Coon Creek Watershed District
2023 Annual Report and Assessment

Board of Managers

President	Jim Hafner
Vice-President	Erin Lind
Treasurer	Mary Campell
Secretary	Jason Lund
At Large	Dwight McCullough

Members Leaving Board During 2023
Matthew Herbst
Patrick Parker

District Administrator

Tim Kelly

763-755-0975
tkelly@cooncreekwd.org

Approved by Board of Managers March 2024

Reporting Requirements

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

1. The Minnesota Watershed Act (M.S. 103D.351)
2. The Metropolitan Water Management Act (M.S. 103B.231)

PURPOSE OF THE REPORT

The Annual Report and Assessment monuments the current condition and trend of water management efforts made the previous year and initiates the annual planning, programming, budgeting, and execution cycle. It is intended to provide guidance on key enduring and emerging planning issues to inform program development and investment decisions.

The Objectives of the Annual Report are to:

OVERVIEW OF COON CREEK WATERSHED DISTRICT

Background

The Coon Creek Watershed District was established in 1959 under the Minnesota Watershed District Law (Minnesota Statutes 103D).

The District is an independent special purpose unit of government that addresses comprehensive water and related resource management. The District is 107 square miles in size and includes the drainage areas of Coon Creek and five smaller watersheds that also drain directly to the Mississippi river.

Board Of Managers

Office	Name	Appointing County	Term
President	Jim Hafner	Anoka	
Vice-President	Erin Lind	Anoka	
Treasurer	Mary Campell	Anoka	
Secretary	Jason Lund	Anoka	
At Large	Dwight McCullough	Anoka	
Resigned	Matt Herbst	Anoka	
Deceased	Partrick Parker	Anoka	

Contact information is available on the District website:
www.cooncreekwd.org

District Mission

The District mission is derived from the nine principle directives and 38 mandates and rules from the state and federal governments. Distilling those requirements our mission is:

To manage surface water and groundwater systems and contributing lands to provide for and balance the competing uses of development, drainage, flood prevention and the protection and restoration of water quality and habitat for the benefit of our communities now and in the future.

Our Intent:

To pursue our mission within the framework of the existing state and federal programs using adaptive management and a theory of continual information and adaptation that enables disciplined decision-making by framing risk and assessing progress toward strategic objectives.

Our priority focus will be on flood prevention and addressing the water quality impairments within the watershed by directly addressing their restoration and long term shifting the biogeochemical integrity of the watershed from a poor to a moderate condition. We further intend to cease or slow the degradation of water resources within the watershed by 2033 as a steppingstone towards achieving the Total Maximum Daily Load Reductions by 2045.

Shifting the biogeochemical integrity of the watershed to address water quality and flood control problems will require the District to:

- continue to conduct the full spectrum of projects and activities.
- converge the capabilities across organizations and resource concerns.

Success will hinge on our ability to:

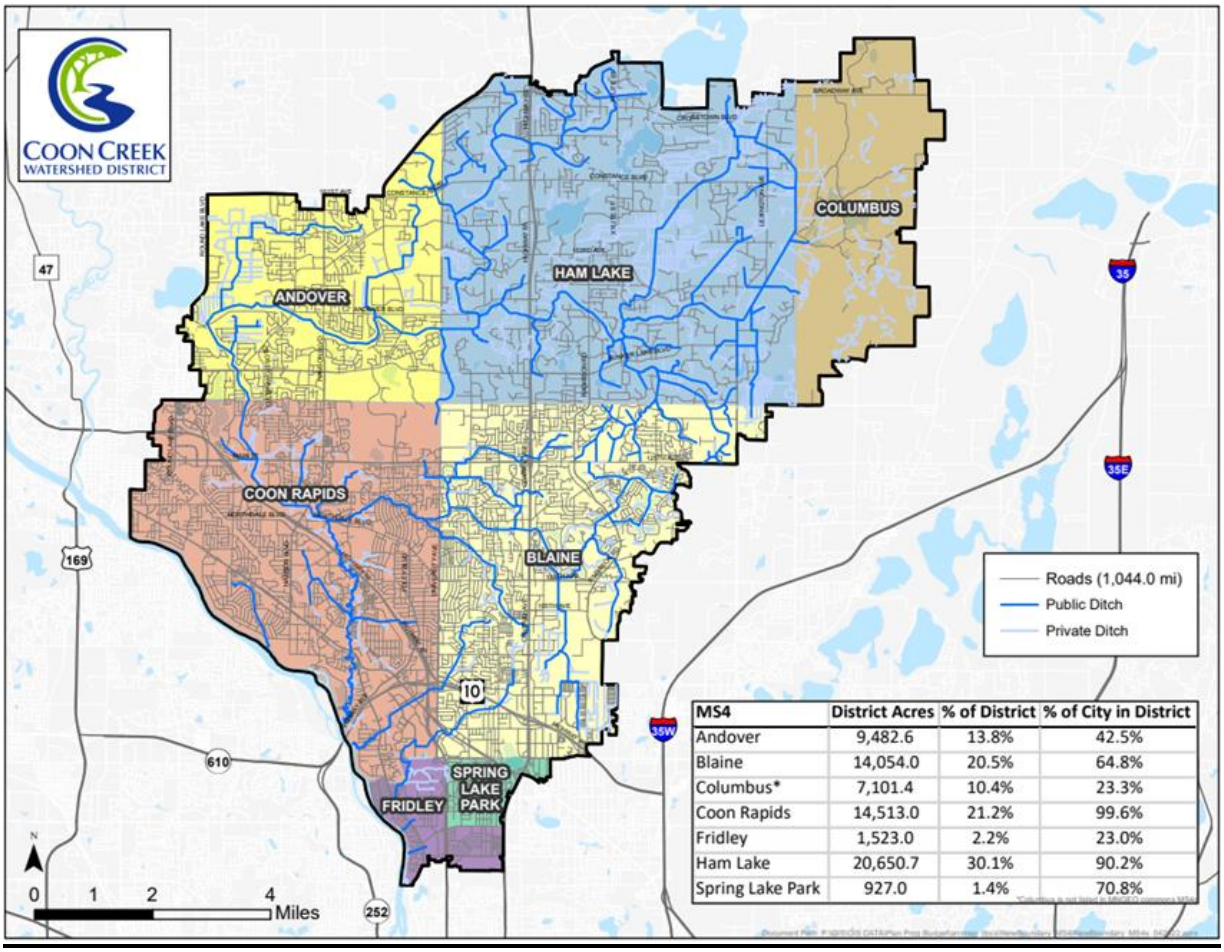
- Transform the inherent conflict involved with land and water to learning and adapting.
- Collaborate and maintain unity of effort.
- Maintain legitimacy of effort
- Build partner capacity and capability.

Our Vision

The District will focus on the drainage basin of Coon Creek and remain ready, willing, and able to collaborate, encourage, deter, and correct a range of water resource related problems issues and concerns. The District is prepared and capable of pursuing this task alone or as part of a joint effort with the seven cities within the watershed, Anoka County, and the Anoka Conservation District.

Our approach is to leverage **the natural tendencies, capabilities, and capacities of the landscape through adaptive and innovative evidence-based practices, using competent empowered professionals, public and government collaborators whose work and efforts** result in short and long-term beneficial use of the resource and that enable city staff and decision makers to achieve success in preventing, repairing, and correcting water resource problems and issues.

Location

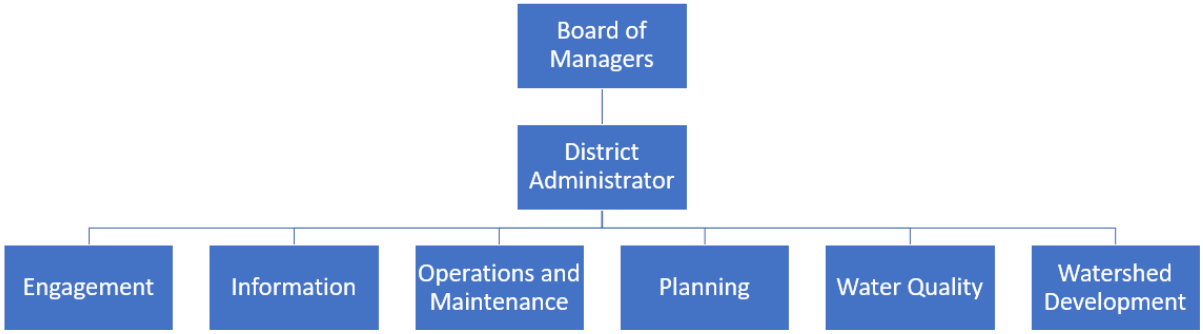


MS4	District Acres	% of District	% of City in District
Andover	9,482.6	13.8%	42.5%
Blaine	14,054.0	20.5%	64.8%
Columbus*	7,101.4	10.4%	23.3%
Coon Rapids	14,513.0	21.2%	99.6%
Fridley	1,523.0	2.2%	23.0%
Ham Lake	20,650.7	30.1%	90.2%
Spring Lake Park	927.0	1.4%	70.8%

Our Approach and Concept of Operation

Basic Organization

The District is organized into six program areas which mirror and serve as essential field operating systems.

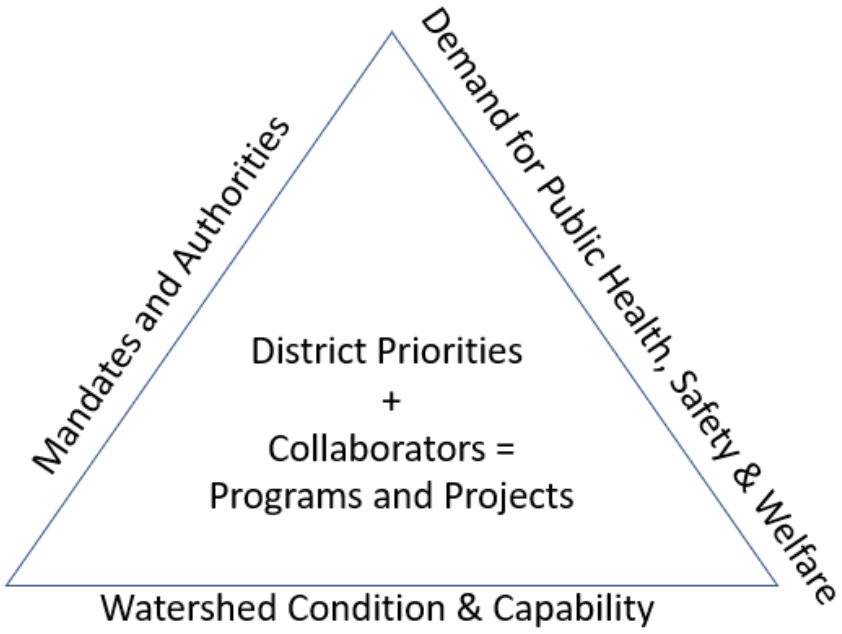


Key Staff and Leadership

Program	Staff Contact
Administrator	Tim Kelly
Attorney	Michelle Ulrich
Director of Annual Operations	Jon Janke
Engagement	Jessica Lindemyer
Engineering	Eileen J. Weigel, Stantec
Information	Dawn Doering
Operations and Maintenance	Jon Janke
Field Operations	Tyler Thompson
Infrastructure Inspections	Jason Hilst
Planning	Erik Bye
Water Quality	Justine Dauphinais
Water Quality & Weather Specialist	Chase Vanderbilt
Watershed Development	Erin Margel
Plan and Permit Review	Abby Lee
Inspections	Kailee Hasbrook

Concept of Operations

The District's current strategy and concept of operations is founded on watershed-based collaborative management actions.

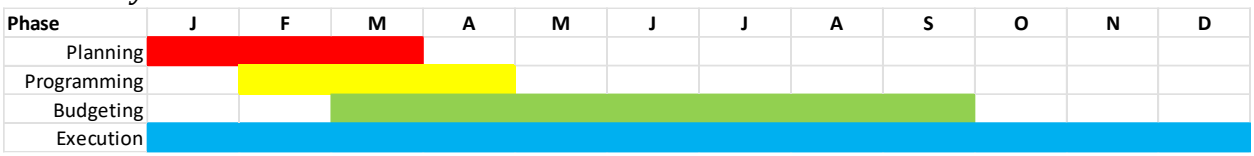


Operate in One- and Ten-Year Cycles

All District goals, programs and intended projects and actions are disclosed in an approved Comprehensive Watershed Management Plan. The plan is reviewed by all state and local stakeholders and approved by the Minnesota Board of Water and Soil resources. Those plans typically are developed for a ten-year period (eg 2014-2023 or 2024 to 2033) and document and disclose the: water management situation; the principal needs and priority goals to be pursued or accomplished: the mix of research, capital, regulatory, and public information and engagement projects, tasks and activities that will be taken to pursue or achieve those goals; the costs, material and staff that will be needed over that time to make this happen: and finally the leadership, governance, communication and collaboration involved.

Implementation of the ten-year Comprehensive Watershed Management Plans occurs through the District's annual planning, programming, budgeting, and execution (PPBE) system. The annual PPBE process is shown below.

Annual Cycle



Assessment of the Financial Condition (Unaudited)

2023-24 Financial Condition

Description	Fund Balance		Change
Special Revenue Funds	1/1/2023	12/31/2023	
MWMA Fund	1,958,079	358,802	(1,599,277)
Illicit Discharge Detection	750	750	-
Rapid Response Reserve	40,000	40,000	-
MWMA Fund Balance	**1,917,329**	**318,052**	**(1,599,277)**
Grants			
ACD WCA Block Grant	-	9,224	9,224
FY19 BWSR CWF MSCCR Gra	-	-	-
FY20 BWR CWF Coon Ck Park	6,716	6,716	-
FY20 Fed 319 NKE Plan Grant	-	-	-
FY21 BWSR WBIF Aurelia Parl	-	31,017	31,017
FY21 BWSR CWF PCSBIESF	39,592	39,592	-
FY22 PCA 319 Pet Waste	(676)	541	(135)
FY22 BWSR CWF ECIESF	172,500	(172,500)	-
FY22 BWSR WBIF Retrofits	108,189	108,189	-
Fiduciary Funds			
Escrow Trust	2,109,241	2,128,456	19,215

2023 Budget Performance

Revenue Sources	2023 Adopted Budget	2023 Actual	Variance	Pct Variance
Property Taxes	3,187,821	3,131,633	(56,188)	-2%
Special Assessments	-	-	-	
Fees & Charges	552,291	224,491	(327,800)	-59%
Grants	405,527	249,542	(155,985)	-38%
Other Revenue	26,963	169,086	142,123	527%
Fund Balances	342,274	161,336	(180,938)	-53%
Total	$ 4,514,876.00	$ 3,936,088.00	(578,788)	-13%

Expenditure Sources	2023 Adopted Budget	2023 Actual	Variance	Pct Variance
Salaries & Benefits	1,775,997	1,528,715	(247,282)	-14%
Professional Services	382,506	266,667	(115,839)	-30%
Operating Expenses	227,180	175,037	(52,143)	-23%
Program Expenses	2,402,962	1,628,301	(774,661)	-32%
Capital Equipment	21,795	11,815	(9,980)	-46%
Total	$ 4,810,440	$ 3,610,535	$ (1,199,905)	-25%

Status of 2023 Audit

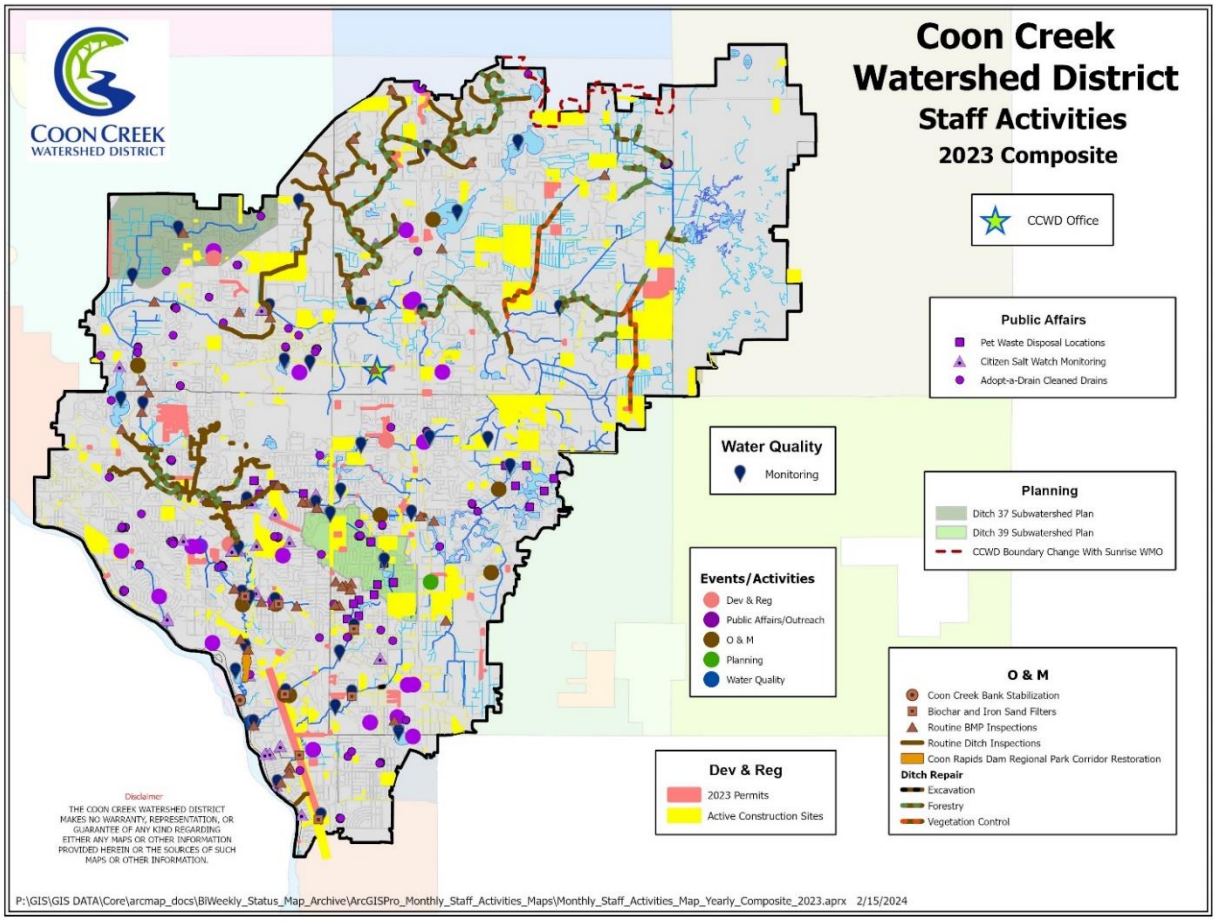
Anoka County performs the accounting for the district and the district's accounts and general ledger are incorporated into the County database. To save time and money both audits are performed by the same audit team at the same time. The implication of this is that the 2023 audit will not be available until the fall of 2024.

Assessment of 2023 Comprehensive Watershed Management Progress

Where We Are At

In 2023 the Minnesota Board of Water and Soil Resources grant a one-year extension on the 2013-2023 Comprehensive Watershed Management Plan to August 2024. In December 2023 a Draft of the newest Comprehensive Plan was submitted for public and agency review. Over 300 comments were received by the end of February 2024. At present the District is reviewing the comments and preparing appropriate responses. Because of the Comprehensive Plan extension and the proposed shifting in District goals, this assessment will focus in work and progress in the District's five principal resource management areas.

2023 Management Activities



Groundwater

In the Anoka Sand Plain there are two ground water systems of concern to the District.

First, deep bedrock aquifers provide most of the drinking water to the citizens of the District. In 2023 the District's watershed development program played an active role in source water protection by reviewing and regulating and in some instances prohibiting approximately 66 proposed land use changes within the watershed that involved ground water and potentially influenced public drinking water supplies.

The second ground water resource concerns the water table. An unconfined water source that provides base flows to ditches and streams as well as lakes and wetlands. In 2022 and 2023 monitoring of surface waters in the southern portion of the watershed showed high levels of chloride that could only have come from the surficial ground water. This was a new discovery and in 2023 the District planned actions disclosed in the Draft Comprehensive Plan to further assess the scope of the effect and cost-effective options for mitigating this chloride pollution.

Goal

The District's goal for ground water management within the watershed is:

To manage groundwater underlying the Coon Creek Watershed cooperatively with the cities and the involved state agencies to promote long-term maintenance or restoration of groundwater systems and their groundwater-dependent ecosystems, including springs, lakes, ponds, streams, riparian areas, and wetlands.

How We Did in 2023

Objective 1: To assist drinking water suppliers in protecting public water supply well heads and source waters.

Activity	
Permit Applications Received	66
Technical Assistance Applications Received	61
Permits Issued	50
Board Application Decisions Made	54
New and Reconstructed Impervious Surface Permitted (acres)	129.7
Land Disturbance Permitted (acres)	298.2
Inspections Conducted (include all inspection types and infiltration witnessing)	746

Objective 2: To assess the scope and effect of water quantity and quality changes in the surficial aquifer.

Activity
Developed and distributed for public review a strategy to address the surficial ground water system of the District.
Conducted targeted water quality monitoring for Chloride during low flow

Public Drainage

The District serves as the drainage authority for 133 miles of public ditch within the watershed. Sixty-three percent of the public drainage system is in good condition and adequately serves the purpose for which it was established. Thirty-six percent of the public drainage system is in fair condition and also successfully functions as designed by is prone to difficulties which require spot maintenance. These ditches serve as essential infrastructure for 13,780 acres of drainage dependent land that have established drainage rights.

Goal

The District's goal for managing public drainage is:

> **To provide sustainable drainage in a fiscally responsible manner from watershed lands for administration, protection, utilization, and enjoyment of the waters and related resources of the District**.

How We Did in 2023

The public drainage system faces three major challenges:

1. Fulfilling its legal obligations to the landowners with established drainage rights that depend on continued drainage for their livelihood.
2. To ensure that stormwater from newly developed or changed land uses upstream from those drainage dependent lands is reasonably and adequately controlled so as not to cause or contribute to flooding or water quality degradation.
3. To address, to the maximum extent practicable, those stressors and functions contributing to the impairment of water quality within these conveyances.

Number 3 is assessed in the discussion on water quality.
Number 2 is assessed in the discussion on water quantity.
Number 1, ensuring drainage is assessed below.

In 2023 the District conducted the following work

Activity	2023
Bank stabilization projects	1

Activity	2023
Beaver issues	29
Beaver removed	23
Ditch maintenance	5
Drainage issues	5
Erosion issues	6
Miles of Contracted Municipal Channel Inspections	11.26
Miles of Ditch inspections	27.75
Number of Contracted Municipal Channel Inspections	2
Number of Drainage System Inspections	4
Obstruction complaints	32
Obstruction issues	25
Percent of Total Drainage System Inspected	18.0%

The District also responded to 73 questions and complaints involving the condition r general nature of the public drainage system.

Water Quality

The watershed contains or abuts 11 water resources that do not meet state or federal standards for water quality and are therefore designated as 'impaired". Seven streams, three lakes and the Mississippi River. The primary pollutants of interest with direct impacts on both aquatic life and recreation-based impairments are total suspended sediments (TSS), total phosphorus (TP), E. coli, and chlorides. Secondary stressors include poor habitat, altered hydrology, and low dissolved oxygen levels. Exceedances of water quality standards for these parameters are widespread. Major issues compounding these pollution problems or creating problems and issues on their own include:

- Active channel erosion
- Aquatic Invasive Species
- Groundwater vulnerability to pollution

Goal

District water quality goal is:

> **To protect and improve the physical, chemical, and biological quality of the District's water resources consistent with State and Federal water quality standards.**

How We Did in 2023

Activities	2023

Sites Monitored	67
Monitoring Visits	421
Grab Samples Collected	1459
Sonde Measurements	364
Paired Flow Measurements	153
Telemetry-enabled sites	9
Aquatic Invasive Species (AIS) early detection surveys	10
AIS response treatment sites	8
Grants applications & awards	1 of 1
Active grants administered	5
Cost share projects funded	2
Stream habitat restoration projects	0
Regional stormwater Best Management Practices (BMPs)	2
Conference Presentations	3
Water Quality Issue Response	6

Water Quantity

The watershed drains approximately 107 square miles and on average receives about 32-33 inches of precipitation per year. There are approximately 180 miles of open channel comprising approximately 7,700 acres. Approximately 134 (74%) miles were improved between 1890 and 1920 and are maintained as part of the public drainage system. There are 10 natural and manmade lakes within the watershed. The natural lakes are shallow lakes usually associated with type 4 & 5 wetland. Groundwater occurs under the entire District. It is within five to ten feet of the land surface over approximately 75% of the watershed.

Water quantity management within the watershed in driven by the amount of precipitation (rain and snow) we receive, land use changes and the variables found in the standard hydrologic equation:

Variable	Definition
P	Total precipitation input
ET	Total evapotranspiration loss
R	Total stream flow

ΔSMS	Change in soil moisture storage
ΔGMS	Change in groundwater storage
ΔDS	Change in depression storage
GWF	Groundwater flux (groundwater flow into or out of the drainage basin).
R	Runoff

Goal

The District has four goals concerning water quantity:

1. **To closely monitor and model the watershed's response and behavior to various hydrologic events.**
2. **To restore and preserve desirable watershed conditions that will prevent or minimize flooding and minimum flows.**
3. **To prevent property damage from flooding, erosion, or degraded water quality**
4. **To ensure balance between inflow, outflow, and the storage of water**

How We Did in 2023

Management activities during 2023

Activity	**2023**
Months of daily precipitation monitoring in watershed reported to District and collaborators monthly.	12
Number of Volunteer Rain gage Network	17
Spring snowpack investigations	10
Subwatershed hydrologic model review, updates and refinements for flood elevations	3 (23%)
Reviewed subwatersheds with hydrologic model refinements	1 (8%)
Percent of subwatersheds with restoration and mitigation projects	66%
Cases modeled for FEMA action to ensure flood elevations.	17
Permits reviewed to prevent flood damage.	60
Number of flood hazard obstructions removed.	49
Miles of Contracted Municipal Channel Inspections	11.3
Number of Contracted Municipal Channel Inspections	2
Bank stabilization projects	1
Erosion issues	6
Flooding issues	5
Public safety issues	0
Routine or follow-up inspections.	94
Spring flooding responses	10

Wetlands

The Coon Creek Watershed contains approximately 15,508 acres of wetland (NWI, 2019). An additional 6,500 acres of wetland may be farmed. Wetlands comprise approximately 31% of the watershed.

Historic estimates, based on hydric soil mapping, are that approximately 47% of the watershed was wetland, as we define them today, prior to settlement (USDA, 1977).

There are three priority problems, issues, and concerns facing wetlands within the watershed:

1. Effects of drainage on jurisdictional wetland
2. Long-term sustainability of wetland hydrology
3. Areas with the capability and capacity to restore and sustain wetlands.

Goal

The District goal is:

> **To pursue the no net loss of the quantity, quality, and biological integrity of the District wetlands**.

How We Did in 2023

Management activities during 2023

Activity	**2023**
Wetland-related Landowner Contacts	192
Boundary/Type Applications	28
No-loss Applications	5
Exemption Applications	3
Square Ft of Exempt Permanent Impact	2,676
Sequencing Applications	0
Replacement Plan Applications	2
Replacement Plans utilizing Wetland Banking	2
Replacement Plans utilizing Project-Specific Replacement	0
Replacement Plans utilizing both Wetland Banking and Project-Specific Replacement	0
Square Ft of Permanent Impact with Approved Replacement Plan	37,056
Potential WCA Violations Investigated	6
TEP Meetings Held	22
Wetland Mitigation Monitoring Reports Reviewed	2
Total Wetland Applications/Requests Received	45

2023 Findings and Lessons Learned

Groundwater

1. 2023 stream chloride monitoring revealed problematic levels of chloride contamination in shallow groundwater as evidenced by elevated chlorides during baseflow compared to stormflow including prolonged exceedances of the chronic aquatic life toxicity standard in Pleasure Creek for the first time.
2. Many of the long-term wetland level monitoring wells went dry in late June-mid September, but all rebounded to measurable levels by early October except for one in central Andover which remained at least 27" below the ground surface at edge of wetland.
3. In 2023, shallow lakes throughout the District remained 1-2' below the long-term average water level for the third consecutive year.

Public Drainage

4. Prolonged drought is contributing to an increase of dying and falling trees and sloughing of the ditch banks resulting in obstructions and deflected flows creating erosion
5. MPCA Stream Habitat Assessment completed on 40% of the public ditch system for qualitative aquatic habitat information identified habitat variability ranging from 25-72 (out of 100) throughout the ditch system enabling managers to better target aquatic habitat improvement strategies and efforts.

Water Quality

6. A diagnostic study in the lower reaches of Pleasure Creek revealed that TSS exceedances at the outlet monitoring site are caused by in-channel sources and not direct watershed runoff as previously believed.
7. A Districtwide street sweeping cost-benefit analysis revealed that enhanced street sweeping would be a cost-effective BMP to meet TP reduction goals; optimizing existing sweeping effort and equipment capacity alone could result in achieving 3-21% of TMDL TP WLAs and increasing sweeping effort could realistically achieve 19-100% of TMDL TP WLA across the four impaired streams at a cost less than $500 per lb TP.
8. Performance monitoring of District-operated BMPs revealed that all BMPs are currently meeting removal efficiency design standards.
9. Routine lake and stream monitoring results were as expected and did not reveal anything concerning needing further investigation.
10. The initial estimated cost to achieve the TMDLs that were in existence in 2023 was $103 million dollars over the next 21 years.
11. An evaluation of 68 crossings and potential barriers to aquatic organism passage on the aquatic life impaired reaches of Coon and Sand Creeks identified 22 barriers impacting aquatic organism passage.

12. MPCA Stream Habitat Assessment completed on 40% of the public ditch system for qualitative aquatic habitat information identified habitat variability ranging from 25-72 (out of 100) throughout the ditch system enabling managers to better target aquatic habitat improvement strategies and efforts.

Aquatic Invasive Species

13. Districtwide reconnaissance activities found one new population of invasive phragmites in August 2023 which initiated a rapid response herbicide treatment in September.
14. Follow-up monitoring of previously treated phragmites infestations revealed 98% of the infested area is now under control.
15. Lake vegetation surveys in fall 2023 found invasive hybrid Eurasian Watermilfoil exceeding the threshold triggering lake wide treatment for the first time since the highly successful whole lake treatment in 2016; a repeat lake wide fluridone treatment was initiated in November.
16. The initial estimated cost to achieve the TMDLs that were in existence in 2023 was $103 million dollars over the next 21 years.
17. An evaluation of 68 crossings and potential barriers to aquatic organism passage on the aquatic life impaired reaches of Coon and Sand Creeks identified 22 barriers impacting aquatic organism passage.

Water Quantity

18. FEMA and DNR have delayed review of the District's hydrologic model and effort to revise floodplain mapping to be more accurate.

19. MPCA Stream Habitat Assessment completed on 40% of the public ditch system for qualitative aquatic habitat information identified habitat variability ranging from 25-72 (out of 100) throughout the ditch system enabling managers to better target aquatic habitat improvement strategies and efforts.

Wetlands

20. Water levels in all reference wetlands remain depressed and approaching.

Assessment of the 2024-25 Operating Environment

This section concerns the District's ability to anticipate structural changes in the operating environment early enough to adapt the District's strategy and planned budget. The Operating Environment is that composite of conditions, circumstances, and influences that affect the District's capabilities and strongly influence the decisions made by a Board or Manager.

The section is designed to encourage the purposeful preparation of the District to budget and pursue implementation of the comprehensive plan goals and objectives in 2025. For the highly collaborative effort in effect within the watershed, thinking through the most important conditions in a changing world can mean the difference between success and failure, and the needless expenditure of public funds versus the judicious and prudent application of both to manage and sustain our water resources.

Our intent is to describe the likely operating environment through December of 2025 and project implications of change for water management, so the District and collaborating agencies can anticipate and prepare budget and work needs. To do this, we pose and then explore three foundational questions. Answers to these questions describe the operating environment and suggest ways the District and its collaborators might prepare for the future. These questions are:

1. What trends and conditions will shape the future water resource environment?
2. How will trends and conditions intersect to change the future character of water management? (What can we expect to see – in all probability)
3.
4. What projects will the District and our collaborators need to conduct in 2025 and 2026?

Expect to See: Trends and Conditions Shaping Water Management in 2024-25

Economic Environment

- Inflation is expected to continue to ease gradually, as cost pressures moderate A surplus in the general fund in FY 2024-25 of $3.7 Billion
- Continued economic growth.
- A decrease in inflation in 2024 and 2025 with the Consumer Price Index falling an additional 1.9% in 2024 before it begins a 2.3% rise in 2025.
- Unemployment is expected to rise from 2.9% in December, 2023 to approximately 4% by December 2024
- Wages and salary disbursements are forecasted to rise 5% in 2024 and 4.2% in 2025.

Information and Technology

- The rate of technological change is moderately high.
- Technology will remain a driving force in evolving workplace changes.
- Increased Ability to Collaborate
- Technological innovations—including automation, online collaboration tools, artificial intelligence, and additive manufacturing—will reshape some fundamental aspects of how and where people work.

Infrastructure

- A focus on "enhancing" asset utilization and optimizing performance to extend asset use.
- Increasing questions about the 'resilience' of storm water assets by citizens, government grant makers and insurance companies.

Management Environment

- Increased difficulty in attracting and retaining qualified staff is already upon us and is expected to continue.
- The increased complexity of the legal and financial environments, combined with a scarcity of qualified and dedicated staff will heighten the risk of miscalculation that could result in an acceleration of adverse conditions.
- Scarcity will be more apparent and the insistence of State agencies to address economic problems with ecological solutions versus ecological problems with economic solutions is compounding problems.
- Communities that share a single water source will begin to feel and or exhibit increasing concern and/or pressure to claim a use of that resource over their neighbors in response to real or perceived well or other interference.

Physical Environment

- Precipitation will likely occur irregularly and in high intensity short duration events.
- Continued long periods of excessively dry conditions (drought)
- A few cases of well interference will probably occur in private wells less than 50 to 150 feet deep.
- Increased likelihood of introduction of new aquatic invasive species
- Increased occurrence of Chloride in base flows in the southern portion of the watershed
- Increased likelihood of contaminants or emerging concerns
- All lakes show steady conditions and are not declining.

Political Environment

- Efforts to increase regulation of local water management authorities particularly drainage authorities.
- Increased challenges to the existing local water management model catalyzing a reshaping of local water management.

- An occurrence of geopolitical water politics between cities due to water issues most likely ground water.
- Water Insecurity/Scarcity Is Likely Going To Get Worse, Water insecurity will have material impacts on cities, industrial and agricultural production, and communities with vulnerable water supplies.

Social

- An increase in public concern about drinking water supply and water quality
- An increase in public activism that will involve more direct public action.

The Probable Character of the District's Operating Environment in 2025 and 2026