MINNEHAHA CREEK
WATERSHED DISTRICT
QUALITY OF WATER, QUALITY OF LIFE

Meeting: Citizens Advisory Committee
Meeting date: 5/15/2024
Agenda Item #: 5.1
Item type: Discussion

Title: MCWD Capital Improvement Plan

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Purpose:
To orient the Citizens Advisory Committee (CAC) to the organization's Capital Improvement Plan (CIP), review the 2024 CIP (attachments) and introduce the preliminary 2025 CIP. The 2024 CIP was developed using a modified format, process, and set of project planning tools designed to enhance shared decision making between the Board and staff. These improvements are collectively referred to as the Multi-Year CIP, and being a relatively new format, would benefit from review and input from the CAC prior to the 2025 annual cycle.

The May 2024 meeting also aligns well with the recent ordering of two capital projects, the East Auburn Wetland Restoration Project and the County Road 6 Pond Retrofit. As time allows, staff will seek CAC input to support each project's design process, as the design of each project is being initiated in May 2024.

Summary:
The Minnehaha Creek Watershed District (MCWD or District) is a mission-driven organization that centers its work on the delivery of high-impact capital projects that integrate water and natural resources with the built environment. MCWD has progressively increased the sophistication and efficacy of its capital project implementation model, including aligning the District's programs and internal capabilities to support capital projects.

As an organization that values continuous improvement, 2024 marks an opportunity for MCWD to continue advancing its capital project program. First, the organization's two focal geographies – Minnehaha Creek and Six Mile Creek-Halsted Bay – have reached milestones that present a natural point to evaluate the next phase of implementation priorities. Furthermore, the organization continues to evaluate project opportunities in other focal areas of the watershed, such as the Long Lake Creek subwatershed. Finally, MCWD recently passed the halfway point of the 2017 Watershed Management Plan (WMP or Plan), providing an opportunity to reflect on our success, renew our focus, and chart the direction of our next 10 year plan (2027).

Each year, as described in MCWD's Plan, MCWD revises and distributes its 10-year CIP to cities and counties for 30-day review and comment. The purpose of this annual process is to allow MCWD to adjust its 10-year CIP based on feasibility analysis of projects described in the Plan, identification of new project opportunities through coordination with land use planning, shifts in District priorities, and assessment of staff and financial capacity. As projects are continually being developed, this process also allows MCWD to provide its stakeholders with a greater level of specificity. The District uses the annual distribution of its CIP to remind its communities of MCWD's implementation approach and its desire to coordinate and align its plans and investments with its member communities.

The 2024 CIP highlights MCWD's Multi-Year CIP initiative. The purpose of this refined initiative is threefold: to improve clarity around near-term project initiatives and the time, staff allocation, and resources needed to execute project workplans; to create a framework to better forecast the capital budget and fundraising needs over multiples years; and to improve the effectiveness of the CIP as an external communications tool.

May 15, 2024, CAC Meeting:
At the May 15, 2024, CAC Meeting, staff will provide a presentation and facilitated discussion to introduce the CAC to the 2024 Multi-Year CIP and the preliminary 2025 Multi-Year CIP. The CAC reviews the CIP annually through the budget

development and review process, and this presentation presents an opportunity to preview the new materials and provide insight into what information may be included in the publicly facing CIP documents.

Staff will also use the opportunity to share recent project milestones and collect CAC input on the design process for two projects advancing in the Six Mile Creek-Halsted Bay subwatershed and the Long Lake Creek subwatershed.

Attachments:

- 2024 CIP
- Draft five-year CIP Table
- Complimentary project summary pages

DRAFT Minnehaha Creek Watershed District 2018-2027 Capital Improvement Plan

Subwatershed	Capital Projects	Estimated Cost	Potential Funding Sources*	Proposed Implementation Year
Minnehaha Creek	Arden Park Stream Restoration and Stormwater Management	$5,020,272	MCWD levy, City of Edina ($2,732,870), BWSR grant ($125,000)	Complete - 2020
	Minnehaha Creek FEMA Flood Damage Repairs	$900,000	MCWD levy, FEMA grant ($336,459)	Complete - 2020
	325 Blake Road Regional Stormwater and Greenway	$5,639,250	MCWD levy, BWSR grants ($495,000), PFA grants (TBD)	2023-2026
	Cottageville Park Phase II Riparian Restoration	$1,300,000	MCWD levy, partner contributions	2023-2026
	Greenway to Cedar Trail Connection and Streambank Restoration	$510,000	MCWD levy, partner contributions, grants	2023-2025
	Minnehaha Parkway Stormwater Management	$1,500,000	MCWD levy, partner contributions, grants	2024-2027
	Meadowbrook Golf Course Ecological Restoration	$2,006,730	MCWD levy, partner contributions, grants	2025-2027
	Meadowbrook Greenway Expansion	$950,000	MCWD levy, partner contributions, grants	2025-2027
	Boone-Aquilla Floodplain	$500,000	MCWD levy, partner contributions, grants	2027-2029
	Louisiana Trail Greenspace and Stormwater	$300,000	MCWD levy, partner contributions, grants	2027-2029
	West Blake Greenway Enhancement	$420,000	MCWD levy, partner contributions, grants	2028-2030
	Hiawatha Golf Course Restoration	$1,940,000	MCWD levy, partner contributions, grants	2028-2030
	Channel/Streambank Restoration	$3,120,000	MCWD levy, partner contributions, grants	Opportunity-based
	Stormwater Volume and Pollutant Load Reduction	$2,450,000	MCWD levy, partner contributions, grants	Opportunity-based
Six Mile Creek-Halsted Bay	East Auburn Stormwater Enhancement Project	$327,500	BWSR grant ($262,520), City of Victoria ($64,980)	Complete - 2018
	Wassermann West External Load Reduction and Landscape Restoration	$2,761,786	City of Victoria ($2,184,660), BWSR grant ($93,879), MCWD levy	Complete - 2021
	Wassermann Internal Load Management	$335,900	MCWD levy, BWSR grant ($284,720)	Complete - 2022
	Six Mile Marsh Prairie Restoration (Trail)	$347,851	MCWD levy	Complete- 2023
	East Auburn Wetland Restoration	$550,000	MCWD levy, partner contributions, grants	2023-2025
	Turbid-Lundsten Wetland Restoration	$3,100,000	MCWD levy, partner contributions, grants	2024-2026
	Halsted Bay Watershed Load Management	$13,000,000	MCWD levy, partner contributions, grants	2026-2028
	Mud Lake Watershed Load Reductions	$3,090,000	MCWD levy, partner contributions, grants	2027-2029
	Pierson Lake Headwaters Restoration	$367,800	MCWD levy, partner contributions, grants	2028-2030
	Whole Lake Drawdown	$770,000	MCWD levy, partner contributions, grants	Opportunity-based
	Internal Load Management	$980,000	MCWD levy, partner contributions, grants	Opportunity-based
	Stormwater Volume and Pollutant Load Reduction	$2,000,000	MCWD levy, partner contributions, grants	Opportunity-based
	Stream Restoration	$870,000	MCWD levy, partner contributions, grants	Opportunity-based
	Wetland Restoration	$3,000,000	MCWD levy, partner contributions, grants	Opportunity-based
Long Lake Creek	County Road Six Pond Retrofit	$525,000	MCWD levy, partner contributions, grants	2023-2025
	Stormwater Volume and Pollutant Load Reduction	$1,320,000	MCWD levy, partner contributions, grants	Opportunity-based
Painter Creek	Potato Marsh Restoration	$870,000	MCWD levy, USACE Section 206, partner contributions, grants	2027-2029
	South Katrina Marsh Restoration	$1,270,000	MCWD levy, USACE Section 206, partner contributions, grants	2027-2029
	SOBI Marsh Restoration	$240,000	MCWD levy, USACE Section 206, partner contributions, grants	2028-2030
	Upper and Lower Painter Marsh Restoration	$2,800,000	MCWD levy, USACE Section 206, partner contributions, grants	2028-2030
	Stream Restoration	$2,990,000	MCWD levy, partner contributions, grants	Opportunity-based
	Wetland Restoration	$330,000	MCWD levy, partner contributions, grants	Opportunity-based
	Stormwater Volume and Pollutant Load Reduction	$980,000	MCWD levy, partner contributions, grants	Opportunity-based
Christmas Lake	Stormwater Volume and Pollutant Load Reduction	$200,000	MCWD levy, partner contributions, grants	Opportunity-based
Dutch Lake	Stormwater Volume and Pollutant Load Reduction	$780,000	MCWD levy, partner contributions, grants	Opportunity-based
Gleason Lake	Maple Creek Pond Improvement Project	$100,000	MCWD levy, partner contributions, grants	Complete - 2023
	Stormwater Volume and Pollutant Load Reduction	$600,000	MCWD levy, partner contributions, grants	Opportunity-based
Lake Minnetonka	Halsted Bay Internal Phosphorus Load Reduction	$1,400,000	MCWD levy, partner contributions, grants	2026-2027
	Stormwater Volume and Pollutant Load Reduction	$1,000,000	MCWD levy, partner contributions, grants	Opportunity-based
Lake Virginia	Stormwater Volume and Pollutant Load Reduction	$650,000	MCWD levy, partner contributions, grants	Opportunity-based
Langdon Lake	Stormwater Volume and Pollutant Load Reduction	$230,000	MCWD levy, partner contributions, grants	Opportunity-based
Schutz Lake	Stormwater Volume and Pollutant Load Reduction	$250,000	MCWD levy, partner contributions, grants	Opportunity-based

MCWD 5-Year CIP Projection

		2024		2025		2026		2027		2028	
	Estimated Cost*	Est. Budget	Category	Est. Budget	Category	Est. Budget	Category	Est. Budget	Category	Est. Budget	Category
MINNEHAHA CREEK SUBWATERSHED											
~~Arden Park Stream Restoration and Stormwater Management~~	~~$5,020,272~~	*Complete*									
~~Minnehaha Creek FEMA Flood Damage Repairs~~	~~$900,000~~	*Complete*									
325 Blake Road Regional Stormwater and Greenway	$5,639,250	$1,632,285	Construction	$1,305,828	Construction	$326,457	Construction	[Carryover]	Warranty	--	--
Cottageville Park Phase II Riparian Restoration	$1,300,000	$650,000	Construction	$520,000	Construction	$130,000	Construction	[Carryover]	Warranty	--	--
Greenway to Cedar Trail Connection and Streambank Restoration	$510,000	$65,000	Design	$445,000	Construction	[Carryover]	Warranty	--	--	--	--
Minnehaha Parkway Stormwater Management	$1,500,000	$75,000	Planning	$250,000	Design	$1,250,000	Construction	[Carryover]	Construction	[Carryover]	Warranty
Meadowbrook Golf Course Ecological Restoration and Greenway Expansion	$2,006,730	$25,000	Planning	$587,066	Design	$1,174,132	Construction	$1,174,132	Construction	[Carryover]	Warranty
Boone-Aquilla Floodplain	$500,000	--	--	--	--	$50,000	Planning	$100,000	Design	$400,000	Construction
Louisiana Trail Greenspace and Stormwater	$300,000	--	--	--	--	$40,000	Planning	$60,000	Design	$240,000	Construction
West Blake Greenway Enhancement	$420,000	--	--	--	--	--	--	$25,000	Planning	$84,000	Design
Hiawatha Golf Course Restoration	$1,940,000	--	--	--	--	--	--	$50,000	Planning	$388,000	Design
Channel/Streambank Restoration	$3,120,000	*Opportunity Driven*									
Stormwater Volume and Pollutant Load Reduction	$2,450,000	*Opportunity Driven*									
SIX MILE CREEK HALSTED BAY SUBWATERSHED											
~~East Auburn Stormwater Enhancement Project~~	~~$327,500~~	*Complete*									
~~Wassermann Internal Load Management~~	~~$335,900~~	*Complete*									
~~Six Mile Marsh Prairie Restoration (Trail)~~	~~$347,851~~	*Complete*									
Wassermann Lake Preserve	$2,761,786	$10,737	Warranty	--		--	--	--	--	--	--
East Auburn Wetland Restoration	$550,000	$68,000	Design	$482,000	Construction	[Carryover]	Construction	[Carryover]	Warranty	--	--
Turbid-Lundsten Wetland Restoration	$3,100,000	$80,000	Planning	$250,000	Design	$2,800,000	Construction	[Carryover]	Construction	[Carryover]	Warranty
Halsted Bay Watershed Load Management	$13,000,000	$55,000	Planning	$55,000	Planning	$2,600,000	Design	$5,200,000	Construction	$5,200,000	Construction
Mud Lake Watershed Load Reductions	$3,090,000	--	--	$50,000	Planning	$25,000	Planning	$618,000	Design	$2,472,000	Construction
Pierson Lake Headwaters Restoration	$367,800	--	--	--	--	--	--	--	--	$73,560	Design
Whole Lake Drawdown	$770,000	*Opportunity Driven*									
Internal Load Management	$980,000	*Opportunity Driven*									
Stormwater Volume and Pollutant Load Reduction	$2,000,000	*Opportunity Driven*									
Stream Restoration	$870,000	*Opportunity Driven*									
Wetland Restoration	$3,000,000	*Opportunity Driven*									
LONG LAKE CREEK SUBWATERSHED											
County Road Six Stormwater Pond Retrofit	$415,000	$110,000	Design	$415,000	Construction	[Carryover]	Warranty	--	--	--	--
Stormwater Volume and Pollutant Load Reduction	$1,320,000	*Opportunity Driven*									
PAINTER CREEK SUBWATERSHED											
Potato Marsh Restoration	$870,000	--	--	--	--	TBD	Planning	TBD	Design		
South Katrina Marsh Restoration	$1,270,000	--	--	--	--	TBD	Planning	TBD	Design		
SOBI Marsh Restoration	$240,000	--	--	--	--	--	--	TBD	Planning	TBD	Design
Upper and Lower Painter Marsh Restoration	$2,800,000	--	--	--	--	--	--	TBD	Planning	TBD	Design
Stream Restoration	$2,990,000	*Opportunity Driven*									
Wetland Restoration	$330,000	*Opportunity Driven*									
Stormwater Volume and Pollutant Load Reduction	$980,000	*Opportunity Driven*									
CHRISTMAS LAKE											

Stormwater Volume and Pollutant Load Reduction	$200,000	*Opportunity Driven*					
DUTCH LAKE							
Stormwater Volume and Pollutant Load Reduction	$780,000	*Opportunity Driven*					
GLEASON LAKE							
Maple Creek Pond Improvement Project	$100,000	--	Warranty				
Stormwater Volume and Pollutant Load Reduction	$600,000	*Opportunity Driven*					
LAKE MINNETONKA							
Halsted Bay Internal Phosphorus Load Reduction	$1,400,000	*Planning Phase to run concurrent with Halsted Alum Facility*		$280,000	Design	$1,120,000	Construction
Stormwater Volume and Pollutant Load Reduction	$1,000,000	*Opportunity Driven*					
LAKE VIRGINIA							
Stormwater Volume and Pollutant Load Reduction	$650,000	*Opportunity Driven*					
LANGDON LAKE							
Stormwater Volume and Pollutant Load Reduction	$230,000	*Opportunity Driven*					
SCHUTZ LAKE							
Stormwater Volume and Pollutant Load Reduction	$250,000	*Opportunity Driven*					

BUDGET SUMMARY	**2024**	**2025**	**2026**	**2027**	**2028**
Planning Budget	$235,000	$105,000	$115,000	$75,000	$0
Capital Budget	$2,536,022	$4,254,894	$8,560,589	$8,272,132	$8,857,560
Total	$2,771,022	$4,359,894	$8,675,589	$8,347,132	$8,857,560

KEY

Opportunity Driven: projects in the CIP that are dependent on factors external to MCWD, including projects that would be identified through the Land and Water Partnership

[Carryover]: Funds for design and construction are typically levied in the year that project phase is intiatied. If the activity spans multiple years, it will use carryover from the previous year and not impact the follow years' levy.

MINNEHAHA CREEK WATERSHED DISTRICT

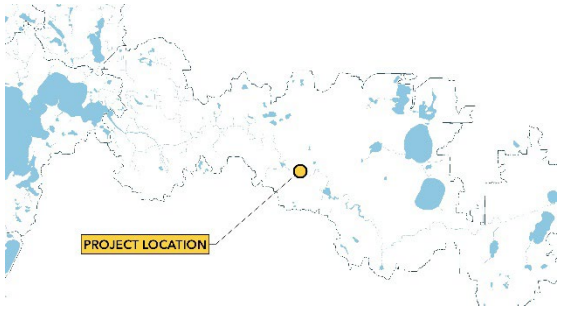
MULTI-YEAR CAPITAL IMPROVEMENT PLAN 2024-2028

OVERVIEW

PROJECT NAME
Greenway to Cedar Trail Connection and Streambank Restoration

LOCATION
St. Louis Park (Minnehaha Creek)

TARGET WATERBODY
Minnehaha Creek



DESCRIPTION

SCOPE
Planned streambank stabilization, riparian restoration, and construction of a trail connection along Minnehaha Creek from the Minnehaha Creek Preserve to the Cedar Lake LRT Regional Trail. This link in the Minnehaha Creek Greenway will be planned in partnership with the City of St. Louis Park and Metropolitan Council and timed to coinicide with Southwest LRT (SWLRT) construction completion.

GOALS
Provide a key connection between existing and future MCWD projects upstream and downstream of the rail corridor, increasing pedestrian and bicyclist safety and improving recreation and transportation access to the Cedar Lake LRT Regional Trail and future SWLRT stations at Blake Road and Louisiana Avenue. The overall ecological integrity of the stream corridor will be improved through approximately 1,500 lineal feet of streambank stabilization and riparian restoration.

JUSTIFICATION
Upstream and downstream Minnehaha Creek Greenway projects are currently separated by freight rail and the future Southwest LRT line, and there is no direct pedestrian or bicycle connection between these investments or the Cedar Lake LRT Regional Trail. The bridge crossing at Minnehaha Creek is the site of past creek manipulation, and Minnehaha Creek is currently impaired for fecal coliform bacteria, chloride, low dissolved oxygen, and fish and macroinvertebrate communities. Lake Hiawatha, Minnehaha Creek's receiving waterbody, is impaired for nutrients due to sediment and nutrient loads transported by Minnehaha Creek and both waterbodies have TMDLs.

WORKPLAN SUMMARY
In 2023, MCWD will compile existing and newly collected data to complete a feasibility assessment and develop a scope for project design. MCWD will pursue partnership agreements, including a design and construction agreement with St. Louis Park, and target 2024 to iniate design. Construction will be coordinated between MCWD and the other agencies who own or operate the SWLRT right-of-way.

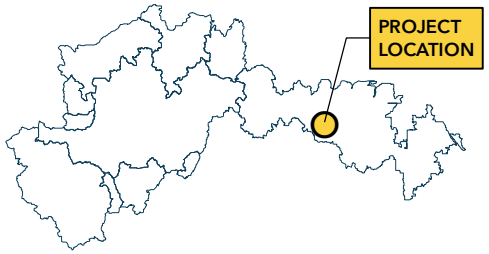
SCHEDULE + BUDGET

PLANNING	DESIGN	CONSTRUCTION
2023	2024 – 2025	2025 – 2026
$25,000	$65,000	$445,000

MCWD CIP OVERVIEW
MINNEHAHA CREEK

Legend

- MCWD Project Location
- Minnehaha Creek Subwatershed



GREENWAY TO CEDAR TRAIL CONNECTION

Cedar Lake Road
Louisiana Avenue South
28th Street W
29th Street
Minnetonka Boulevard
31st Street West
Kentucky Avenue South
Jersey Avenue South
Idaho Avenue South
Texas Avenue South
Sumter Avenue South
Rhode Island Avenue South
St. Louis Park
Lake
Highway 100 South
36th Street West
Highway 7
Cambridge Street
Minnehaha Creek
Highway 169
Hopkins
Excelsior Boulevard
Yosemite Avenue South
Meadowbrook
Belmore Lane
Interlachen Boulevard
Edina Mill Pond
Minnetonka
Edina
Malibu Drive
Schaefer Road
Blake Road South
Highway 100
Harvey
Vernon Avenue
Melody

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0 0.125 0.25 0.5
Miles

MINNEHAHA CREEK WATERSHED DISTRICT

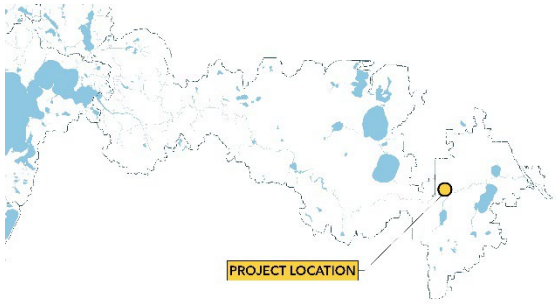
MULTI-YEAR CAPITAL IMPROVEMENT PLAN 2024-2028

OVERVIEW

PROJECT NAME
Minnehaha Parkway Stormwater Management

LOCATION
Minneapolis (Minnehaha Creek)

TARGET WATERBODY
Minnehaha Creek, Lake Hiawatha



DESCRIPTION

SCOPE
Proposed partnership with the City of Minneapolis and Minneapolis Park and Recreation Board (MPRB) to create a shared implementation framework for the Minnehaha Parkway Regional Trail Master Plan, a 30 year vision to enhance recreation, improve ecological function of the creek corridor, improve public safety, address flooding, and improve water quality in the Minneapolis segment of the Minnehaha Creek corridor.

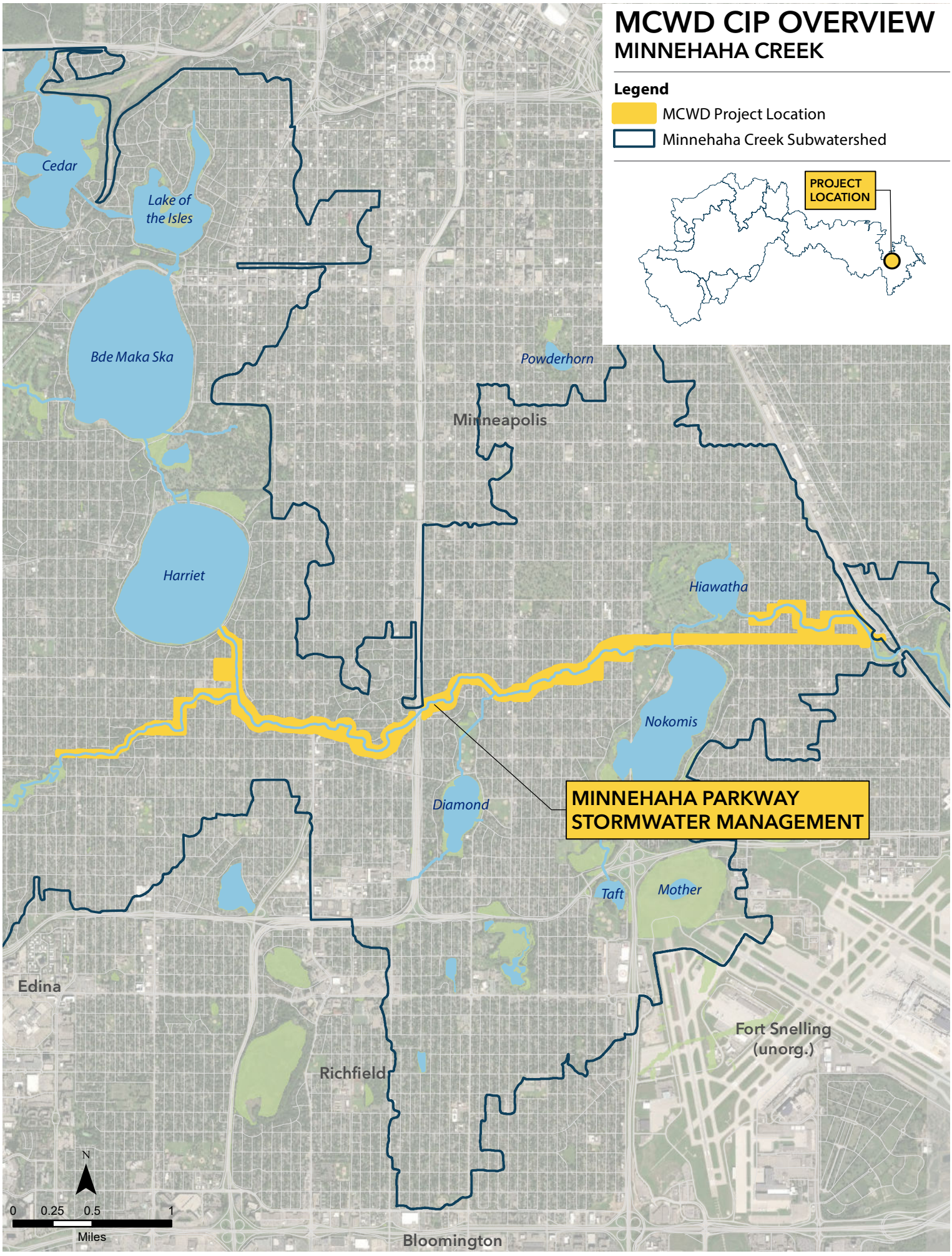
GOALS
The Minnehaha Parkway Regional Trail Master Plan includes 35 water resource projects, which together would remeandor 2.65 miles of creek, restore 51.8 acres of upland landscape, reduce annual phsophorus loading to lake Hiawatha by 434 lbs/year; increase floodplain storage by 56 acre-feet; and create six new creek access points.

JUSTIFICATION
Minnehaha Creek is an iconic regional and cultural natural resource. It is an impaired water body for multiple parameters, including fecal coliform bacteria, chloride, low dissolved oxygen, and fish and macroinvertebrate communities. Further, the MPCA has listed downstream receiving water body Lake Hiawatha as impaired for excess nutrients. Minnehaha Creek is further impacted by rapidly fluctuating water flows that contribute to bank erosion and impair the biotic integrity of the stream.

WORKPLAN SUMMARY
The focus for 2023-2024 will be on developing a shared implementation framework between MCWD, MPRB, and Minneapolis to identify and implement priority capital improvements in the Minnehaha Parkway. Successful partnership development will lead to future advancement of specific capital projects through the planning, design, and construction cycle. The below timeline is illustrative of a potential first phase project for implementation.

SCHEDULE + BUDGET

PLANNING	DESIGN	CONSTRUCTION
2023– 2024	2024 – 2025	2026 – 2028
$100,000	$250,000	$1.25 million


MCWD CIP OVERVIEW
MINNEHAHA CREEK
Legend
MCWD Project Location
Minnehaha Creek Subwatershed
PROJECT LOCATION
Cedar
Lake of the Isles
Bde Maka Ska
Harriet
Powderhorn
Minneapolis
Hiawatha
Nokomis
Diamond
MINNEHAHA PARKWAY STORMWATER MANAGEMENT
Taft
Mother
Edina
Richfield
Fort Snelling (unorg.)
Bloomington
N
0 0.25 0.5 1
Miles

MINNEHAHA CREEK WATERSHED DISTRICT

MULTI-YEAR CAPITAL IMPROVEMENT PLAN 2024-2028

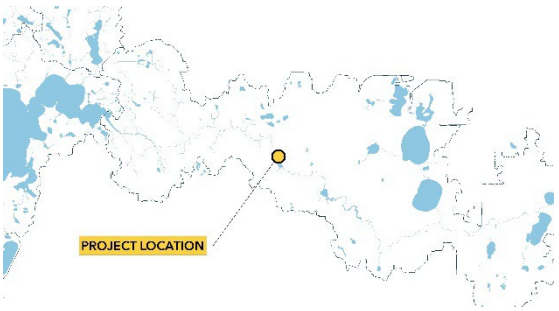
OVERVIEW

PROJECT NAME

Meadowbrook Golf Course Ecological Restoration and Greenway Expansion

LOCATION

St. Louis Park, Hopkins, and Edina (Minnehaha Creek)



TARGET WATERBODY

Minnehaha Creek

DESCRIPTION

SCOPE

Reevaluate plan to reconfigure and enhance Meadowbrook Golf Course to restore and improve the ecological integrity of the Minnehaha Creek stream corridor, enhance on-site flood storage and resilience, and connect the Minnehaha Creek Greenway through Minneapolis Parks and Recreation Board land to the City of Edina parks and trails system.

GOALS

The project would improve the ecological integrity and upland areas of the golf course along a 1,200-foot stretch of the Minnehaha Creek corridor, improve water quality in Minnehaha Creek and Lake Hiawatha through buffers and imprved stromwater managment, and restore weltand function. It may explore the potential to reduce flooding impacts to Meadowbrook Golf Course and surrounding neighborhoods via the creation of additional storage, and connect the Minnehaha Creek Greenway to the City of Edina parks and trails system.

JUSTIFICATION

The project is within the most degraded section of the Minnehaha Creek corridor, which historically experienced ditching, wetland loss, and habitat fragmentation. Minnehaha Creek is currently impaired for fecal coliform bacteria, chloride, low dissolved oxygen, and fish and macroinvertebrate communities. Lake Hiawatha, Minnehaha Creek's receiving waterbody, is impaired for nutrients due to sediment and nutrient loads transported by Minnehaha Creek and both waterbodies have TMDLs. This projectwould connect to the upstream Minnehaha Creek Corridor, supporting both recreation access and ecological integrity through this contiguous stretch of restored greenway.

WORKPLAN SUMMARY

The Meadowbrooke Golf Course Project underwent feasibility and design in 2015-2016. MCWD has identified 2024 as a possible target to reinitiate project planning and partnership development. Advancing the project, either as designed or of a modified scope, is contingent on developing partnership agreements with MPRB. The timeline below is reliant on partnership alignment, and therefore illustrative only.

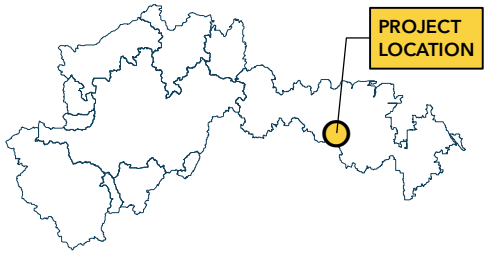
SCHEDULE + BUDGET

PLANNING	DESIGN	CONSTRUCTION
2024-2025	2026-2027	2027-2028
$75,000	$587,066	$2.4 million

MCWD CIP OVERVIEW
MINNEHAHA CREEK

Legend

- MCWD Project Location
- Minnehaha Creek Subwatershed



MEADOWBROOK GOLF COURSE ECOLOGICAL RESTORATION

Cedar Lake Road
Louisiana Avenue South
28th Street W
29th Street
Minnetonka Boulevard
31st Street West
Kentucky Avenue South
Jersey Avenue South
Idaho Avenue South
Texas Avenue South
Sumter Avenue South
Rhode Island Avenue South
St. Louis Park
Lake
Highway 100 South
36th Street West
Highway 7
Cambridge Street
Minnehaha Creek
Highway 169
Hopkins
Excelsior Boulevard
Yosemite Avenue South
Meadowbrook
Belmore Lane
Interlachen Boulevard
Edina Mill Pond
Minnetonka
Edina
Malibu Drive
Schaefer Road
Blake Road South
Highway 100
Harvey
Vernon Avenue
Melody

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Miles

MINNEHAHA CREEK WATERSHED DISTRICT

MULTI-YEAR CAPITAL IMPROVEMENT PLAN 2024-2028

OVERVIEW

PROJECT NAME
Boone-Aquila Floodplain Restoration

LOCATION
St. Louis Park (Minnehaha Creek)

TARGET WATERBODY
Minnehaha Creek

DESCRIPTION

SCOPE
Evaluate opportunity for floodplain restoration, stormwater management, and enhanced recreational access along Minnehaha Creek in the Aquila neighborhood of St. Louis Park near Target-Knollwood.

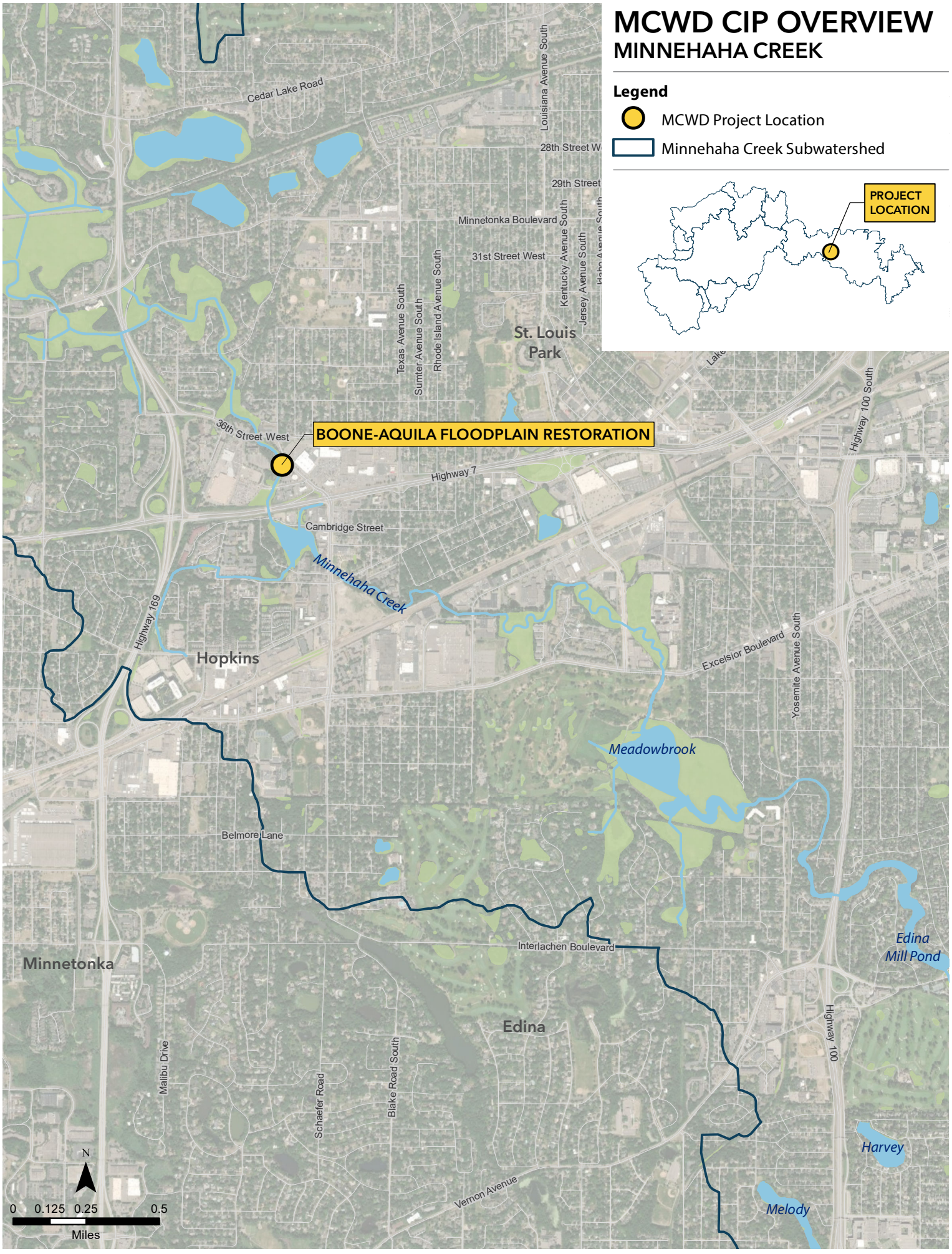
GOALS
This project may improve the ecological integrity along approxiomately 1,000-feet of an urbanized stretch of Minnehaha Creek, explore expansion of floodplain storage over a three-acre area, enhance riparian habitats, and provide safe recreational access to Minnehaha Creek and connections to the Minnehaha Creek Greenway.

JUSTIFICATION
Historic development of this urban stretch of Minnehaha Creek resulted in filling large areas of floodplain, localized flooding, and impervious surfaces within the floodplain. Minnehaha Creek is currently impaired for fecal coliform bacteria, chloride, low dissolved oxygen, and fish and macroinvertebrate communities. Lake Hiawatha, Minnehaha Creek's receiving waterbody, is impaired for nutrients due to sediment and nutrient loads transported by Minnehaha Creek and both waterbodies have TMDLs.

WORKPLAN SUMMARY
The ability to design and execute a project is dependent on landowner interest in either integrating a project on their property through redevelopment or conveying property to MCWD. MCWD will consider 2025 to reinitiate project planning, which may include technical review and data collection to better evaluate potential project developments, evaluation of partnership and land acquisition opportunities, and developing conceptual design and implementation scenarios. The timeline below is illustrative only based on the hypothetical advancement of a project out of the planning phase.

SCHEDULE + BUDGET

PLANNING	DESIGN	CONSTRUCTION
2025-2026	2026-2027	2028-2029
$50,000	$100,000	$400,000


MCWD CIP OVERVIEW
MINNEHAHA CREEK
Legend
MCWD Project Location
Minnehaha Creek Subwatershed
PROJECT LOCATION
BOONE-AQUILA FLOODPLAIN RESTORATION
Cedar Lake Road
Louisiana Avenue South
28th Street W
29th Street
Minnetonka Boulevard
31st Street West
Kentucky Avenue South
Jersey Avenue South
Texas Avenue South
Sumter Avenue South
Rhode Island Avenue South
St. Louis Park
36th Street West
Highway 7
Highway 100 South
Cambridge Street
Minnehaha Creek
Highway 169
Hopkins
Excelsior Boulevard
Yosemite Avenue South
Meadowbrook
Belmore Lane
Interlachen Boulevard
Edina Mill Pond
Minnetonka
Edina
Malibu Drive
Schaefer Road
Blake Road South
Highway 100
Harvey
Vernon Avenue
Melody
N
0 0.125 0.25 0.5
Miles

MINNEHAHA CREEK WATERSHED DISTRICT

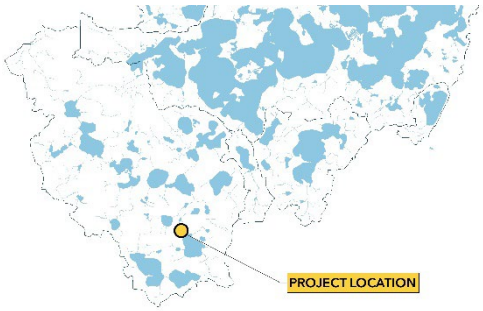
MULTI-YEAR CAPITAL IMPROVEMENT PLAN 2024-2028

OVERVIEW

PROJECT NAME
East Auburn Wetland Restoration

LOCATION
Victoria (Six Mile Creek-Halsted Bay)

TARGET WATERBODY
East Auburn Lake



DESCRIPTION

SCOPE
This project will target phosphorus export from a degraded wetland at the outlet of Wassermann Lake. MCWD will conduct monitoring and feasibility to develop a project approach that will likely include an innovative solution, depending on observed wetland conditions.

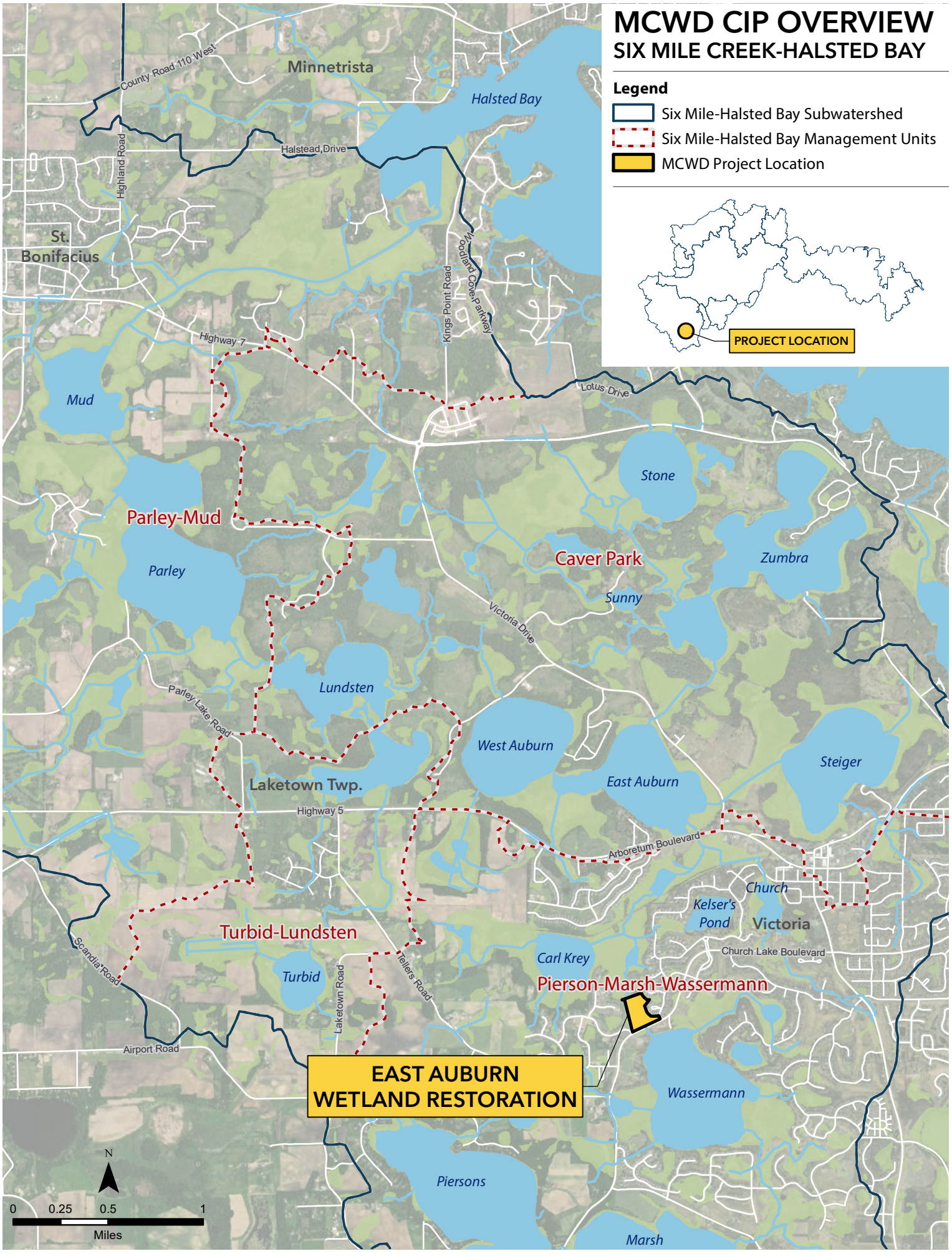
GOALS
The project will target a phosphorus reduction of 135 lbs/yr. Secondary benefits including habitat restoration and increased water storage will be explored through feasibility.

JUSTIFICATION
East Auburn is an impaired waterbody requiring a total nutrient reduction of 626 lbs/yr, with 410 lbs/yr designated from the upstream watershed. This project will target a specific wetland segment at the outlet of Wassermann Lake that represents the highest identified concentration of nutrient export to East Auburn Lake. Management methods for reducing nutrient output from degraded wetlands are not well established, and successful implementation may support the implementation of projects in similar wetland systems in the future.

WORKPLAN SUMMARY
In 2023, MCWD will seek to complete a feasibility assessment to identify the project scope to address nutrient export from the subject wetland. 2023 anticipated work includes refining the project approach, developing partnership agreements, and commencing project design, pending Board consideration.

SCHEDULE + BUDGET

PLANNING	DESIGN	CONSTRUCTION
2023 – 2024	2024	2025
$50,000	$68,000	$482,000


MCWD CIP OVERVIEW
SIX MILE CREEK-HALSTED BAY
Legend
Six Mile-Halsted Bay Subwatershed
Six Mile-Halsted Bay Management Units
MCWD Project Location
PROJECT LOCATION
Minnetrista
St. Bonifacius
Halsted Bay
County Road 110 West
Halstead Drive
Highland Road
Kings Point Road
Woodland Cove Parkway
Highway 7
Lotus Drive
Mud
Stone
Parley-Mud
Parley
Caver Park
Zumbra
Sunny
Victoria Drive
Lundsten
Parley Lake Road
West Auburn
Steiger
East Auburn
Laketown Twp.
Highway 5
Arboretum Boulevard
Church
Kelser's Pond
Victoria
Church Lake Boulevard
Turbid-Lundsten
Scandia Road
Carl Krey
Pierson-Marsh-Wassermann
Turbid
Laketown Road
Telle's Road
Airport Road
EAST AUBURN WETLAND RESTORATION
Wassermann
Piersons
Marsh
N
0
0.25
0.5
1
Miles

MINNEHAHA CREEK WATERSHED DISTRICT

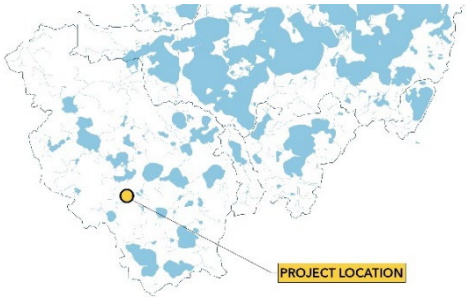
MULTI-YEAR CAPITAL IMPROVEMENT PLAN 2024-2028

OVERVIEW

PROJECT NAME
Turbid-Lundsten Corridor Restoration

LOCATION
Laketown Township (Six Mile Creek Halsted Bay)

TARGET WATERBODY
Turbid, South & North Lundsten Lakes, Six Mile Creek



DESCRIPTION

SCOPE
An individual project or set of combined complementary projects will reduce phosphorus loading and export within this chain of lakes and the adjacent wetlands. Project opportunities to be evaluated include wetland and stream corridor restoration, internal load treatment using alum, and habitat corridor establishment.

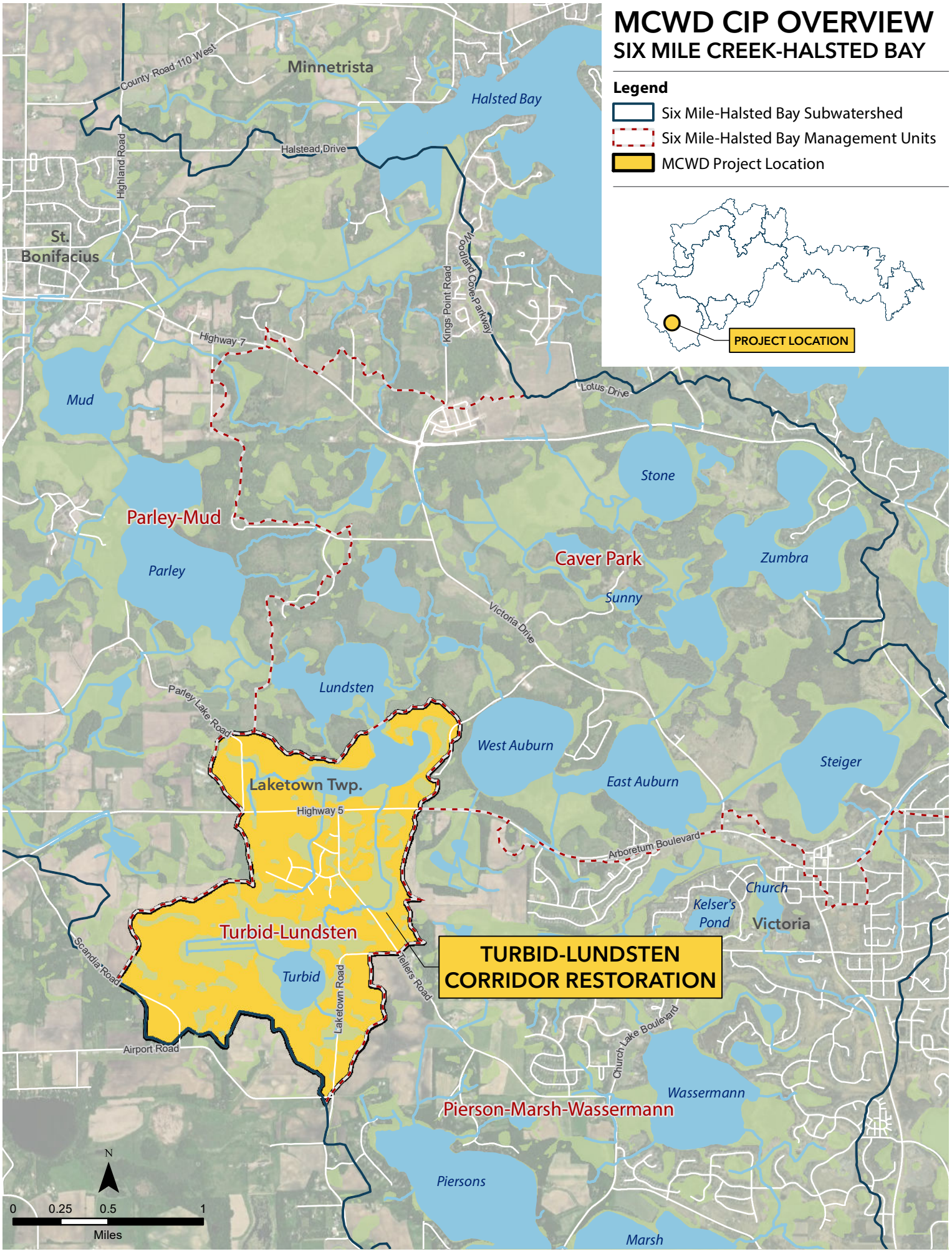
GOALS
Project benefits may include an approximate 35 lbs/yr nutrient reduction to Turbid Lake and 55 lbs/yr reduction to South Lundsten (based on 2012 feasibility); 95 acres of restored wetlands with associated ecological and hydrological benefits; and future integration with residential development and an expanding greenway corridor.

JUSTIFICATION
Turbid Lake is impaired for nutrients which is primarily due to internal loading. The lake requires a 138 lbs/yr phosphorus reduction under an approved TMDL. South Lundsten has very high phosphorus concentrations but is classified as a wetland and therefore does not have a TMDL. The altered wetlands around this small chain of lakes and internal loading are the principal drivers of degraded water quality. Previous feasibility studies have identified viable management strategies in this corridor.

WORKPLAN SUMMARY
MCWD is in the early planning phase for opportunities in this corridor. The scale of work will be dependent on land acquisition, potential partnerships, and the identification of feasible project opportunities, all of which will be explored through planning work in 2023 and 2024. Projects identified for near term implementation will be advanced through the CIP. The timeline below is based on the assumption that a specific project is advanced out of the planning phase for near term implementation.

SCHEDULE + BUDGET

PLANNING	DESIGN	CONSTRUCTION
2023-2024	2025-2026	2026-2027
$80,000	$250,000	$2.8 million


MCWD CIP OVERVIEW
SIX MILE CREEK-HALSTED BAY
Legend
Six Mile-Halsted Bay Subwatershed
Six Mile-Halsted Bay Management Units
MCWD Project Location
PROJECT LOCATION
Minnetrista
St. Bonifacius
County Road 110 West
Halsted Bay
Halstead Drive
Highland Road
Kings Point Road
Woodland Cove Parkway
Highway 7
Lotus Drive
Mud
Stone
Parley-Mud
Parley
Caver Park
Zumbra
Sunny
Victoria Drive
Lundsten
Parley Lake Road
West Auburn
Steiger
East Auburn
Laketown Twp.
Highway 5
Arboretum Boulevard
Church
Kelser's Pond
Victoria
Turbid-Lundsten
TURBID-LUNDSTEN CORRIDOR RESTORATION
Scandia Road
Turbid
Laketown Road
Weiler's Road
Airport Road
Church Lake Boulevard
Wassermann
Pierson-Marsh-Wassermann
Piersons
Marsh
N
0
0.25
0.5
1
Miles

MINNEHAHA CREEK WATERSHED DISTRICT

MULTI-YEAR CAPITAL IMPROVEMENT PLAN 2024-2028

OVERVIEW

PROJECT NAME

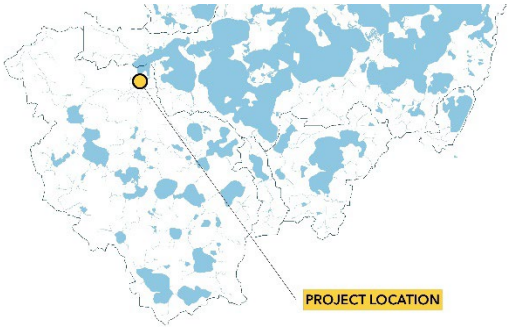
Lake Minnetonka – Halsted Bay Alum Treatment Facility

LOCATION

Minnetrista (Six Mile Creek Halsted Bay)

TARGET WATERBODY

Halsted Bay, Lake Minnetonka



DESCRIPTION

SCOPE

Evaluate the construction of a phosphorus removal facility which would pump water from Six Mile Creek, treat it using aluminum sulfate (alum), and discharge treated water into the Creek before entering Halsted Bay. Alum treatment to address internal loading in Halsted Bay may also be cosidered as complementary component of this project.

GOALS

This project would reduce nutrient loading to Halsted Bay by an estimated 1,620 lbs/yr. If paired with an in-lake alum treatment, an additional 1,900 lbs/yr reduction could be achieved. Secondary benefits include increased water clarity, reemergence of aquatic habitat, and improved recreational value.

JUSTIFICATION

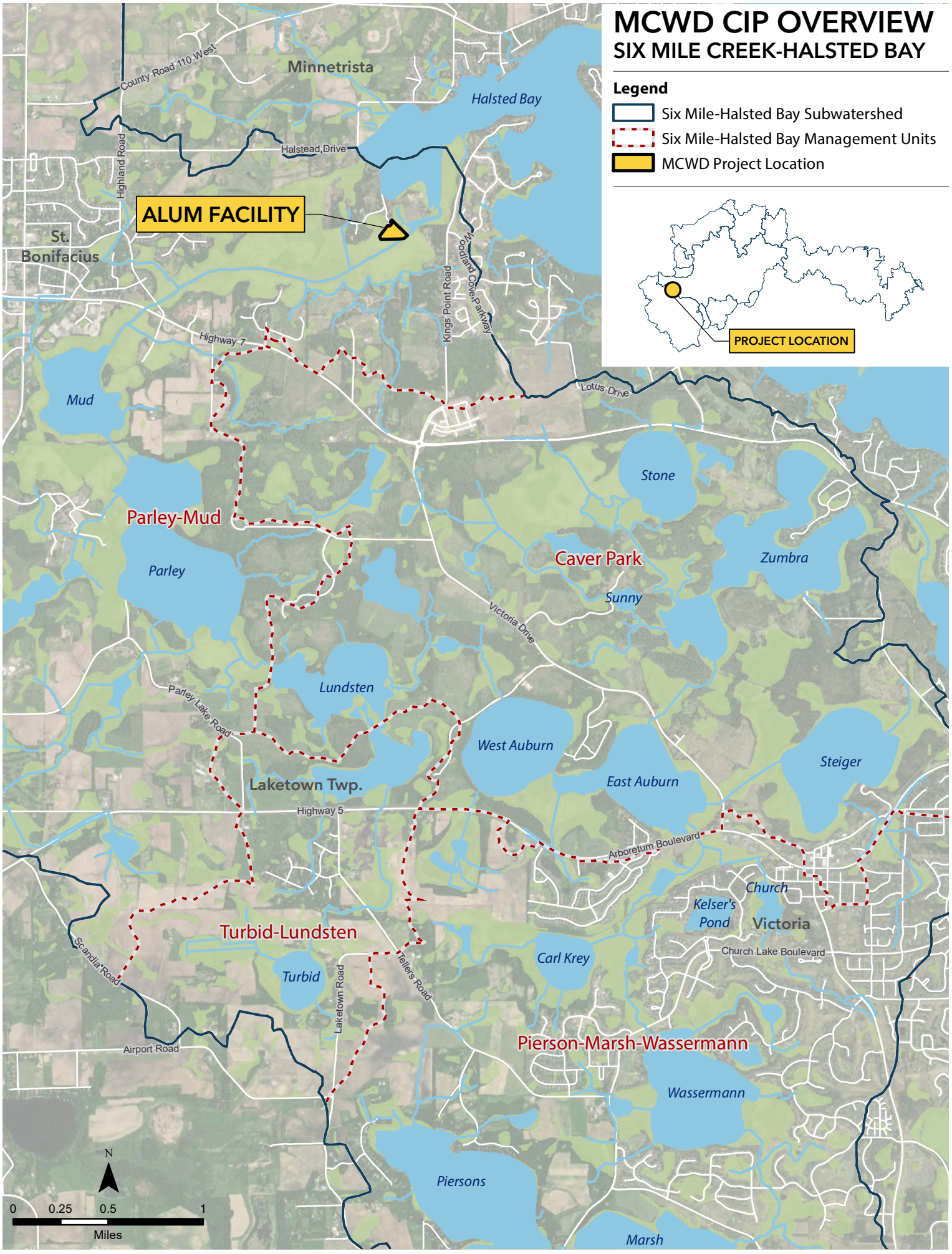
Halsted Bay is impaired for nutrients and requires the largest phosphorus load reduction of any waterbody in the MCWD. Preliminary feasibility assessments identified that 50% of the nutrient load to Halsted Bay is from the Six Mile Marsh wetland (40% internal load, 10% other watershed load), requiring a 2,000 lbs/yr nutrient load reduction. The vast majority of nutrient input to Halsted Bay is dissolved phosphorus, which requires chemical treatment for removal. Meeting state water quality standards in Halsted Bay will require addressing both watershed and internal loading.

WORKPLAN SUMMARY

MCWD plans to commence the project planning phase in fall 2023 and will continue through 2024. Preliminary work will focus on reviewing the 2012 feasibility report and validating the conceptual design; meeting with project partners to initiate discussions around facility operations, regulatory frameworks, and funding; and developing a project outreach plan. Consideration of advancing the project into design will be carefully considered by MCWD's Board in collaboration with project partners.

SCHEDULE + BUDGET

PLANNING	DESIGN	CONSTRUCTION
2023 – 2025	2025 – 2026	2027 – 2029
$175,000	$2,600,000	$10.4 million


MCWD CIP OVERVIEW
SIX MILE CREEK-HALSTED BAY
Legend
Six Mile-Halsted Bay Subwatershed
Six Mile-Halsted Bay Management Units
MCWD Project Location
PROJECT LOCATION
ALUM FACILITY
Minnetrista
Halsted Bay
County Road 110 West
Halstead Drive
Highland Road
St. Bonifacius
Kings Point Road
Woodland Cove Parkway
Highway 7
Lotus Drive
Mud
Stone
Parley-Mud
Parley
Caver Park
Zumbra
Sunny
Victoria Drive
Lundsten
Parley Lake Road
West Auburn
Steiger
East Auburn
Laketown Twp.
Highway 5
Arboretum Boulevard
Church
Kelser's Pond
Victoria
Church Lake Boulevard
Turbid-Lundsten
Scandia Road
Carl Krey
Turbid
Laketown Road
Keller's Road
Airport Road
Pierson-Marsh-Wassermann
Wassermann
Piersons
Marsh
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Miles

MINNEHAHA CREEK WATERSHED DISTRICT

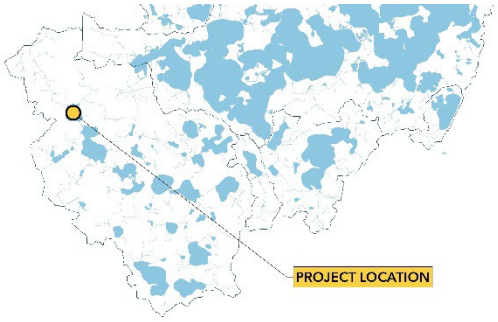
MULTI-YEAR CAPITAL IMPROVEMENT PLAN 2024-2028

OVERVIEW

PROJECT NAME
Mud Lake Watershed Load Reductions

LOCATION
Minnetrista, St. Bonifacius (Six Mile Creek Halsted Bay)

TARGET WATERBODY
Mud Lake, Halsted Bay



DESCRIPTION

SCOPE
Individual project or projects to reduce nutrient loading in the Mud Lake subwatershed which may include wetland retoration, regional stormwater treatment, and existing stormwater facility retrofits.

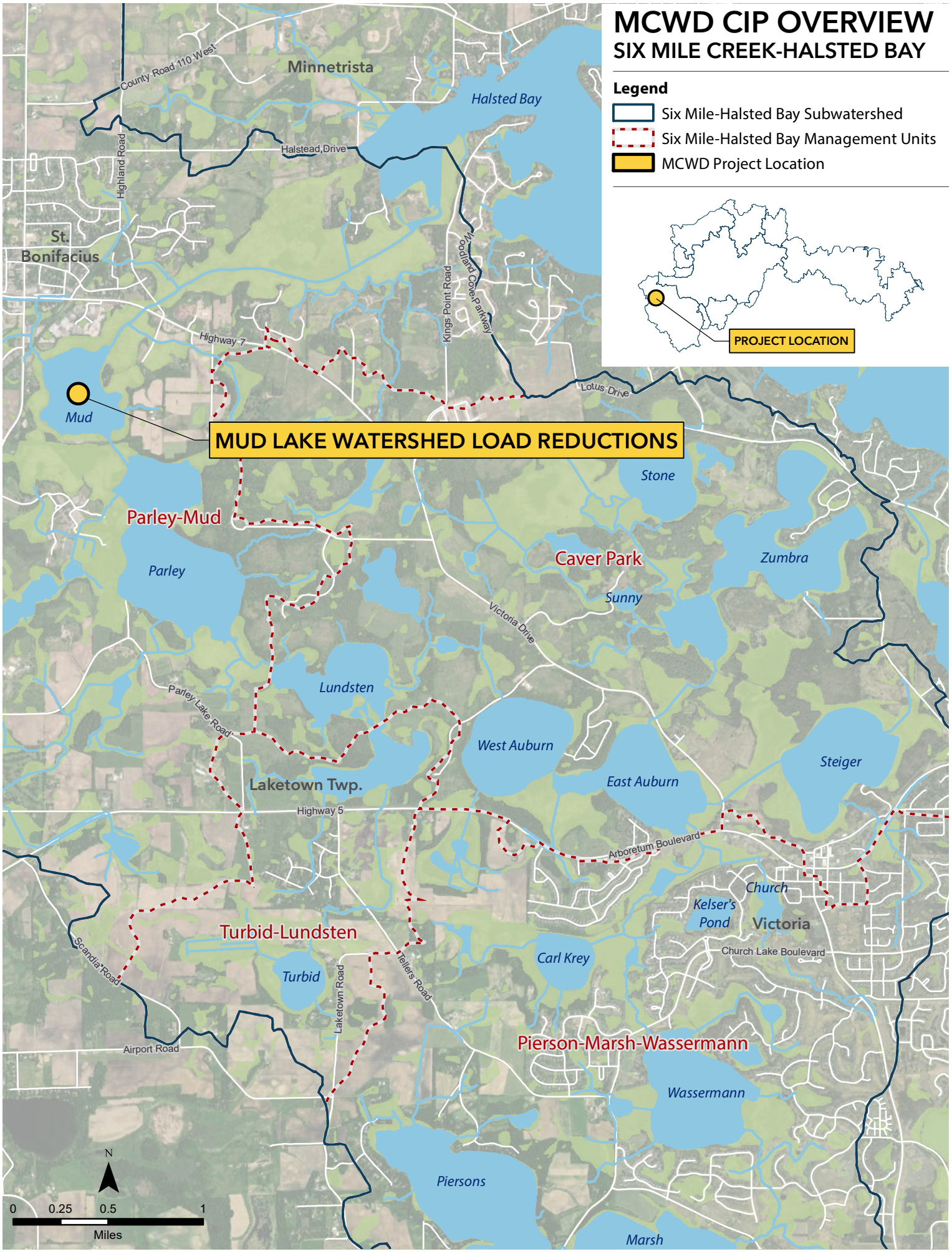
GOALS
The primary purpose of these projects are to reduce nutrient loading to Mud Lake. Phosphorus sources to Mud Lake are diffuse and implementation will take place in a phased approach, targeting the most cost-effective and highest impact projects first.

JUSTIFICATION
The 2013 Six Mile Diagnostic identified Mud Lake as having very poor water quality, driven by a combination of internal loading, upstream lake water quality, and watershed loading. Reductions between 78% and 95% (1,864 lbs/yr – 2,258 lbs/yr) from the direct watershed are needed to shift the ecological condition of Mud Lake and address downstream impacts to Halsted Bay. Halsted Bay requires the largest phosphorus load reduction in the District and 50% of its load comes from upstream Mud Lake via the Six Mile Marsh wetland complex.

WORKPLAN
MCWD completed a study in 2018 that evaluated a range of project opportunities to address nutrient loading to Mud Lake. In 2025, MCWD plans to initiate planning to reevaluate the technical assumptions, preliminary feasibility, and property rights in order to develop a multiphase implementation strategy. The timeline below is based on the hypothetical identification of a project or series of projects through that early planning work. The construction cost assumes a phased implementation approach.

SCHEDULE + BUDGET

PLANNING	DESIGN	CONSTRUCTION
2025-2026	2026– 2027	2028+
$75,000	$618,000	$2.4 million


MCWD CIP OVERVIEW
SIX MILE CREEK-HALSTED BAY
Legend
Six Mile-Halsted Bay Subwatershed
Six Mile-Halsted Bay Management Units
MCWD Project Location
PROJECT LOCATION
MUD LAKE WATERSHED LOAD REDUCTIONS
Minnetrista
Halsted Bay
County Road 110 West
Halstead Drive
Highland Road
St. Bonifacius
Highway 7
Kings Point Road
Woodland Cove Parkway
Lotus Drive
Mud
Stone
Parley-Mud
Parley
Caver Park
Zumbra
Sunny
Victoria Drive
Lundsten
Parley Lake Road
West Auburn
Steiger
East Auburn
Laketown Twp.
Highway 5
Arboretum Boulevard
Church
Kelser's Pond
Victoria
Church Lake Boulevard
Turbid-Lundsten
Scandia Road
Carl Krey
Turbid
Laketown Road
Telle's Road
Airport Road
Pierson-Marsh-Wassermann
Wassermann
Piersons
Marsh
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1
Miles

MINNEHAHA CREEK WATERSHED DISTRICT

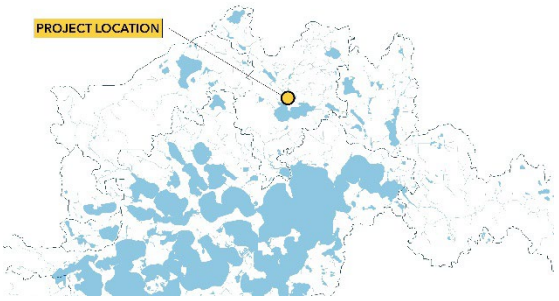
MULTI-YEAR CAPITAL IMPROVEMENT PLAN 2024-2028

OVERVIEW

PROJECT NAME
County Road 6 Pond Retrofit

LOCATION
Orono (Long Lake Creek)

TARGET WATERBODY
Long Lake



DESCRIPTION

SCOPE
Proposed retrofit of an existing MCWD pond providing downstream treatment of both the Wolsfeld and Holy Name management units through the addition of a sand filtration bench to improve water quality treatment capacity.

GOALS
Reduce nutrient loading to Long Lake by approximately 150 lbs/yr and reduce TSS loading by approximately 85%.

JUSTIFICATION
Long Lake is impaired for nutrients and requires a 62% (411 lbs) reduction to meet state water quality standards, including 195 lbs/yr from watershed sources. Monitoring of the County Road 6 pond in 2021 identified concentrations of phosphorus in the pond to be higher than previously understood, presenting an opportunity to make significant progress towards the watershed load reduction goal. With other projects in the subwatershed reliant on land use change, this presents a short term implementation opportunity.

WORKPLAN SUMMARY
In 2023, MCWD intends to build on the collected monitoring data and concept development to complete project feasibility. Pending the completion of project feasibility, Board consideration, and project ordering, MCWD anticipates 2023 project design and 2024 construction.

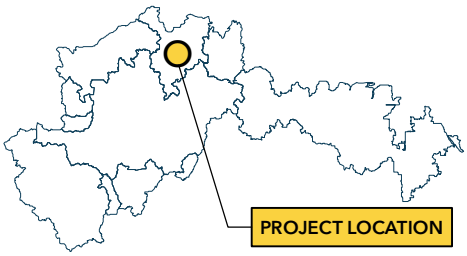
SCHEDULE + BUDGET

PLANNING	DESIGN	CONSTRUCTION
2022	2023-2024	2024-2025
$25,000	$110,000	$415,000

MCWD CIP OVERVIEW
LONG LAKE CREEK

Legend

- Long Lake Creek Subwatershed
- MCWD Project Location



COUNTY ROAD 6 POND IMPROVEMENT PROJECT

Hamel Road
School
Medina
County Road 24
Tamarack Drive
Homestead Trail
Deer Hill Road
Wolsfeld
Plymouth
6th Avenue North
Mooney
Dickey's
Classen
Lydiard
Long
Unnamed
Long Lake
Wayzata Boulevard West
Highway 12
Old Crystal Bay Road North
Watertown Road
Willow Drive South
Old Crystal Bay Road South
Fox Street
Brown Road South
Wayzata
Orono
Tanager
Shoreline Drive
North Shore Drive
Woodland
Deephaven
Minnetonka Beach
Minnetonka

N

0 0.25 0.5 1

Miles

MINNEHAHA CREEK WATERSHED DISTRICT

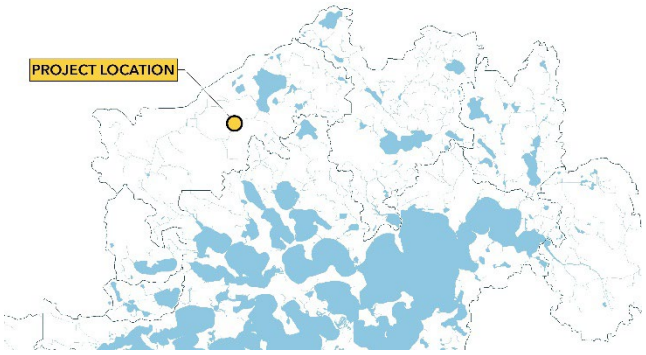
MULTI-YEAR CAPITAL IMPROVEMENT PLAN 2024-2028

OVERVIEW

PROJECT NAME
Painter Creek Wetland Restorations

LOCATION
Independence, Medina, Minnetrista, Orono
(Painter Creek Subwatershed)

TARGET WATERBODY
Jennings Bay, Lake Minnetonka



DESCRIPTION

SCOPE
Proposed development of a systematic implementation plan for the subwatershed that protects and improves the ecological integrity of the extensive wetland network through hydrologic and vegetative wetland restorations while addressing nutrient loading to downstream Jenning's Bay.

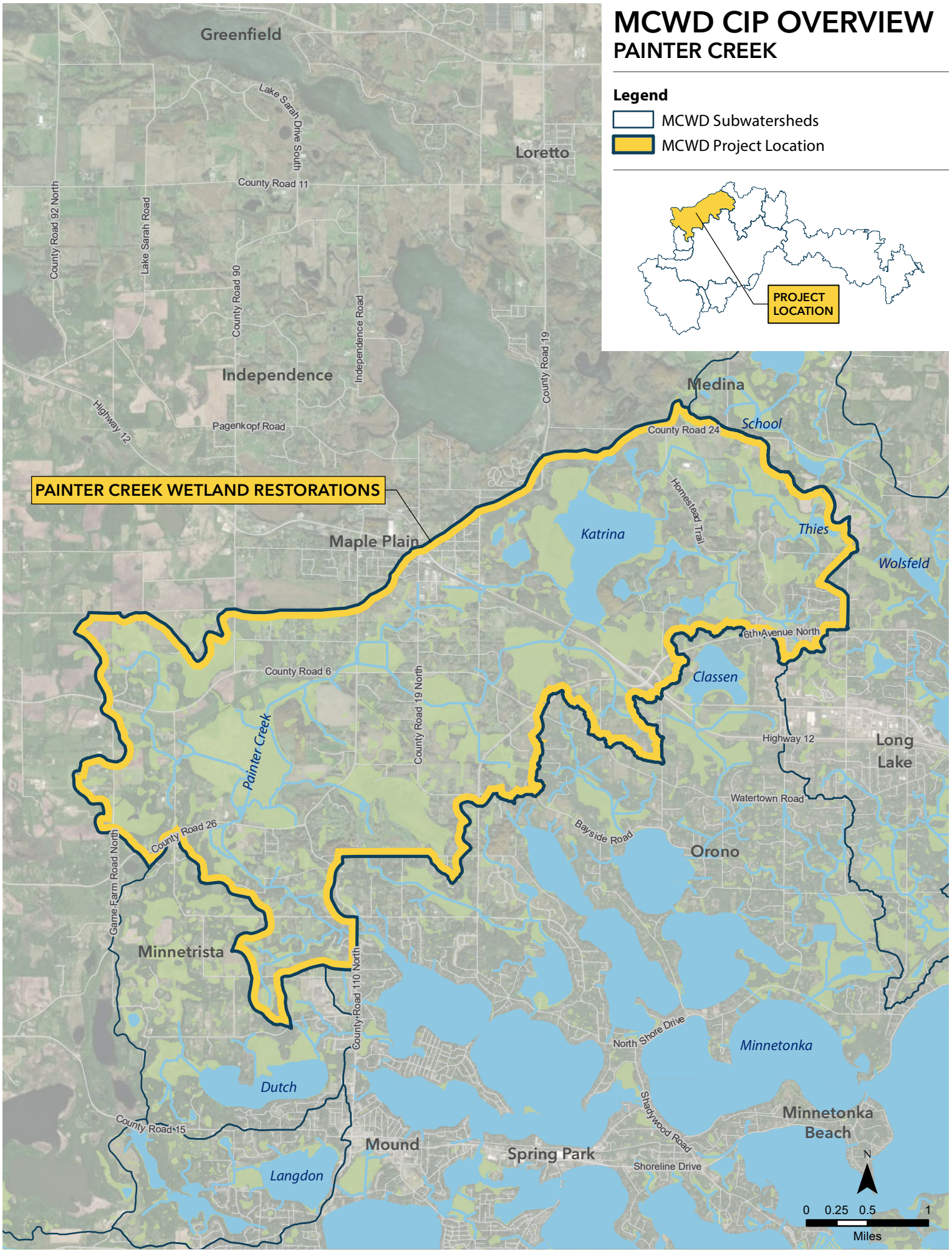
GOALS
The development of specific project goals will be a component of the implementation plan. Target goals may include increased wetland habitat diversity, reduced sedimentation and pollutant loading, and hydrologic resotoration.

JUSTIFICATION
The Painter Creek Subwatershed is a regionally significant subwatershed that contains a number of large wetlands, many of which have been ditched or otherwise altered, that are connected by Painter Creek. Painter Creek contributes an estimated 33-50% of the total annual phosphorus load to Jennings Bay on Lake Minnetonka, which is impaired. The MCWD has previously established a partnership with the United States Army Corps of Engineers (USACE), which identified the potential restoration of four of the major wetland marsh systems under the Federal Section 206 Program, which may provide funding and implementation assistance for projects in the subwatershed.

WORKPLAN SUMMARY
Prior to commencing project work in the Painter Creek Subwatershed, MCWD will systematically develop an implementation framework that integrates natural resource goals, local context, and the previous work completed in partnership with the USACE. Planning will be initiated in 2025, likely starting with a subwatershed assessment lead by MCWD's Research and Monitoring team.

SCHEDULE + BUDGET

PLANNING	DESIGN	CONSTRUCTION
2025-2027	TBD	TBD
$100,000		


MCWD CIP OVERVIEW
PAINTER CREEK
Legend
MCWD Subwatersheds
MCWD Project Location
PROJECT LOCATION
PAINTER CREEK WETLAND RESTORATIONS
Greenfield
Loretto
Independence
Medina
Maple Plain
Minnetrista
Orono
Long Lake
Mound
Spring Park
Minnetonka Beach
Minnetonka
Dutch
Langdon
Katrina
Classen
Thies
Wolsfeld
School
Painter Creek
Lake Sarah Drive South
County Road 11
County Road 92 North
Lake Sarah Road
County Road 90
Independence Road
County Road 19
Highway 12
Pagenkopf Road
County Road 24
Homestead Trail
6th Avenue North
County Road 6
County Road 19 North
Watertown Road
Bayside Road
County Road 26
Game Farm Road North
County Road 110 North
North Shore Drive
Shadywood Road
Shoreline Drive
County Road 15
N
0 0.25 0.5 1
Miles