | Develop GIS maps showing coincidence of AIS and critical ecosystems | SAMP - AIS | 750 | | | | | | | | | | |
| 13 | 15 | Identify and map drainage sections and drainage areas that serve or influence municipal water supplies | Special Study: Drinking Water | * | | | | | | | | | | |
| 13 | 16 | Update SWPPP | SWPPP | 4,000 | | | | | | | | | | |
| 13 | 21 | Classify drainage system and waterways by human influence | WRAPP | 1,000 | | | | | | | | | | |
| 13 | 22 | Identify minor sub-watersheds providing water within the drinking water supply Management Area as defined in the City's well-head protection plan or 1 year travel time of municipal and | Special Study: Drinking Water | * | | | | | | | | | | |

| Year | Project Number | Name | Description | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------|----------------|--|-------------------------------|--------|--------|---------|-------|------|-------|-------|------|------|-------|-------|
| | | other public wells and water supplies during land management planning | | | | | | | | | | | | |
| 13 | 27 | Phased | WRAPP | 32,702 | 87,646 | 130,579 | | | | | | | | |
| 13 | 28 | Evaluate and coordinate existing systems for reporting AIS sightings | SAMP - AIS | 2,100 | | | | | | | | | | |
| 13 | 29 | Support Anoka County Geologic Atlas | Special Study: Drinking Water | 800 | 800 | 800 | | | | | | | | |
| 13 | 32 | Identify lead agencies for particular AIS, water bodies and invasion vector. | SAMP - AIS | 700 | | | | | | | | | | |
| 13 | 38 | Prioritize control efforts for existing and new organisms of concern | SAMP - AIS | 2,400 | | | 2,400 | | | 2,400 | | | 2,400 | |
| 13 | 40 | Prioritize ecologically sensitive areas at risk for AIS | SAMP - AIS | 4,200 | | | | | 4,200 | | | | | 4,200 |

| Year | Project Number | Name | Description | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------|----------------|---|-------------|---------|------|------|------|------|------|------|------|------|------|------|
| | | | | impacts | | | | | | | | | | |
| 13 | 43 | Quantify and assess bait as an AIS vector | SAMP - AIS | 2,000 | | | | | | | | | | |
| 13 | 45 | Quantify and assess construction activities as an AIS vector | SAMP - AIS | 2,000 | | | | | | | | | | |
| 13 | 47 | Quantify and assess recreational boating as an AIS vector | SAMP - AIS | 2,000 | | | | | | | | | | |
| 13 | 49 | Quantify and assess recreational fishing as an AIS vector | SAMP - AIS | 2,000 | | | | | | | | | | |
| 13 | 51 | Quantify and assess research, resource management and educational activities as AIS vectors | SAMP - AIS | 2,000 | | | | | | | | | | |

| Year | Project Number | Name | Description | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------|----------------|---|-------------------------------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|
| 13 | 52 | Quantify and assess restoration activities as an AIS vector | SAMP - AIS | 2,000 | | | | | | | | | | |
| 14 | 5 | Develop or update Lake or resource specific management plans | SAMP - AIS | 1,400 | | 1,400 | | 1,400 | | 1,400 | | | | |
| 14 | 9 | Maintain an inventory of municipal supply watersheds. | Special Study: Drinking Water | | 300 | | 300 | | 300 | | 300 | | 300 | |
| 14 | 19 | Develop and implement a rapid response plan for detecting and eradicating AIS | SAMP - AIS | | 8,000 | 3,000 | | | | | | | | |
| 14 | 22 | Develop species and/or location-specific control plans | SAMP - AIS | | 4,000 | | 4,000 | | 4,000 | | | | | |
| 14 | 23 | Develop species and/or location-specific rapid response plans | SAMP - AIS | | 4,000 | 3,000 | | | | | | | | |
| 14 | 25 | Rank AIS vector importance | SAMP - AIS | | 2,000 | | | | | | | | | |

| Year | Project Number | Name | Description | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------|----------------|---|-------------------------------|------|------|-------|-------|-------|-------|-------|-------|------|------|------|
| 15 | 4 | Develop and coordinate measures necessary for management of municipal supply watersheds | Special Study: Drinking Water | | | 1,500 | 1,500 | 1,500 | 1,500 | | | | | |
| 15 | 6 | Estimate groundwater storage & supply within the watershed | Special Study: Drinking Water | | | 4,000 | | | | | | | | |
| 16 | 6 | Develop & Maintain measures necessary for management of municipal supply watersheds | Special Study: Drinking Water | | | | 1,000 | 1,000 | 1,000 | | | | | |
| 16 | 19 | Riparian Land Study | SAMP | | | | 8,000 | 8,000 | 8,000 | | | | | |
| 19 | 1 | Develop Municipal water supply watershed plans where needed | Special Study: Drinking Water | | | | | | | 1,500 | 1,500 | | | |
| 20 | 5 | Review Conservation Water Fees with TAC | Special Study: Drinking Water | | | | | | | | 800 | 800 | | |

**Coon Creek Watershed District
Capital Plan
2013 to 2023**

Capital Equipment

| Yr | Proj Num | Name | Descrip | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|----|----------|------------------------|------------------------|--------|------|-------|-------|------|--------|-------|------|-------|-------|--------|
| 13 | 2 | Computers & Software | Computers | 10,500 | | 2,500 | 7,000 | | 2,500 | 7,000 | | 2,500 | 7,000 | |
| 13 | 3 | HydroLab | Field Equipment | 10,000 | | | | | 10,000 | | | | | 10,000 |
| 13 | 4 | Infiltration Rings | Field Equipment | 200 | | | | | | | | | | |
| 13 | 5 | Precip Gage | Field Equipment | 300 | | | | | 300 | | | | | 300 |
| 13 | 6 | Soil Probe | Field Equipment | 100 | | | | | | | | | | |
| 13 | 7 | Turbidity Meter | Field Equipment | 742 | | | | | 742 | | | | | 742 |
| 13 | 8 | Stream Hydrology Meter | Field Equipment WM-40s | 900 | | | | | 900 | | | | | 900 |
| 13 | 9 | Telecommunications | Smart Phone | | | 200 | | | 200 | | | 200 | | |

| Yr | Proj Num | Name | Descrip | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|----|----------|------------------------------|--------------------|-------|-------|--------|-------|------|-------|-------|--------|-------|-------|-------|
| 13 | 17 | Telecommunica | Smart | 200 | | | 200 | | | 200 | | | 200 | |
| | | tions | Phone | | | | | | | | | | | |
| 13 | 18 | Telecommunica | Smart | 200 | | | 200 | | | 200 | | | 200 | |
| | | tions | Phone | | | | | | | | | | | |
| 13 | 23 | Computers & Software | iPads | 7,700 | | | 7,700 | | | 7,700 | | | 7,700 | |
| 13 | 33 | Spatial analyst | Software | 2,250 | | | | | 2,250 | | | | | 2,250 |
| 13 | 34 | Trimpix Software – GIS | Software | 180 | | | | | 180 | | | | | 180 |
| 14 | 1 | Camera | Field Equipment | | | | | | | | | | | |
| 14 | 13 | Digital Recorder | Office Equip | | 300 | | | | | 300 | | | | |
| 14 | 14 | Projector | Office Equip | | 1,200 | | | | | 1,200 | | | | |
| 15 | 1 | GPS Receiver & Controller | Field Equipment | | | 28,000 | | | | | 28,000 | | | |
| 16 | 1 | Hydromet | Field Equipment | | | | 4,500 | | | | | 4,500 | | |

Funding Options

**Coon Creek Watershed District
Capital Plan
2013 to 2023
Special Assessment Eligible**

| Yr | Name | Description | Activity | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------|---|--|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 13 | Ditch 44: Sand mine to Crosstown | Ditch 44 Cleaning: Sand mine to Crosstown | Ditch Repair | 9,000 | | | | | | | | | | |

Coon Creek Watershed District
Capital Plan
2013 to 2023
Grant Eligible

The Coon Creek Watershed District conducts activities that may qualify for the following grants

BWSR Administered

Clean Water Funds: The Clean Water Fund was established to implement part of Article XI, Section 15, of the Minnesota Constitution, with the purpose of protecting, enhancing, and restoring water quality in lakes, rivers, and streams in addition to protecting ground water and drinking water sources from degradation. The appropriation language governing the use of these funds is in Laws of Minnesota 2011, 1st Special Session, Chapter 6. These funds must supplement traditional sources of funding and may not be used as a substitute to fund activities or programs.

Clean Water Assistance Grants: Funds are to be used to protect, enhance and restore water quality in lakes, rivers and streams and to protect groundwater and drinking water. Activities include structural and vegetative practices to reduce runoff and retain water on the land, feedlot water quality projects, SSTS abatement grants for low income individuals, and stream bank, stream channel and shoreline protection projects. These grants require a 25% local match. There are three types of grants under this program category:

1. Clean Water Assistance Grants;
2. Livestock Waste Management System Grants; and
3. Subsurface Sewage Treatment System (SSTS) Abatement Grants .

BWSR Clean Water Accelerated Implementation Grants: These funds are for projects and activities (such as ordinances, organization capacity, and state of the art targeting tools) that complement, supplement, or exceed current state standards for protection, enhancement, and restoration of water quality in lakes, rivers, and streams or that protect groundwater from degradation. These grants require a 25% local match.

Clean Water Conservation Drainage Grants: These funds are for projects to retrofit existing drainage systems with water quality improvement practices, evaluate outcomes and provide outreach to landowners, public drainage authorities, drainage engineers, contractors and others. These grants require a 25% local match.

Community Partners Conservation Program Grants: These funds are to be used for community partners within a Local Government Units (LGU) jurisdiction to implement structural and vegetative practices to reduce stormwater runoff and retain water on the land to reduce the movement of sediment, nutrients and pollutants. LGUs will be the primary applicant and provide sub-grants to community partners who are implementing practices to accomplish restoration, protection or enhancement of water quality in lakes, rivers and streams and/or protection of groundwater and drinking water. These grants require a 25% local match.

Well Sealing Program: These funds are to be used to provide assistance to well owners for the sealing of unused wells in accordance with Minnesota Rules 4725. These grants require a 50% local match.

Cost Share Program: The State Cost-Share Program was created to provide funds to Soil and Water Conservation Districts (SWCDs) for the implementation of conservation practices that protect and improve water quality by controlling soil erosion and reducing sedimentation. This program provides 50 to 75 percent of the total eligible costs of a practice. Grant funds are available through ACD at the beginning of the state's fiscal year. Grant applications are accepted at any time through the Anoka Conservation District's (ACD) water quality cost share program.

Native Buffer Cost Share Grants: Grants for cost-sharing contracts to establish and maintain diverse native vegetation buffers using seeds and plants of local ecotype regions.

Natural Resources Block Grant (NRBG): is a composite of base grants available to local government units that help them implement programs designed to protect and improve water resources. Individual programs under this grant include:

- Comprehensive Local Water Management: The Comprehensive Local Water Management Program is a voluntary program that requires counties to use local task forces to develop and implement water plans based on their priorities.
- Wetland Conservation Act: The Board of Water and Soil Resources requires that under this grant program, a county must agree to transfer a minimum of \$5,000 (or 15 percent of their allocation, whichever is greatest) to the Soil and Water Conservation District for the implementation of Wetland Conservation Act activities within 30 days of receipt of Natural Resources Block Grant funds.
- DNR - Shoreland Management: The Community Stewardship Unit oversees the administration of the state shoreland management program to promote wise development of shorelands in order to preserve and enhance the quality of surface waters, preserve the economic values of shorelands, and ensure the wise use of water and related resources. These grants require a 50% local match.

Clean Water Legacy Grants: The Board of Water and Soil Resources is responsible for implementing non-point pollution reduction activities through the Minnesota Clean Water Legacy Act. The purpose of the Clean Water Legacy Act is to protect, restore, and preserve the quality of Minnesota's surface waters by providing authority, direction, and resources to achieve and maintain water quality standards for surface waters as required by section 303(d) of the Federal Clean Water Act.

MPCA Administered

Watershed Project Funding: Administered by the MPCA these grants provide funding for water protection and restoration projects around the state.

Nonpoint Source Water Pollution Projects: Clean Water Partnership and Section 319 Programs: The MPCA provides financial and technical assistance to local government and other water resource managers to address nonpoint-source water pollution through the State Clean Water Partnership (CWP) and Federal Clean Water Act Section 319 (Section 319) programs. The CWP funds will be used for diagnostic study or implementation projects that protect water bodies currently meeting Minnesota's water quality standards.

The CWP and Section 319 programs address nonpoint sources of pollution. Nonpoint pollution comes from many individual sources, such as storm sewers, construction sites, animal feedlots, paved surfaces, failing septic systems and over-fertilized lawns. When taken together, these sources contribute huge quantities of phosphorus, bacteria, sediments, nitrates and other pollutants to the environment. They also represent the largest combined threat (an estimated 86 percent) of the state's water pollution.

The MPCA uses the CWP and Section 319 programs to support the leadership efforts of local units of government and citizens to address nonpoint sources of pollution. The programs provide financial and technical assistance to study water bodies with pollution problems, develop action plans to address the problems, and plan implementation to fix the problems.

CWP and Section 319 projects require a large commitment of time and effort on the part of local participants. Participants may include local units of government, tribes, nonprofit organizations, universities and colleges, as well as citizens concerned about local water quality. Both programs require applicants to match grant money with local cash or in-kind services.

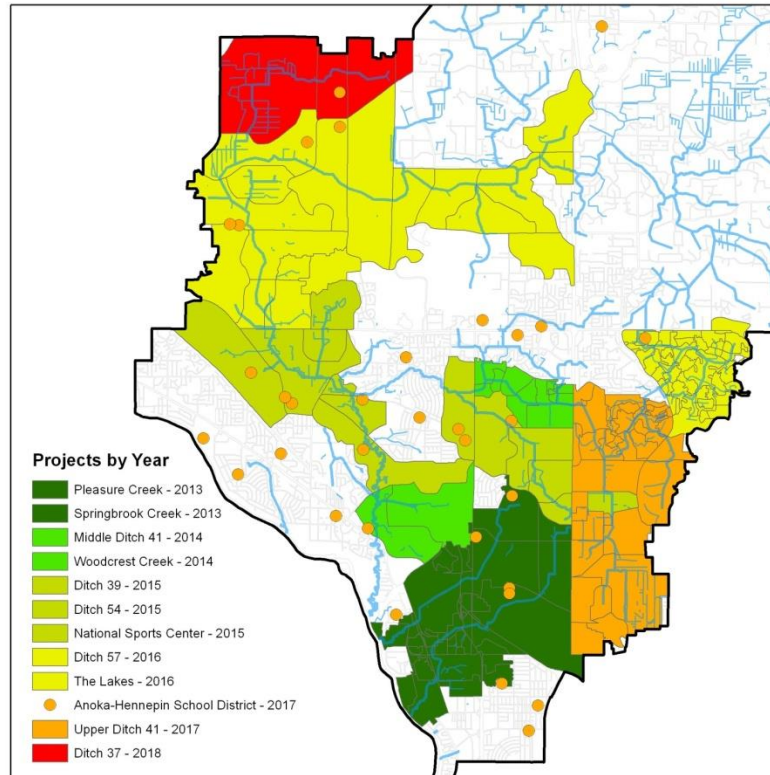
Clean Water Partnership: Grants to protect and improve the basins and watersheds of the state and provide financial and technical assistance to study waters with nonpoint source pollution problems. Priority shall be given to projects preventing impairments and degradation of lakes, rivers, streams, and groundwater in accordance with Minnesota Statutes, section 114D.20, subdivision 2, clause (4).

Surface Water Assessment Grants (SWAG): Grants to complete the monitoring needed to meet assessment requirements on Minnesota lakes and streams. Requests for proposal are open annually in October to provide local organizations and citizen volunteers with monitoring funds.

Coon Creek Watershed District Capital Plan 2013 to 2023

State Clean Water Fund Eligible

Clean Water Funds: The Clean Water Fund was established to implement part of Article XI, Section 15, of the Minnesota Constitution, with the purpose of protecting, enhancing, and restoring water quality in lakes, rivers, and streams in addition to protecting ground water and drinking water sources from degradation. The appropriation language governing the use of these funds is in Laws of Minnesota 2011, 1st Special Session, Chapter 6. These funds must supplement traditional sources of funding and may not be used as a substitute to fund activities or programs.



| Year | Name | Description | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-------------|---|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 13 | Pleasure | Retrofit Study | 33,000 | | | | | | | | | | |
| 13 | Pleasure Creek - Stormwater Assessment with Bacteria & TSS Estimation | Retrofit Study | 26,200 | | | | | | | | | | |
| 13 | Springbrook | Retrofit Study | 33,000 | | | | | | | | | | |
| 13 | Springbrook - Stormwater Assessment with Bacteria & TSS Estimation | Retrofit Study | 39,800 | | | | | | | | | | |
| 13 | WRAPP | Special Study | 60,000 | 60,000 | 30,000 | | | | | | | | |
| 14 | Middle Ditch 41 | Retrofit Study | | 40,000 | | | | | | | | | |
| 14 | Woodcrest | Retrofit Study | | 15,000 | | | | | | | | | |
| 15 | Ditch 39 | Retrofit Study | | | 25,000 | | | | | | | | |
| 15 | Ditch 54 | Retrofit Study | | | 20,000 | | | | | | | | |
| 15 | National Sports Center | Retrofit Study | | | 10,000 | | | | | | | | |
| 16 | Ditch 57 | Retrofit Study | | | | 35,000 | | | | | | | |
| 16 | The Lakes | Retrofit Study | | | | 25,000 | | | | | | | |
| 17 | Anoka-Hennepin School District | Retrofit Study | | | | | 30,000 | | | | | | |

| Year | Name | Description | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-------------|----------------|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 17 | Upper Ditch 41 | Retrofit Study | | | | | 30,000 | | | | | | |
| 18 | Ditch 37 | Retrofit Study | | | | | | 25,000 | | | | | |

Coon Creek Watershed District
Capital Plan
2013 to 2023
State Cost Share Fund Eligible

Cost Share Funds: The State Cost-Share Program was created to provide funds to Soil and Water Conservation Districts (SWCDs) for the implementation of conservation practices that protect and improve water quality by controlling soil erosion and reducing sedimentation. This program provides 50 to 75 percent of the total eligible costs of a practice. Grant funds are available through ACD at the beginning of the state's fiscal year. Grant applications are accepted at any time through the Anoka Conservation District's (ACD) water quality cost share program.

Stream Bank Repair and Bank Stabilization: Streambank repairs are the formalization and back log of the District's bank stabilization program. Established in 1996 (Policy and Procedure 4.3: Bank Restoration) the District has operated a Bank stabilization program on a first come first serve basis:

1. To solve local streambank erosion problems in a manner that minimizes the effect on stream behavior and impacts on affected property owners.
2. To identify effective low cost methods of streambank protection as an alternate to more expensive, traditional means of erosion control.
3. To understand the cause of streambank erosion problems, and to match the problem with a suitable bank protection method and to provide an organized, well planned approach to addressing and resolving streambank protection, restoration, maintenance and

In recent years the District has needed to become more systematic, incorporating ditch bank condition into the annual ditch inspection program as well as the District's Issue Management activities. In 2013 the District will be initiating a GIS condition based model in an attempt to find other highly erodible and 'high probability of failure' conditions within the watershed that may not have been inspected or has yet to be reported. Identified projects are evaluated as follows:

1. Identify Creek or Ditch Bank Erosion/Failure Situation
2. Inspect site and determine nature, scope & cause of the bank erosion/failure
3. Determine a bank repair/protection method & cost
4. Significance/Priority: Determine if the bank is worth protecting: using
 - a. The Wisconsin NRCS Rate Method
 - b. Current availability of funds (availability will be determined on a first-in, first-out basis, unless there is competition and/or funds are scarce)

| Year | Name | Description | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-------------|------------------|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 13 | Cappiello | Bank Stabilization | 20,250 | | | | | | | | | | |
| 13 | Perkins | Bank Stabilization | 13,500 | | | | | | | | | | |
| 13 | Sand Creek Trail | Bank Stabilization | 13,500 | | | | | | | | | | |
| 14 | Erlandson Park 1 | Bank Stabilization | | 20,250 | | | | | | | | | |
| 14 | Erlandson Park 2 | Bank Stabilization | | 2,700 | | | | | | | | | |
| 14 | Kurt Carr | Bank Stabilization | | 20,250 | | | | | | | | | |
| 15 | Woodcrest | Bank Stabilization | | | 135,000 | | | | | | | | |
| 16 | Ditch 44 | Bank Stabilization | | | | 58,050 | | | | | | | |
| 17 | Brad Wehmoff | Bank Stabilization | | | | | 12,150 | | | | | | |

| Year | Name | Description | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-------------|----------------------------|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 17 | Creeside Estates | Bank Stabilization | | | | | 13,500 | | | | | | |
| 17 | LaVay | Bank Stabilization | | | | | 14,850 | | | | | | |
| 18 | Larson | Bank Stabilization | | | | | | 13,500 | | | | | |
| 18 | Park of Four Seasons | Bank Stabilization | | | | | | 9,450 | | | | | |
| 18 | Pleasure Creek | Bank Stabilization | | | | | | 13,500 | | | | | |
| 18 | Sand Creek and Xeon Street | Bank Stabilization | | | | | | 675 | | | | | |
| 18 | Woodcrest Confluence | Bank Stabilization | | | | | | 2,700 | | | | | |
| 19 | Ditch 11 | Bank Stabilization | | | | | | | 14,850 | | | | |

**Coon Creek Watershed District
Capital Plan
2013 to 2023
Eligible for Clean Water & Cost Share Funds**

| Yr | Name | Description | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|----|----------------------|---|---------|---------|------|------|------|------|------|------|------|------|------|
| 13 | OG C-1 | Creek Corridor Stabilization | 425,000 | | | | | | | | | | |
| 14 | OG C-2* | Existing Wet Detention Pond Excavation | | 77,580 | | | | | | | | | |
| 14 | OG C-2* | Industrial Curb-cut Rain Garden Network | | 17,000 | | | | | | | | | |
| 14 | WC -9* | Infiltration/Retention on WC-9 | | 4,620 | | | | | | | | | |
| 14 | SC- R2 | Neighborhood Retrofit SC-R2 | | 89,529 | | | | | | | | | |
| 14 | SC- R3 | Neighborhood Retrofit SC-R3 | | 77,500 | | | | | | | | | |
| 14 | WC -In- Stream | New Pond WC | | 136,500 | | | | | | | | | |
| 14 | WC -1 | Residential Rain Gardens WC-1 | | 77,240 | | | | | | | | | |

| Yr | Name | Description | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|----|----------------|---|------|------|---------|---------|------|------|------|------|------|------|------|
| 14 | OG C-6 | School Parking Lot Disconnect | | 950 | | | | | | | | | |
| 15 | OG C- 2* | Industrial Parking Lot Rain Garden | | | 7,020 | | | | | | | | |
| 15 | SC- R3 | Neighborhood Retrofit | | | 282,105 | | | | | | | | |
| 15 | WC -4 | Residential Rain Gardens WC-4 | | | 77,328 | | | | | | | | |
| 16 | OG C- 2* | Existing Wet Detention Pond Expansion | | | | 794,920 | | | | | | | |
| 16 | OG C- 2* | Industrial Parking Lot Depavement | | | | 17,696 | | | | | | | |
| 16 | OG C-7 | Industrial Parking Lot Rain Garden | | | | 7,020 | | | | | | | |
| 16 | OG C-8 | Industrial Parking Lot Rain Garden | | | | 7,020 | | | | | | | |
| 16 | SC- R4 | Neighborhood Retrofit | | | | 45,397 | | | | | | | |
| 16 | SC- R4 | Neighborhood Retrofit | | | | 97,553 | | | | | | | |
| 16 | SC- R5 | Neighborhood Retrofit | | | | 41,385 | | | | | | | |
| 16 | WC -5 | Pond Modification | | | | 35,500 | | | | | | | |

| Yr | Name | Description | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|----|-------------------|----------------------------------|------|------|------|--------|---------|------|------|------|------|------|------|
| 16 | WC -7 | Residential Rain Gardens | | | | 26,960 | | | | | | | |
| 16 | WC -9* | Residential Rain Gardens | | | | 38,970 | | | | | | | |
| 16 | WC -8 | Residential Rain Gardens WC-8 | | | | 51,492 | | | | | | | |
| 16 | WC -5 | Stormwater Disconnects | | | | 7,600 | | | | | | | |
| 17 | WC -1 | Apt. Rain Garden | | | | | 31,000 | | | | | | |
| 17 | WC -3 | Apt./Office Rain Gardens | | | | | 22,180 | | | | | | |
| 17 | SC- R3 | Neighborhood Retrofit | | | | | 607,077 | | | | | | |
| 17 | SC- R5 | Neighborhood Retrofit | | | | | 85,817 | | | | | | |
| 17 | In- Stre am | Pond Modification | | | | | 210,000 | | | | | | |
| 17 | SC- R6 | Pond Modification | | | | | 7,104 | | | | | | |
| 17 | SC- R7 | Pond Modification | | | | | 14,400 | | | | | | |

| Yr | Name | Description | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|----|-----------|--|------|------|------|------|------|---------|---------|---------|------|------|------|
| 18 | WC -6* | Bioretention | | | | | | 329,690 | | | | | |
| 19 | WC -6* | Biofiltration | | | | | | | 404,432 | | | | |
| 19 | OG C-5 | High-rise Residential Parking Lot Rain Garden | | | | | | | 7,020 | | | | |
| 19 | OG C-5 | Hospital and High-rise Residential Parking Lot Rain Garden | | | | | | | 20,520 | | | | |
| 19 | OG C-5 | Office Park Parking Lot Rain Garden | | | | | | | 11,520 | | | | |
| 19 | OG C-1 | Residential Curb-cut Rain Garden Network | | | | | | | 52,200 | | | | |
| 19 | OG C-3 | Residential Curb-cut Rain Garden Network | | | | | | | 110,000 | | | | |
| 20 | In-Stream | Channel Stabilization | | | | | | | | 210,000 | | | |
| 20 | WC -7 | Pond Modification | | | | | | | | 67,930 | | | |
| 20 | WC -6* | Sand Filter | | | | | | | | 97,680 | | | |

| Yr | Name | Description | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|----|-----------|--|------|------|------|------|------|------|------|-------|---------|---------|------|
| 20 | OG C-6 | School Parking Lot Rain Garden | | | | | | | | 7,020 | | | |
| 21 | OG C-4 | Hospital Parking Lot Permeable Asphalt | | | | | | | | | 327,470 | | |
| 21 | OG C-2 | Industrial Parking Lot Permeable Asphalt | | | | | | | | | 307,370 | | |
| 21 | WC -3 | Sand Filter | | | | | | | | | 65,680 | | |
| 21 | WC -5 | Sand Filter | | | | | | | | | 15,800 | | |
| 22 | WC -6* | Permeable Asphalt | | | | | | | | | | 611,520 | |

**Coon Creek Watershed District
Capital Plan
2013 to 2023
Clean Water Partnership Funds**

Nonpoint Source Water Pollution Projects: Clean Water Partnership and Section 319 Programs: The MPCA provides financial and technical assistance to local government and other water resource managers to address nonpoint-source water pollution through the State Clean Water Partnership (CWP) and Federal Clean Water Act Section 319 (Section 319) programs. The CWP funds will be used for diagnostic study or implementation projects that protect water bodies currently meeting Minnesota’s water quality standards.

The CWP and Section 319 programs address nonpoint sources of pollution. Nonpoint pollution comes from many individual sources, such as storm sewers, construction sites, animal feedlots, paved surfaces, failing septic systems and over-fertilized lawns. When taken together, these sources contribute huge quantities of phosphorus, bacteria, sediments, nitrates and other pollutants to the environment. They also represent the largest combined threat (an estimated 86 percent) of the state's water pollution.

The MPCA uses the CWP and Section 319 programs to support the leadership efforts of local units of government and citizens to address nonpoint sources of pollution. The programs provide financial and technical assistance to study water bodies with pollution problems, develop action plans to address the problems, and plan implementation to fix the problems.

CWP and Section 319 projects require a large commitment of time and effort on the part of local participants. Participants may include local units of government, tribes, nonprofit organizations, universities and colleges, as well as citizens concerned about local water quality. Both programs require applicants to match grant money with local cash or in-kind services.

| Year | Name | Description | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-------------|---|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 13 | Classify drainage system and waterways by human influence | WRAPP | 1,000 | | | | | | | | | | |
| 13 | Phased | WRAPP | 32,702 | 87,646 | 130,579 | | | | | | | | |

Evaluation

Introduction

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.

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Goals

1. To monitor the development of the Comprehensive Plan as a whole, and of its component projects, in relation to changes in the context, operating environment and circumstances of their implementation.
2. To monitor the development of the program as a whole, and of its component projects, in regard to goals, timelines and any unforeseen circumstances.
3. To implement a rapid problem identification system, as well as, a system for internal communications to the various stakeholders.
4. To facilitate evaluation procedures during and after activities, through the definition of specific indicators.

Overview

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

Reality Monitoring

All programs and activities can be seen as initiatives in pursuing the mission and goals and objectives of the watershed district as well as

strengthening natural capital. Indicators relative to ‘reality monitoring’ should therefore be focused on three orders of macro-phenomena: physical capacity, beneficial uses and needs and managerial requirements and capacity.

Physical Capacity If we define physical capacity as the overall ability of an ecosystem to maintain its natural, original, or current condition and to produce goods and services. This includes both the current stock and the ability of an ecosystem to produce more of a specific resource. This includes surface and subsurface water and related renewable resources.

Measurement Tools The following tools for measuring successful implementation of this plan are to be used annually under the District Performance Measurement System:

1. The primary metric primary metric for evaluation of progress by the District’s programs is improvement in water quality goals as measured by water quality trends determined from the District monitoring efforts and supplemental monitoring conducted by other agencies.
2. A secondary metric is the completion of planned programs and projects. This secondary metric is a quantitative assessment of the completion of projects and the success of programs. This quantitative assessment will also allow evaluation of specific projects and initiatives and allow evaluation of resource goals.

Quantitative Assessment: Issue Areas Addressed The quantitative measurement of the District’s accomplishment of projects and programs will indicate progress in addressing District Goals and Issues from the short term perspective of successful completion of planned program initiatives and projects.

Projects The District will perform an annual inventory of District projects accomplished in the preceding year. Result will provide a simple assessment of which Issues have received attention through project work that was intended for completion that year. Progress in each issue area will be evaluated based on the progress Evaluation Metrics identified in each area areas.

Programs Ongoing initiatives conducted through district programs will be evaluated in a similar manner. Since ongoing initiatives, by definition, have no end point of completion, District Board and staff will assign a numerical score (1 – 10) based on the level of effort put into the program in the preceding year.

Additional evaluation of success of District programs will be completed by evaluating progress towards the goals of the program. Programs will

be evaluated based on the Progress Evaluation Metrics identified in the program description.

Program Evaluations

Periodic evaluations of implementation and accomplishments of individual water and related resource programs and activities administered by the CCWD are a critical element of overall performance measurement. Findings of periodic and annual evaluations are used to refine the District's objectives and guide revisions to the District's comprehensive plan.

A variety of program reviews and evaluations are routinely conducted within the CCWD. Most of the evaluations are applied to all aspects of the District's programs and activities, but not necessarily within the same year. Schedules are established each year so that, in a five to seven year period, all programs are reviewed.

Programmatic Review Program coordinators conduct programmatic reviews to assess the propriety of program implementation at the field level.

Compliance Review The District Administrator conducts independent reviews of programs to ascertain compliance with existing laws, Board policy, regulations, policies and procedures. Review types include surveys, comprehensive reviews and quick response reviews depending on the issue, scope and depth of review needs.

State Program Review State agencies (BWSR & MPCA) conduct compliance reviews and audits of the individual programmatic activities and for operational reviews within their jurisdictions. The auditor conducts an annual review of compliance and financial efficiency.

- The BWSR conducts Performance Review and Assistance Studies (PRAP) and reviews of Wetland conservation Act administration.
- The MPCA conducts periodic audits of MS4s to ensure compliance with NPDES permit requirements.

In 2008, the Board of Water and Soil Resources conducted a review of District administration and operations under the Program Review and Assistance Program (PRAP). Using a standardized methodology, integrated strategies were developed to facilitate and evaluate implementation of the District's long range goals and objectives. In addition, an evaluation of the District's goals, objectives and performance measures were considered during revision of the Comprehensive Plan.

Measuring Implementation Progress

Due to its decentralized structure and wide scope of programs and activities, the CCWD maintains several systems to track performance and provide management information on the implementation of the Comprehensive Plan. These include the following:

- Staff Activity Reports (SAR)
- Water Monitoring & Atlas System (WMAS)
- Asset Knowledge/ Infrastructure Database.

Staff Activity Reporting (SAR)

This system is for District programs. It is used to set annual performance targets toward the start of the year and annual plan commencement and report on accomplishments at the end of the year. Each CCWD program is assigned targets for the major activities associated with the program. Mid-year adjustments to activity targets may be made to reflect changes in priorities, needs, costs or resources. CCWD staff record data on activity accomplishments on a monthly basis, through the Administrators monthly staff report. This data is then reviewed and aggregated for the District before being submitted to the Board of managers for review and receipt.

SAR data is recorded monthly electronically. The electronic format consists of a spreadsheet with monthly and annual totals by program.

SAR data goes through several layers of review starting with the District Administrator, then through the Board of Managers, and finally the Advisory Committees and the BWSR in the District's Annual Report. The data is again reviewed by staff, administration and the Board of Managers during the Annual Evaluation and Assessment steps to assess program and activity trends, shifts and needs for future budgeting and planning.

Water Monitoring & Atlas System (WMAS)

The WMAS tracks funding and attainment of monitoring and research work. At the beginning of the year, Monitoring funds are allocated to the Anoka Conservation District (ACD) based on the Board of Managers adopted budget and work plan. The ACD then allocates the funding and work load across the varying monitoring activities (Lakes, streams, wetlands and precipitation). The data are reviewed by ACD staff, entered into Storet/Equis where appropriate and, at years end, prepare a report (The County Water Atlas) on the results and the conditions, trends and management implications of the data. The CCWD then takes the final report and incorporates that into the CCWD's annual report to the BWSR.

Data is also used in the District's Annual Assessment of resource condition, trends and needs which in turn feeds into a review of the District's progress in achieving its long range goals and the discussion

of adjustments for the District's next budget cycle.

Data quality problems occur infrequently, and when they do are typically related to equipment failures or flow conditions (high or low).

**Asset Knowledge/
Infrastructure
Inventory Database**

INFRA is the District Asset inventory of constructed features, ditches, ponds, control structures, dams and other water management features. The database includes that quantified asset information which is readily available for asset management purposes. Having this information for all the District assets is the foundation for good decision making. The definition implies that the information is organized and readily available in a clear and structured way.

Asset knowledge has five objectives:

1. Define the minimum level of detail for an asset (what assets to track)
2. Establish a uniform asset enumeration scheme (asset organization)
3. Identify existing assets and related attributes (asset data)
4. Identify the probability and consequence of failure of an asset (asset risk)
5. Establish the level of asset management performed (asset management strategy).

The District will review and update its asset management source databases to be reconciled with each other and in accordance with the minimum asset detail and asset numbering guidelines.

The conveyance system will be updated using the latest "stream order maps," combined with the record drawings. The stream order maps have been kept up to date and provide a view of large branches of the system.

The District is currently in the process of updating its conveyance geographical information system (GIS). At the end of this project, the District will have all of its conveyance facilities included on the District GIS system.

In parallel with this effort, the District will record appropriate asset data if it is not recorded already. Such asset data will fall into three sets:

1. Identifying information, such as construction date, and original cost.
2. Basic hydraulic information, such as 100 year flood elevation, flow capacity, and length.
3. Maintenance history, such as types and frequencies.

The District will define the required information by asset class to ensure that a consistent set of data is achieved. This effort will be ongoing.

Asset Condition and Consequence Database

Describes the procedures for determining, recording, tracking and updating condition assessments and intervals.

Current condition of each of the ditch systems, and maintenance needs are reviewed and tracked twice per year.

1. The overall condition of the drainage system is reported in the District’s annual report. Reporting the condition of the drainage system to the Commissioner of the Department of Natural Resources is a legislative requirement.
2. The condition of the drainage system, results of recent spot and system inspections, entries into the Issues Log, and comments by Managers and residents of the watershed are reviewed as part of the annual budget process.

The overall condition of a ditch system is recorded in the “infrastructure inventory” portion of the District’s asset inventory which is reviewed at the times noted above and during the District’s annual audit.

Annual Evaluations Used to Revise Goals and Objectives

The evaluations required an identification of needs that in turn formed recommendations for future goals and objectives with associated outcome statements, outcome measures, efficiency measures, output measures, baselines and targets where appropriate.

When determining the suitability of proposed goals, objectives and performance measures, we considered the results of both a review of the District’s external environment (physical, social and political and economic trends) and our organizational capability based on our internal factors of production (finances, knowledge, skills and abilities of staff, work procedures and relations with collaborators).

Schedule of Future Program Evaluations

The Watershed District conducts regular program evaluations at various levels of the organization separate from those conducted by state agencies. The following schedule identifies significant evaluations projected over the next 10 years. As necessary, the Watershed District will conduct additional studies and evaluations as directed by the Board of Managers, BWSR or the legislature.

| Evaluation | Scope | Methodology | Timetable |
|--|---|---|---|
| Subwatershed Management | Major Subwatershed/ Ditch system – flooding, water quality & other uses | Reviewed with Cities & other collaborators | Same schedule as inspections. Every 5 years or 20% each year. |
| Maintenance Review | Ditches, structures | Inspections, Issue investigations | Annually prior to budget |
| Integrated reviews of programs with partners | Review of programs under agreement or memoranda | Program and partner field reviews | Periodically |
| Financial Audit | review of compliance and financial efficiency & procedures | Governmental Accounting Standards & Practices | Annually |
| Watershed Assessment of Natural Resources | Evaluate status, condition, trends and uses of Coon Creeks resources and the processes which support them | Independent technical assessment of condition, trends and emerging issues | 2015 2020 2025 |
| Research and Monitoring | District wide and by subject | Integrated review of joint subwatershed and monitoring program to evaluate mission delivery | 2014 2019 2024 |