

# Coon Creek Watershed District

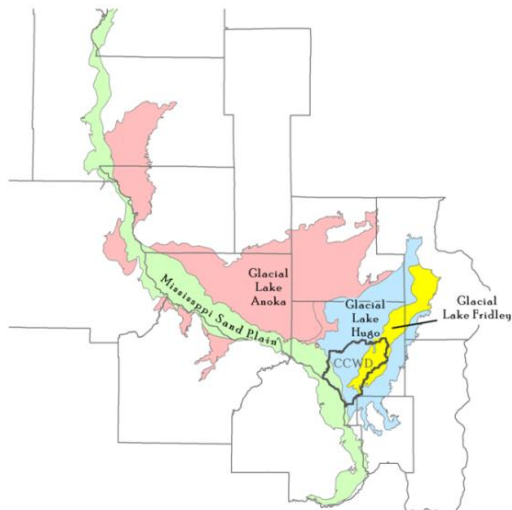
## 2013 to 2023 Comprehensive Watershed Management Plan Summary

### 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 4<sup>th</sup> 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).

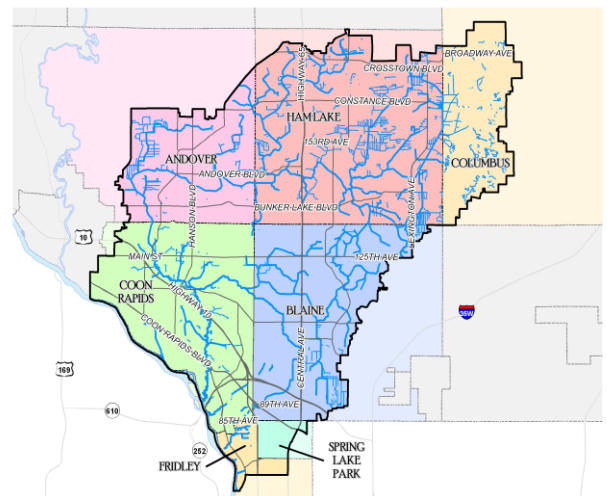
### Background

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
<b>Andover</b>	15	14%	43%
<b>Blaine</b>	22	21%	64%
<b>Columbus</b>	11	10%	23%
<b>Coon Rapids</b>	22	21%	99%
<b>Fridley</b>	2	2%	21%
<b>Ham Lake</b>	33	30%	90%
<b>Spring Lake Park</b>	2	2%	68%
<b>Total</b>	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

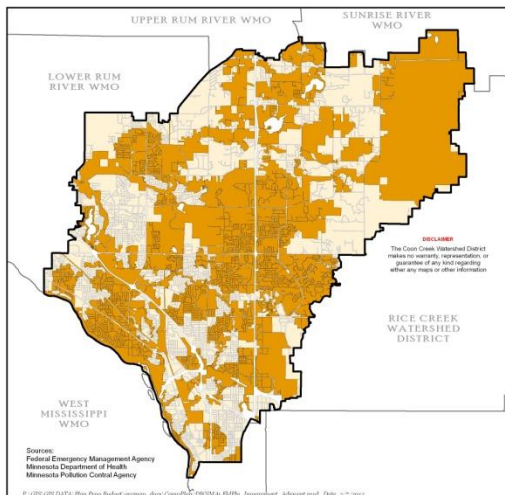
### **Goal 1: To prevent property damage from flooding, erosion or degraded water quality**

**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.

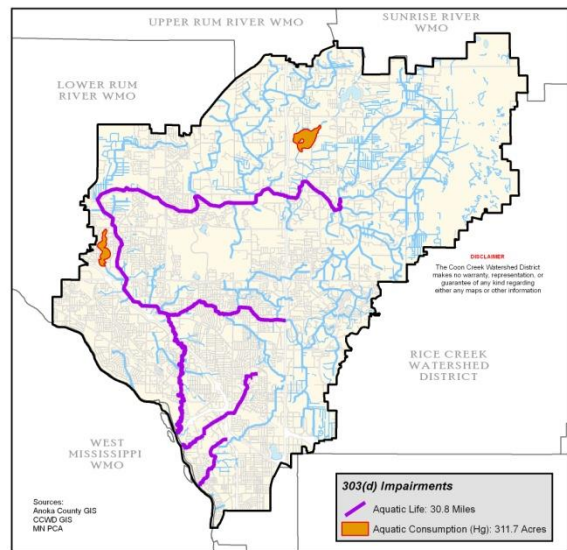
Water quality goals and standards apply to a variety of water resources. Within the Coon Creek Watershed those resources and the amount within the watershed are:

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.

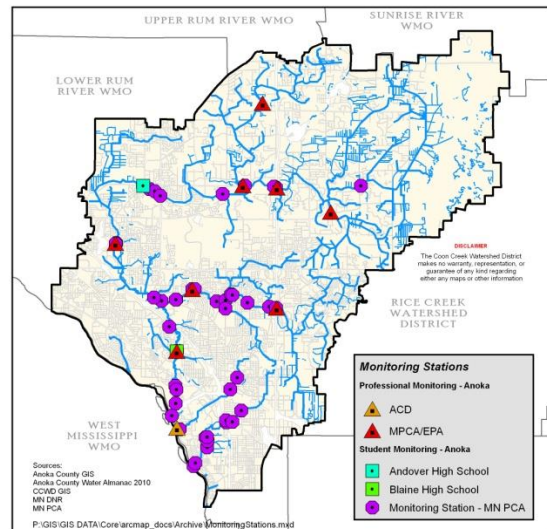
Planning, Programming & Budgeting: Water quality planning efforts will revolve around four efforts.

- 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

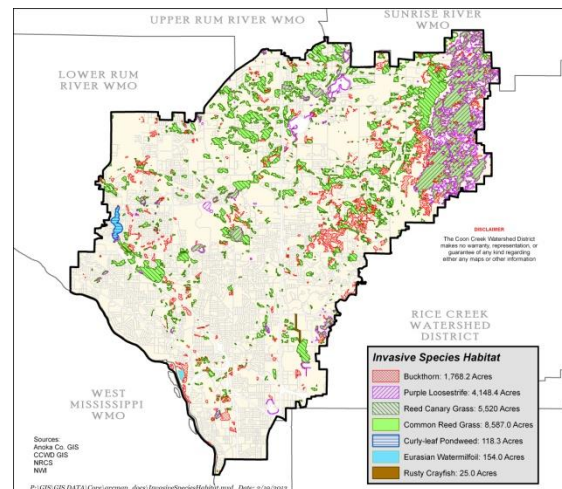
**Current Situation:** At present known occurrences of Invasive species within the Coon Creek Watershed District are as follows:

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:

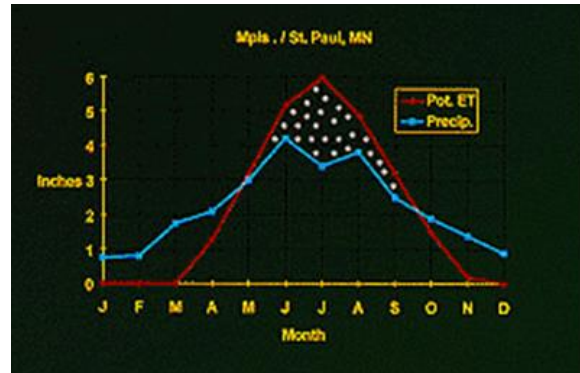
1. How increasing hydrologic variability may affect water supply and demand and stormwater collection and treatment.
2. How changes in the amounts and seasonal and spatial distribution of precipitation potentially may have large impacts on the watershed in next twenty years.
3. How increasing hydrologic 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.

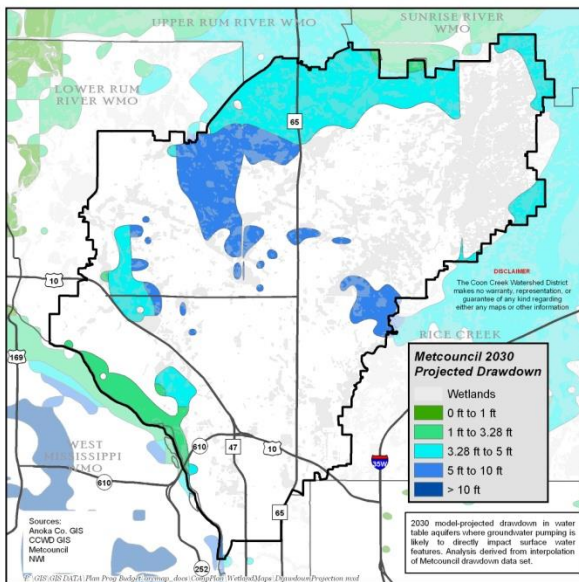
Groundwater-dependent ecosystems vary dramatically in how extensively they depend on Groundwater, from being entirely dependent to having occasional dependence. Unique ecosystems that depend on Groundwater (fens for example) can be entirely dependent on Groundwater, which makes them very vulnerable to 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.

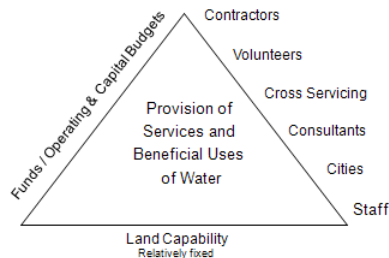
**Means and Methods of Doing Business**

**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

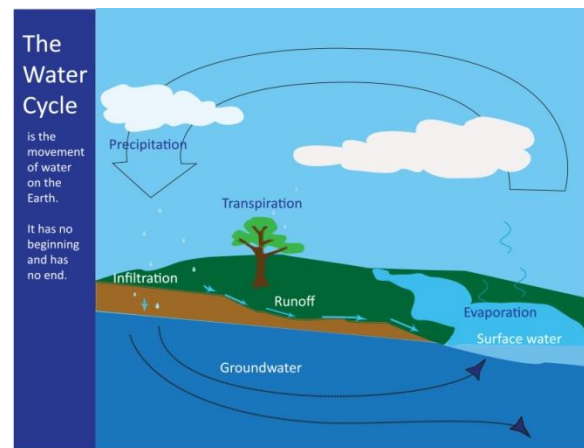
4. Planning, Programming and Budgeting
5. Public and Governmental Relations
6. Research and Monitoring

## 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
<b>Total</b>	<b>\$ 10,381,324</b>

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.