

Executive Summary

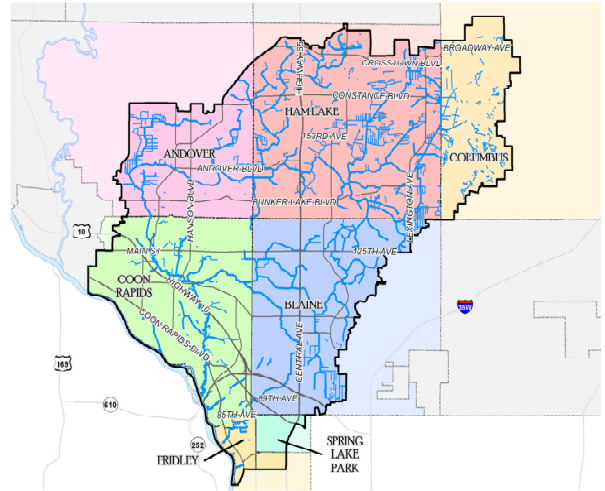
Coon Creek Watershed District 2013 to 2023 Comprehensive Watershed Management Plan

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:

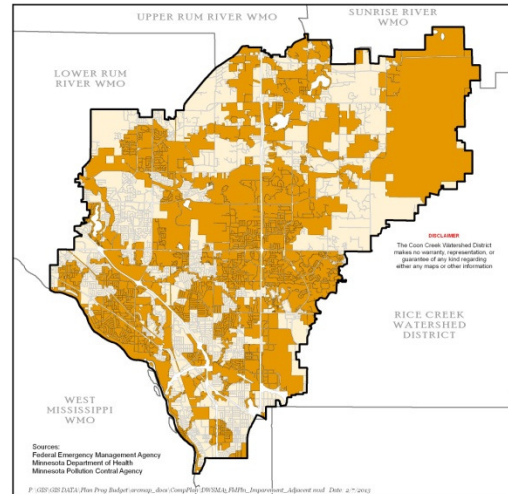
1. Preventing flooding
2. Improving water quality in impaired or impacted waters
3. Maintaining and enhancing water quality in waters that are not impaired.

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

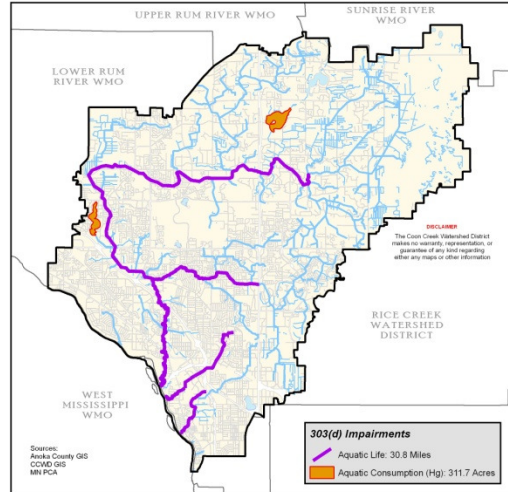
Goal 3: To ensure that water is protected from contamination

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:

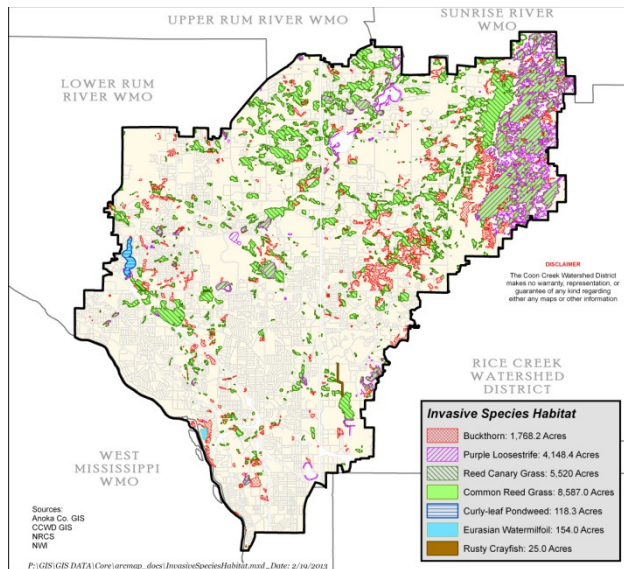
1. Eurasian watermilfoil (*Myriophyllum spicatum*)
2. Curly-leaf pondweed (*Potamogeton crispus*)
3. Flowering rush (*Butomus umbellatus*)
4. Reed Canary Grass (*Phalaris arundinacea*)
5. Purple loosestrife (*Lythrum salicaria*)
6. Buckthorn (*Rhamnus frangula*)
7. Common Reed grass (*Phragmites australis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