# Sauk Creek Corridor Plan

## FINAL CORRIDOR PLAN PUBLIC MEETING #5

**PRESENTATION: 6:30-8:00 PM**

**Q&A: 8:00 PM-8:30 PM**

JANUARY 22, 2025

CITY OF MADISON

# Meeting Technical Housekeeping

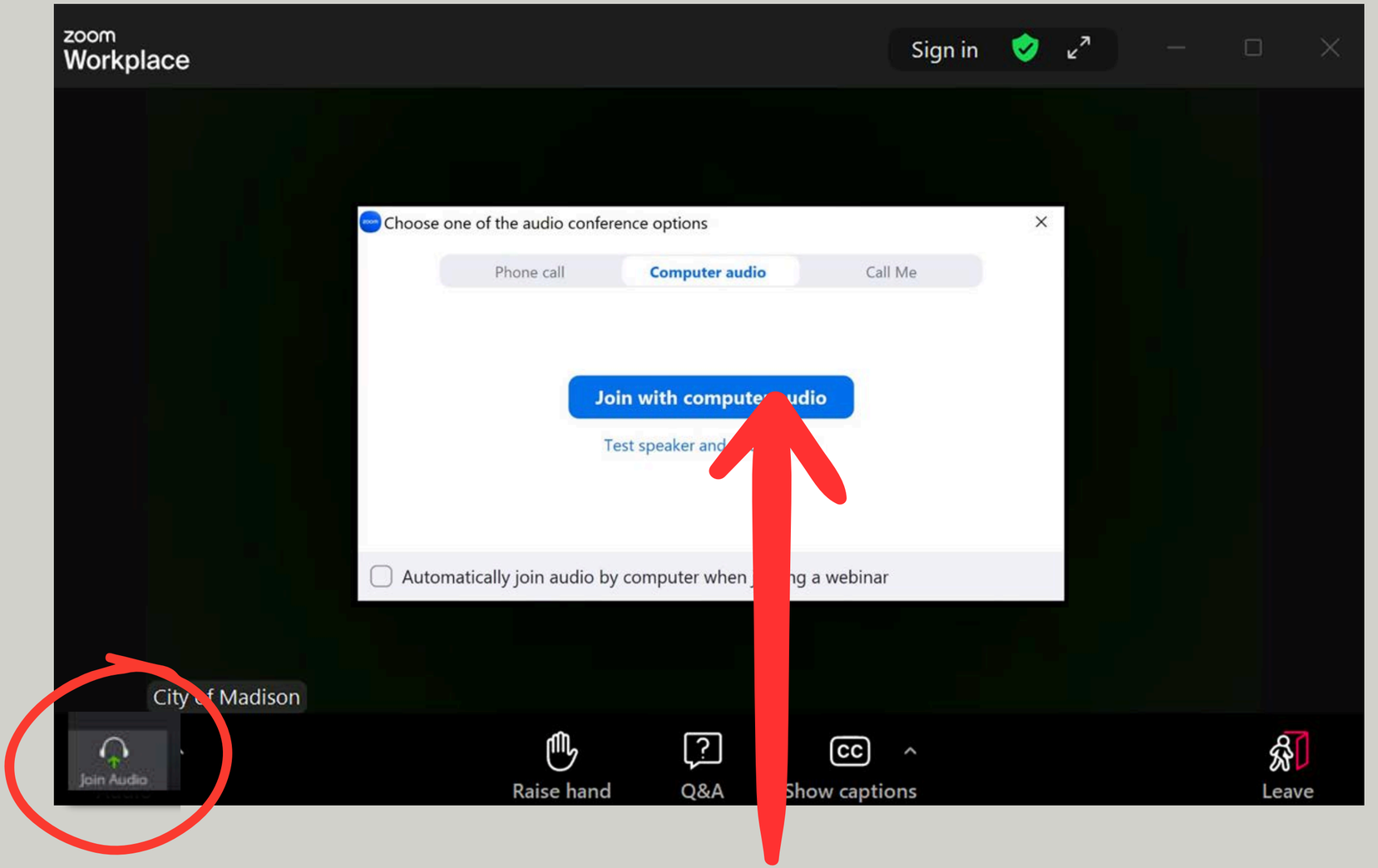
- This meeting will be recorded and posted to the project page.
- All attendees should be muted to keep background noise to a minimum.
- Use the "Q&A" button for technical issues with meeting to troubleshoot with staff to assist.
- Use the "Q&A" button to type questions about presentation.
  - Questions will be answered live after the presentation.
- Use the "raise your hand" button to verbally ask your question. You will be prompted to unmute when it is your turn.

**THIS MEETING IS BEING RECORDED.**

**IT IS A PUBLIC RECORD SUBJECT TO DISCLOSURE.**

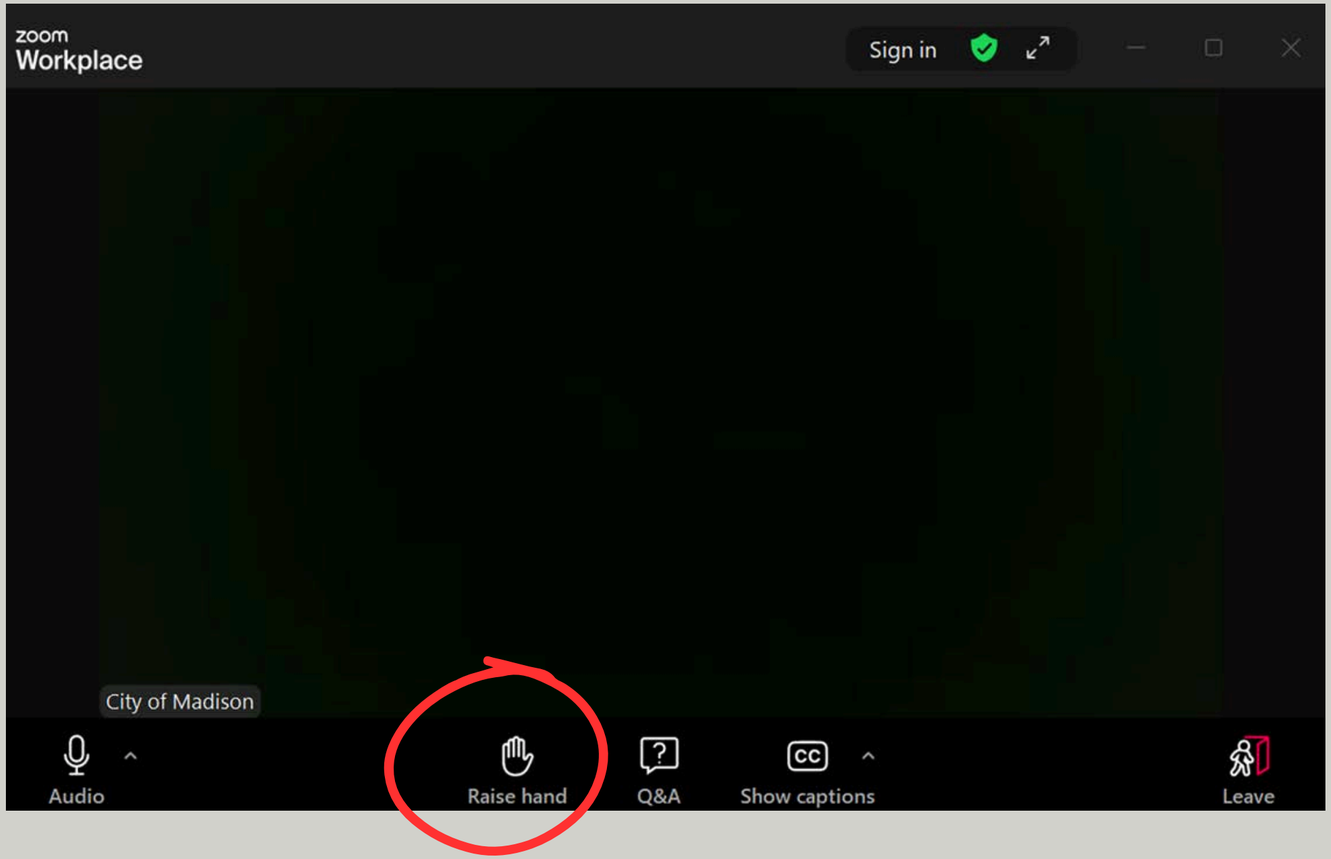
By continuing to be in the meeting, you are consenting to being recorded and consenting to this record being released to public record requestors.

# How to Participate



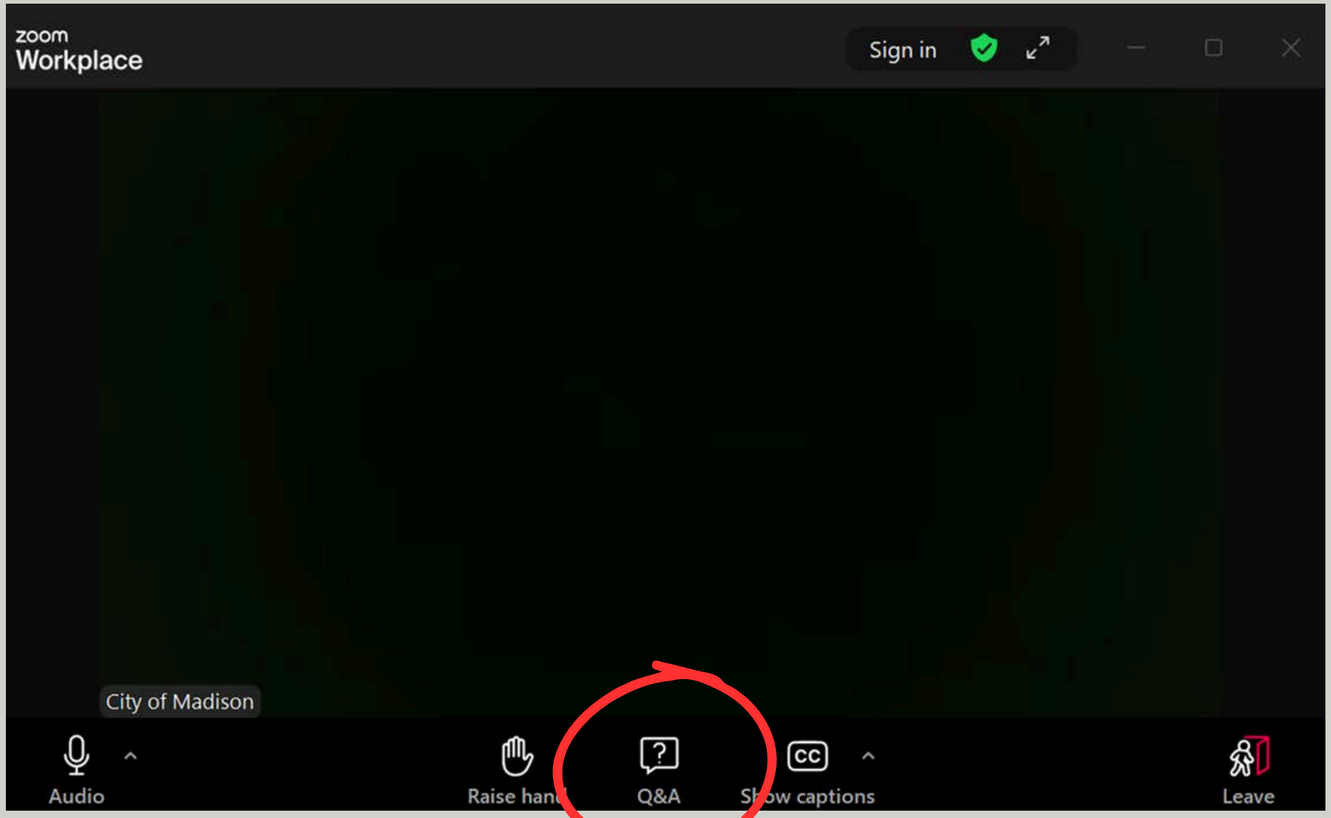

Make sure to join audio

# How to Participate



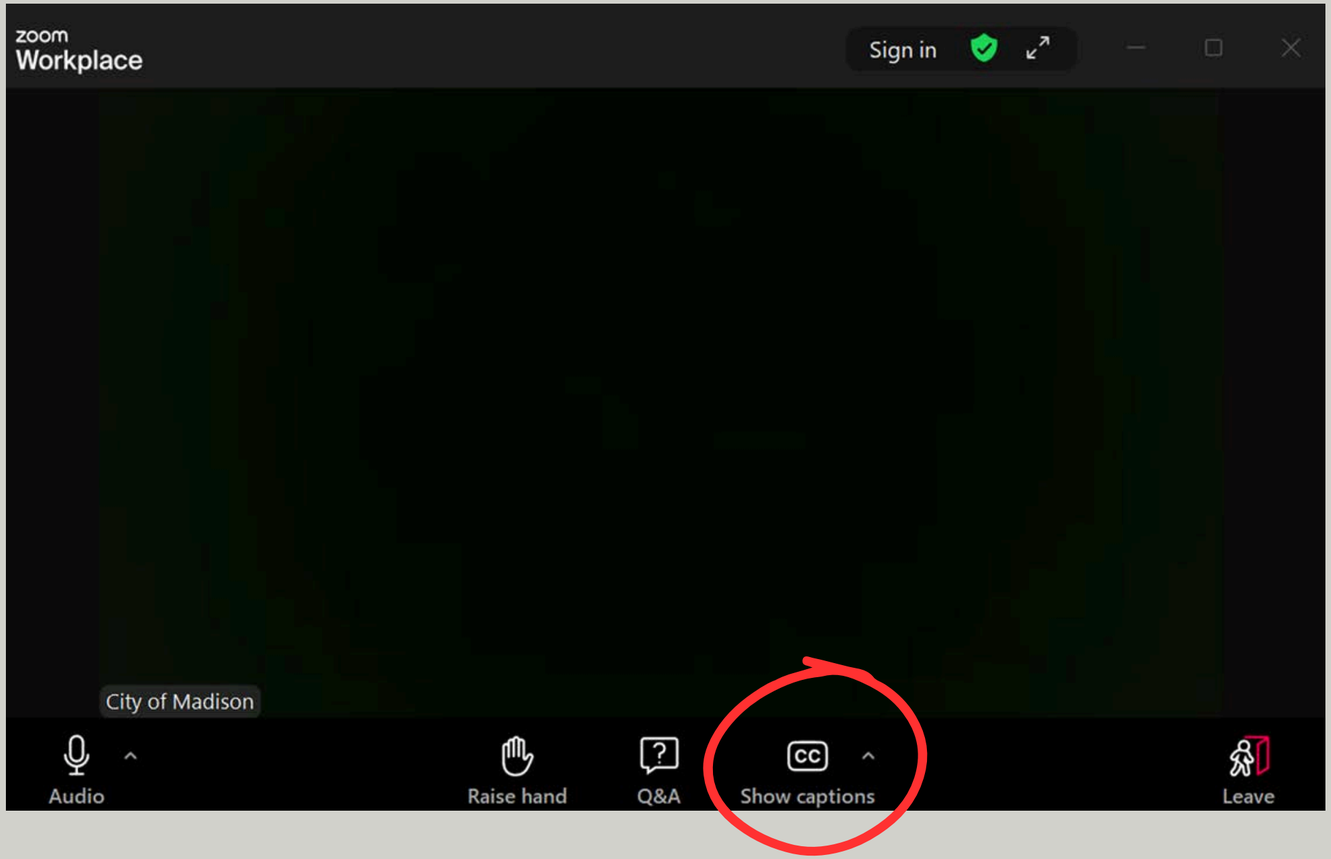

Raise your hand to be unmuted for comments or ask additional questions.

# How to Participate



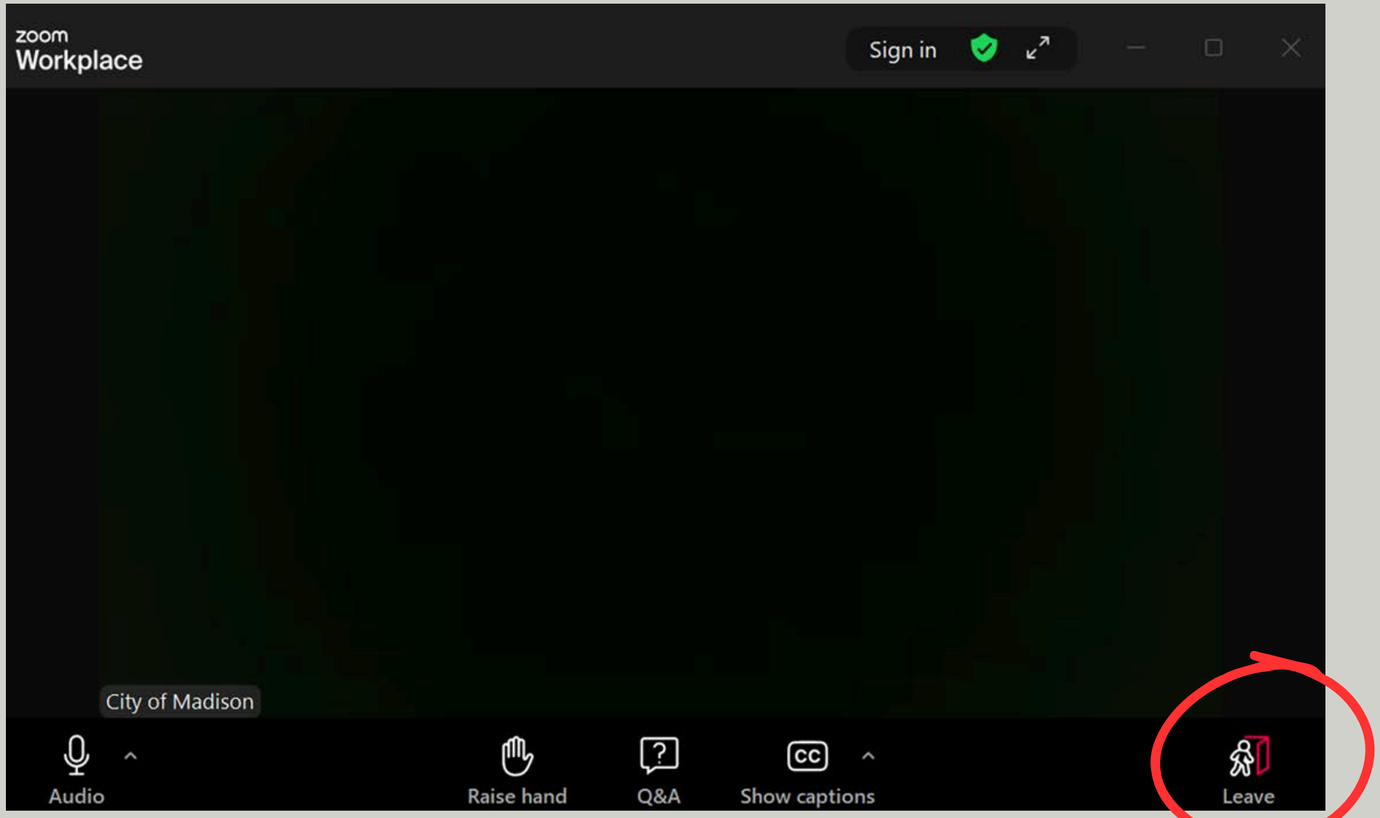

Use Q&A for questions, if you have technical issues or need quick clarification during the presentation. We will answer general questions at the end of the presentation.

# How to Participate




Click “Show Captions” for zoom automated captions.

# How to Participate




To leave the meeting click here

# Meeting Facilitation Requests

- Ask clarifying questions as we go.
  (e.g. explain a term)
- Save discussion questions for the end.
- Practice putting yourself in others' shoes, but speak from your own experience.
- Be respectful. Be open to listening. Respect others in this meeting the way you wish to be respected.
- Recognize that personal opinions differ, there are often competing priorities, differing values, and perspectives.

# Our Team

**Presenters Bios:**

**Jojo O'Brien, Stormwater Engineer, PE - Project Manager,** is a Water Resources Engineer and UW-Madison graduate with a B.S. Degree in Natural Resources and Environmental Engineering and Environmental Studies. She joined the City of Madison in 2016.

**Maddie Dumas, Ecologist-Stormwater Vegetation Coordinator,** has a Master's of Science from UW-Madison. She joined the City of Madison in 2018, and previously managed 660 acres of restored prairie and wetland for a non-profit.

**Supporting Staff Bios:**

**Janet Schmidt, PE - Principal Engineer for the City Stormwater section,** is a Civil Engineer and a 1994 UW-Madison graduate with a B.S. Degree in Civil & Environmental Engineering.

**Greg Fries, PE - Deputy City Engineer.** Greg is a Civil Engineer and a UW-Madison graduate with a B.S. Degree in Civil & Environmental Engineering and Masters Degree in Business.

**Ryan Schmidt - Engineering Operations Supervisor**, joined the City of Madison in 2016, currently oversees construction and maintenance operations for the City of Madison's Pond and Greenways.

**Alder Conklin - District 9**

# Agenda

1. Timeline and Next Steps
2. Recap Goals of Plan
    a. Existing Conditions + Maintenance Needs
3. How Input Shaped the Plan
    a. Overall
    b. Walk thru
    c. Survey
4. Proposed Corridor Plan
5. Q&A

# Sauk Creek Corridor Plan

## 2018-2023 - CONDITIONS ASSESSMENT
- Tree inventory
- Topographic survey
- Pheasant Branch Watershed Study
- Wetland Delineations
- Ecological and Channel Assessment
- West Area Plan

## 2023 - ISSUES AND OPPORTUNITIES
- Kick-off Meeting + Online Survey
- Focus Groups

Nov 2023

## 2024 - CONCEPT REFINEMENT
- Public Meeting

July 2024

## 2024 - DRAFT PRELIMINARY CORRIDOR PLAN
- Internal advisory group generates corridor concepts
- Public Meeting to gather feedback
  - Focus Groups to give input on vegetation

Oct 2024

## 2024 - DRAFT FINAL CORRIDOR PLAN
- Internal advisory group refines corridor concept
- Public Meeting + Online Survey to gather feedback
- Community Site Walk Throughs

Dec 2024

## 2024 - FINAL CORRIDOR PLAN & IMPLEMENTATION
- Internal advisory group finalizes corridor plan
- Public Meeting to gather feedback

January 2025


## 2025 - APPROVAL PROCESS
Ultimate Decision Makers
- Board of Public Works - Informational Update - January 29, 2025
- Common Council (Introduction only* ) - February 11, 2025
- Board of Public Works — Entire Corridor Plan - February 12, 2025
- Common Council – Entire Corridor Plan, Final approval - March 11, 2025

*Introducing items at Council is procedural. It does not involve Council discussion or action, there will be no public speaking registration available for this item.

Developed using the City of Madison Racial Equity and Social Justice Public Participation Resource Guide

# Corridor Plan - Outstanding Opportunities for Input

## Opportunities:

- This meeting
- Email comments to Jojo through 1/28/25
  - Comments will be added to the report as an appendix
- Boards and Council meetings where you can register to comment
  - Board of Public Works  - Informational Presentation - 1/29/25 (**No action will be taken**)
  - Board of Public Works - Corridor Plan approval, 2/12/25
  - Common Council - Corridor Plan approval, 3/11/25
- During each design phase!

## How input will be incorporated:

- Corridor plan is a **conceptual** plan that shows a **general** location of proposed improvements.
- High level input will be considered to modify the overall corridor plan
- Comments related to design-elements, will be noted in report to be considered with the detailed design which will site the final location of all improvements design development.
  - Comments will serve as a starting point for the design phases, and there will be more opportunities for input

# GET TO KNOW YOU QUESTION

Q1

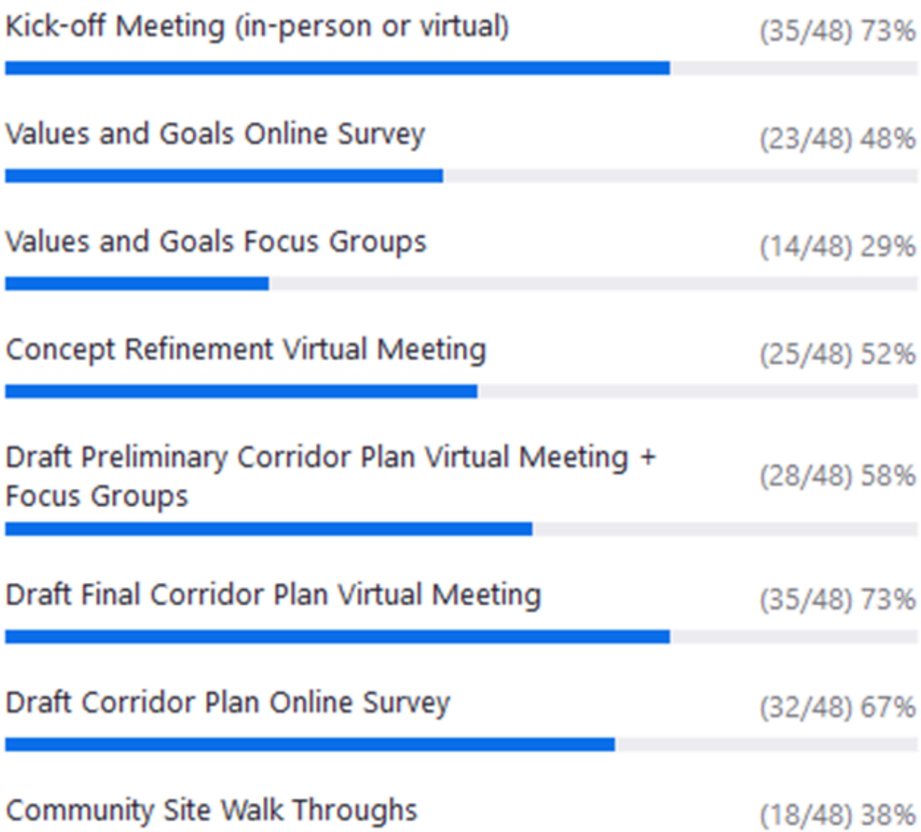
## How have you previously engaged in the corridor planning process *(either attended, or watched the recording online)*?

## Multiple Choice.

1. Kick-off Meeting (in-person or virtual)
2. Values and Goals Online Survey
3. Values and Goals Focus Groups
4. Concept Refinement Virtual Meeting
5. Draft Preliminary Corridor Plan Virtual Meeting + Focus Groups
6. Draft Final Corridor Plan Virtual Meeting
7. Draft Corridor Plan Online Survey
8. Community Site Walk Throughs
9. This is my first time engaging

# Q1 - Sauk Creek Greenway PIM 5

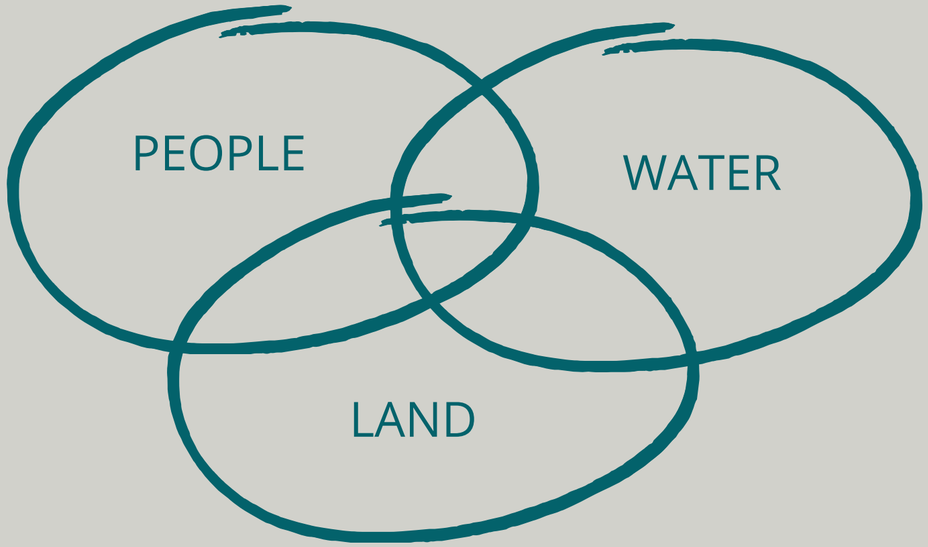
1. How have you previously engaged in the corridor planning process (for meetings, check yes if you either attended, or watched the recording online)? (Multiple choice)




This is my first time engaging (6/48) 13%

# Goals and Objectives of Corridor Plan

1. Stormwater Goals
2. Maintenance Goals
3. Ecological Goals

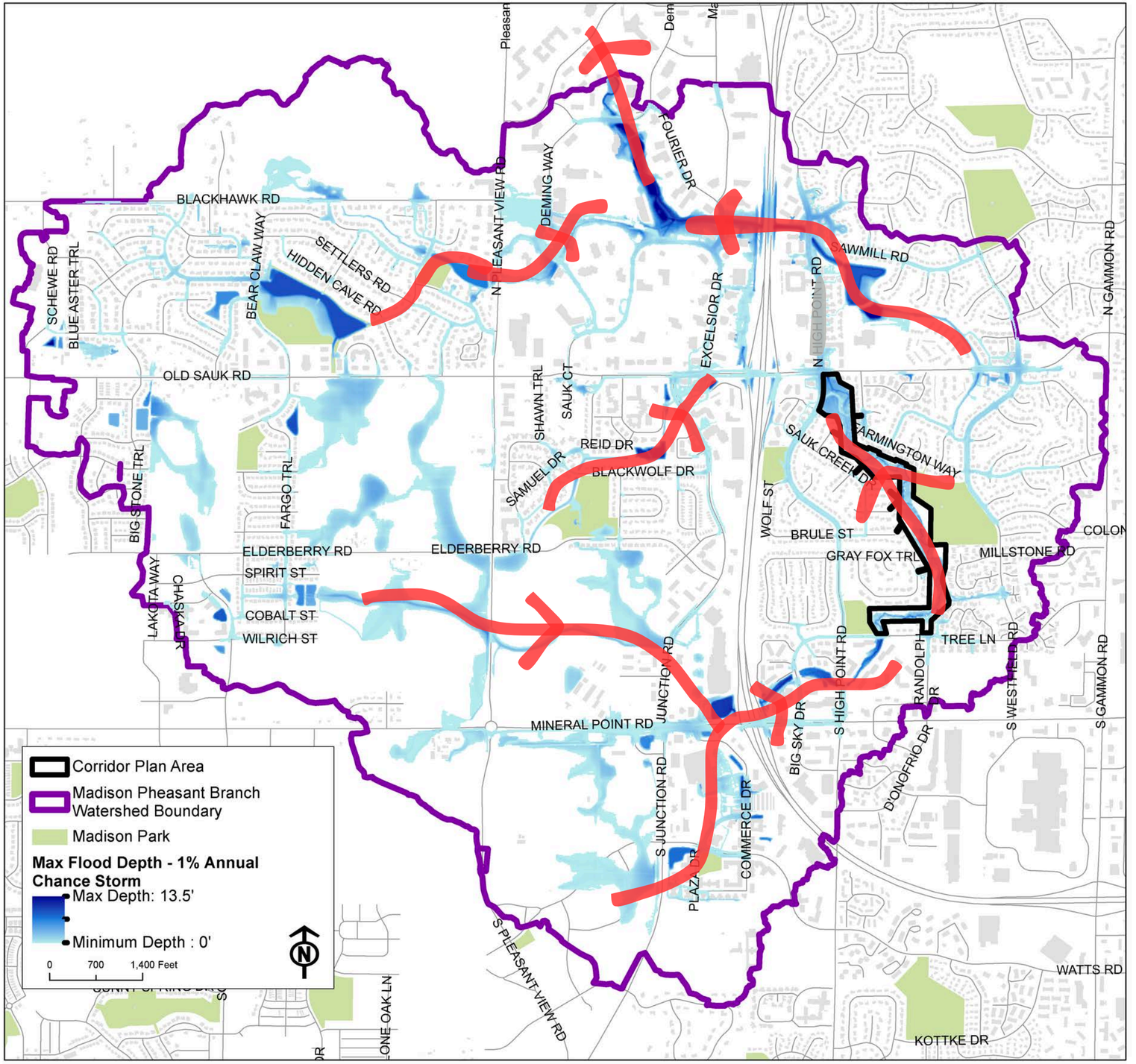



# Stormwater Goals - Overview

The Sauk Creek Greenway is part of the Pheasant Branch Watershed.

Flows need to flow through the Sauk Creek Greenway Corridor such that they:

- Do not flood adjacent structures
- Do not negatively impact downstream water quality

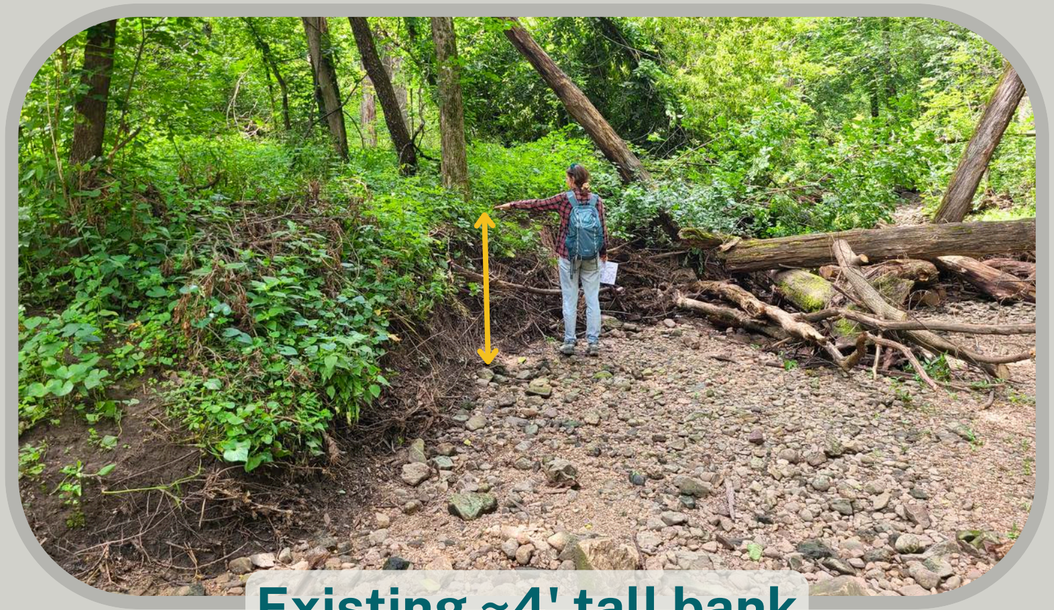


# Stormwater Goals - Channel Stabilization to Improve Water Quality

Stabilizing the banks of badly eroding channels is in alignment with:

- The City of Madison Comprehensive Plan, Imagine Madison, to improve lake and stream water quality
- The Renew the Blue guide from the Yahara CLEAN compact, which specifically lists stabilizing drainage corridors as a recommended action

Existing vertical bank with down tree at top of slope



Existing ~4' tall bank

# Stormwater / Maintenance Goals - Remove large blockages

Large channel blockages lead to large areas of focused erosion

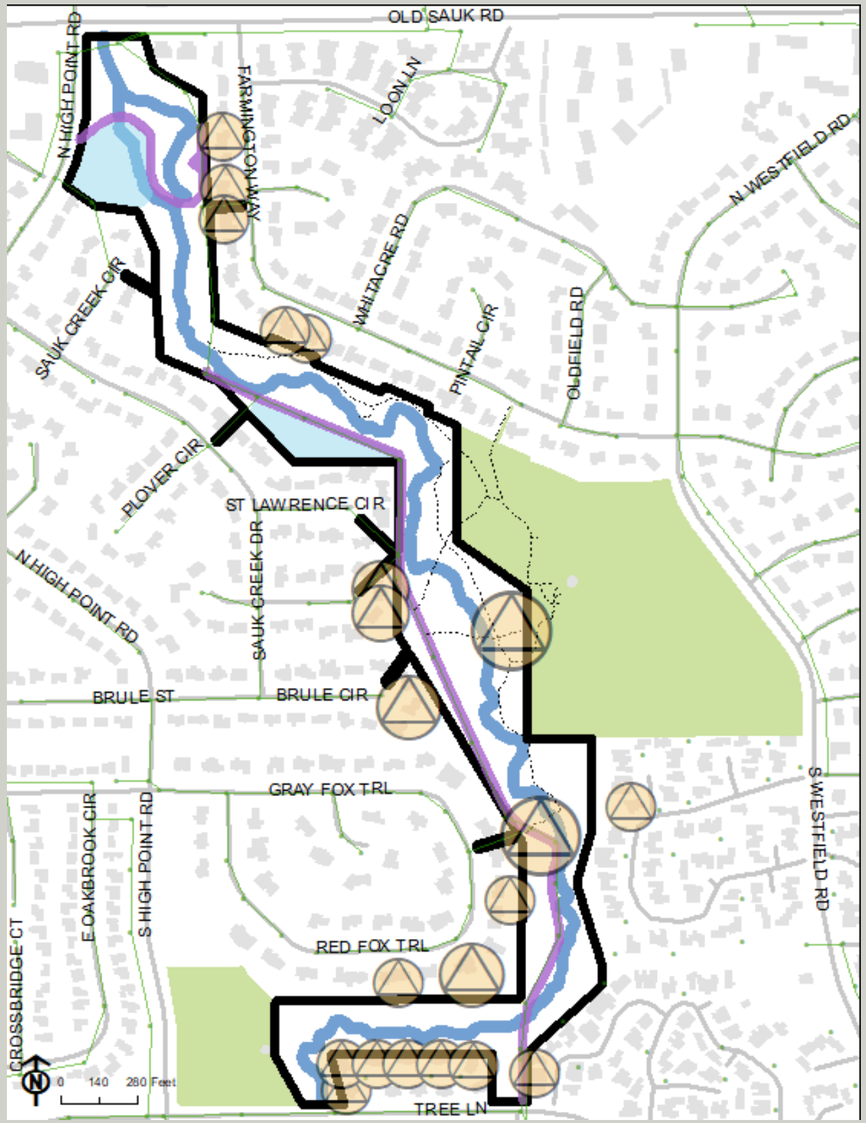
# Stormwater / Maintenance Goals - Remove large blockages

Eroded out soil beneath tree, eventually tree fell down

Looking Downstream at blockage

Looking Upstream

# Maintenance Goals - Improved Access




## Access for Tree Removals Requests

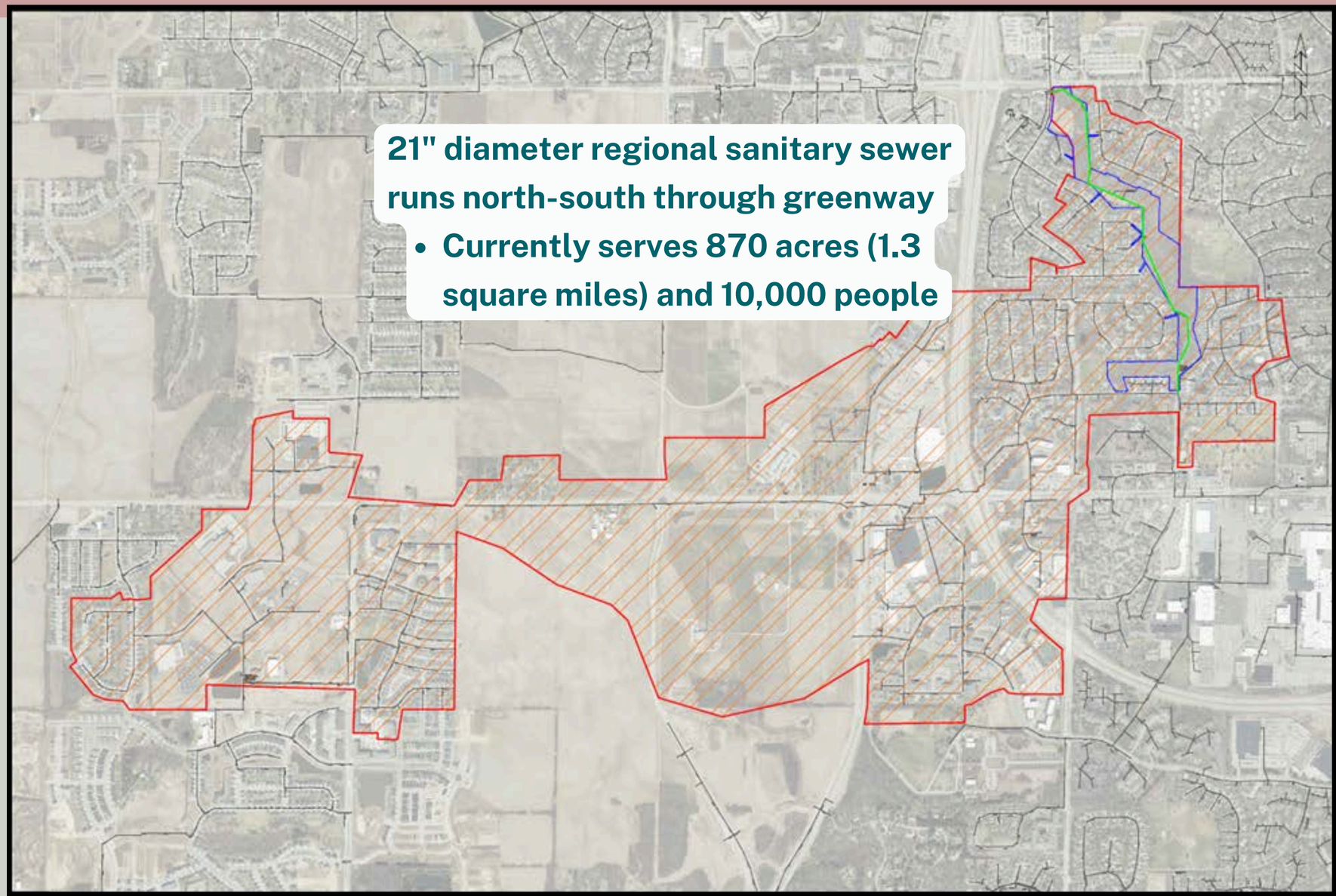
- The City receives frequent requests to remove standing dead, or fallen trees.
- Since 2018, Engineering Operations has received >40 requests for tree removals in the Sauk Creek Greenway alone

## Access to Channel to remove large blockages

- Currently access is limited to the channel that is accessible from the sanitary access path (purple on map)

# Maintenance Goals - Regional Sanitary Sewer

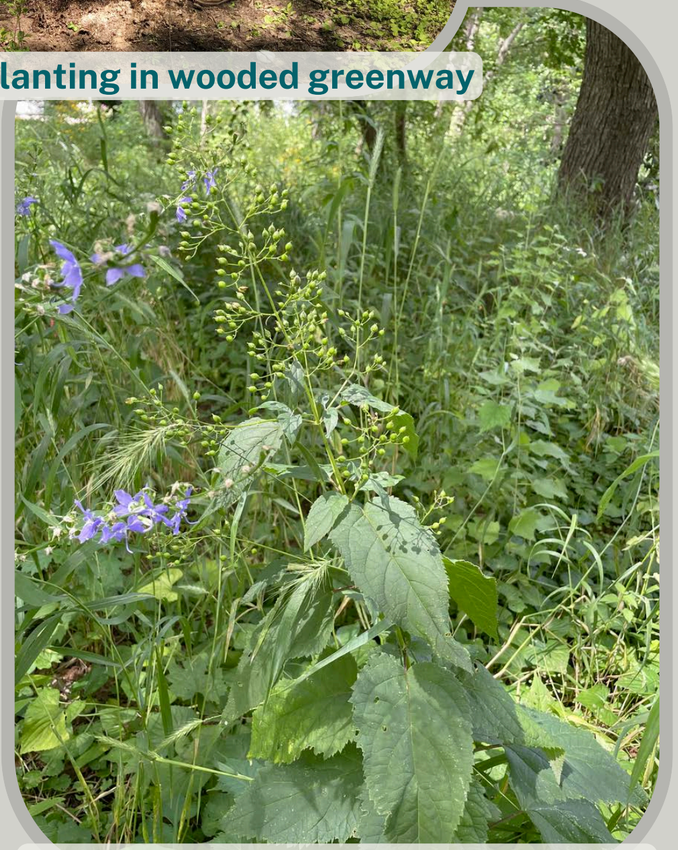
- Complete preventative maintenance
  - Cleaning
  - Televising
- Have rapid access during an emergency



# Ecological Goals

- Preserve as many mature canopy trees as possible
- Plant trees to keep oaks, hickory and other slower-growing hardwood species in future canopy
- Convert bare ground to areas that are planted with deep rooted native herbaceous plants, shrubs and trees to improve biodiversity, provide wildlife habitat and mitigate erosion

Native tree replanting in wooded greenway



Native woodland herbaceous species

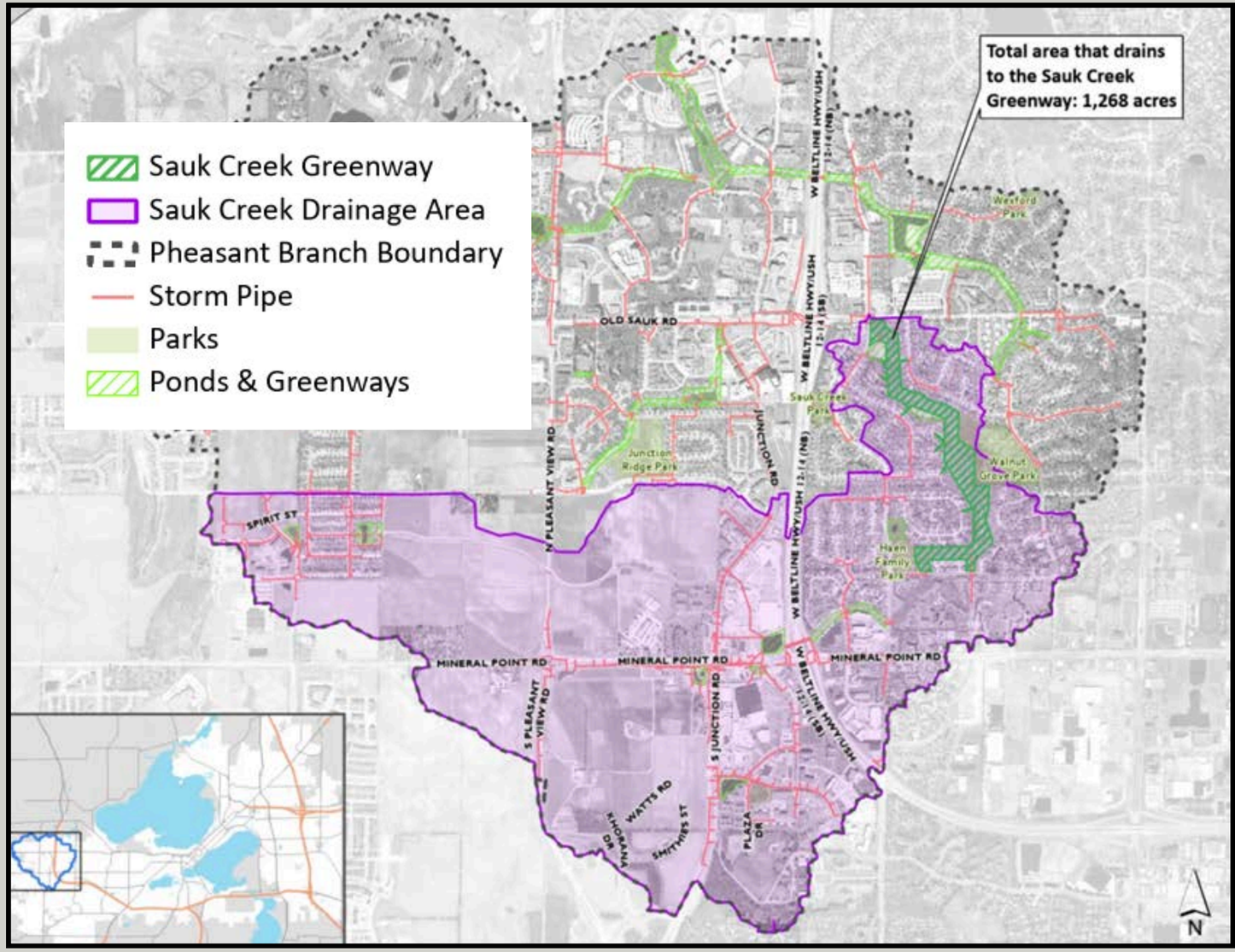
# Stormwater Existing Conditions - Conveyance

**Peak flows through greenway**

- Large summer storm (50% annual chance) = 290 cfs
  - ~10,730 garden hoses!
- Flood-level event (1% annual chance)= 820 cfs
  - ~30,340 garden hoses!

**Total volume of stormwater**

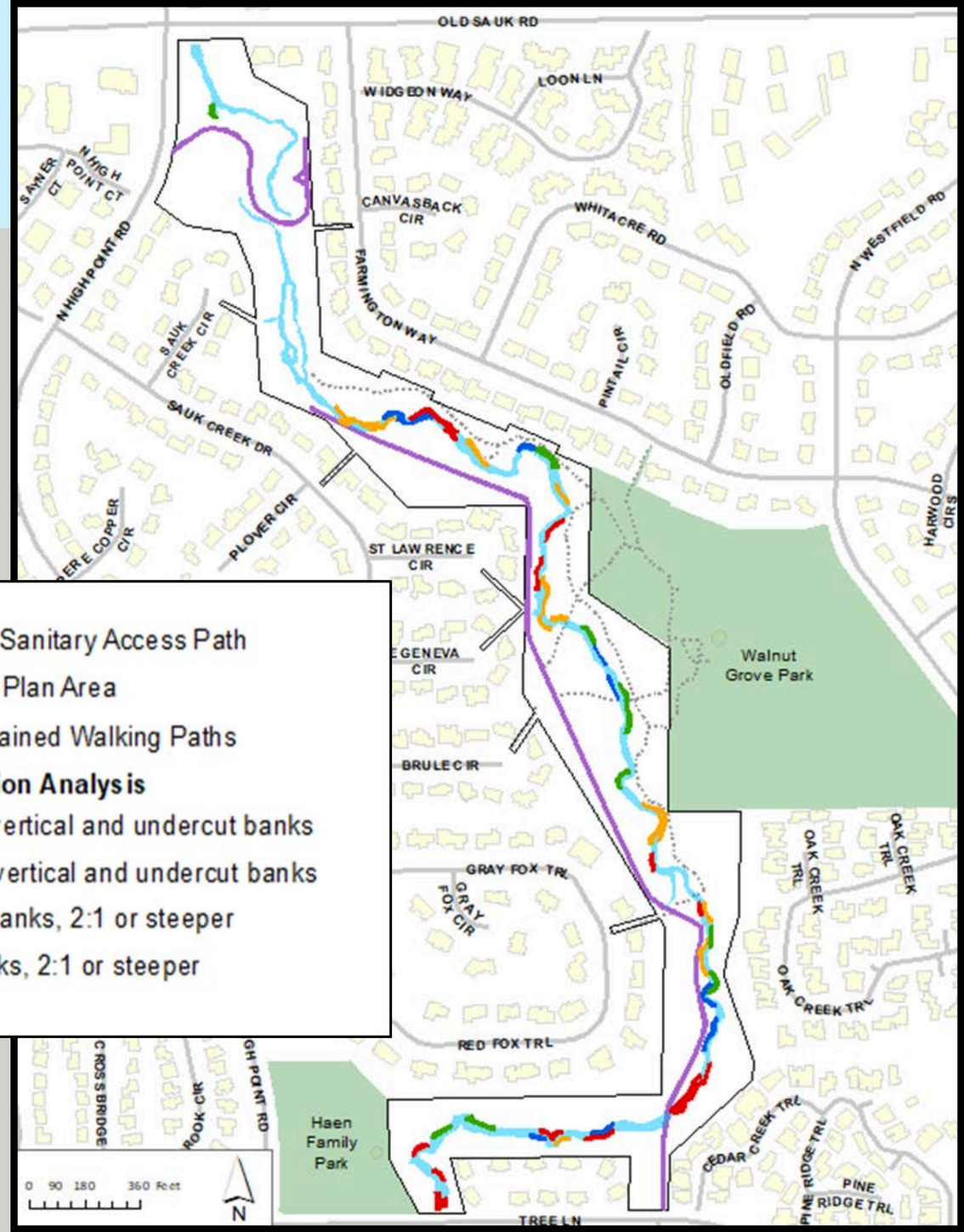
- Large summer storm (50% annual chance) = 80 acre-feet
  - To visualize, you would need to stack existing ponds 28' high
- Flood-level event (1% annual chance)= 290 acre-feet
  - To visualize, you would need to stack existing ponds 94' high



# Stormwater Existing Conditions - Channel Banks

There are a variety of steep, vertical and undercut banks over 3 feet high.

These are primarily located upstream of the St. Lawrence Pond, in the southern 3/4 of the corridor.



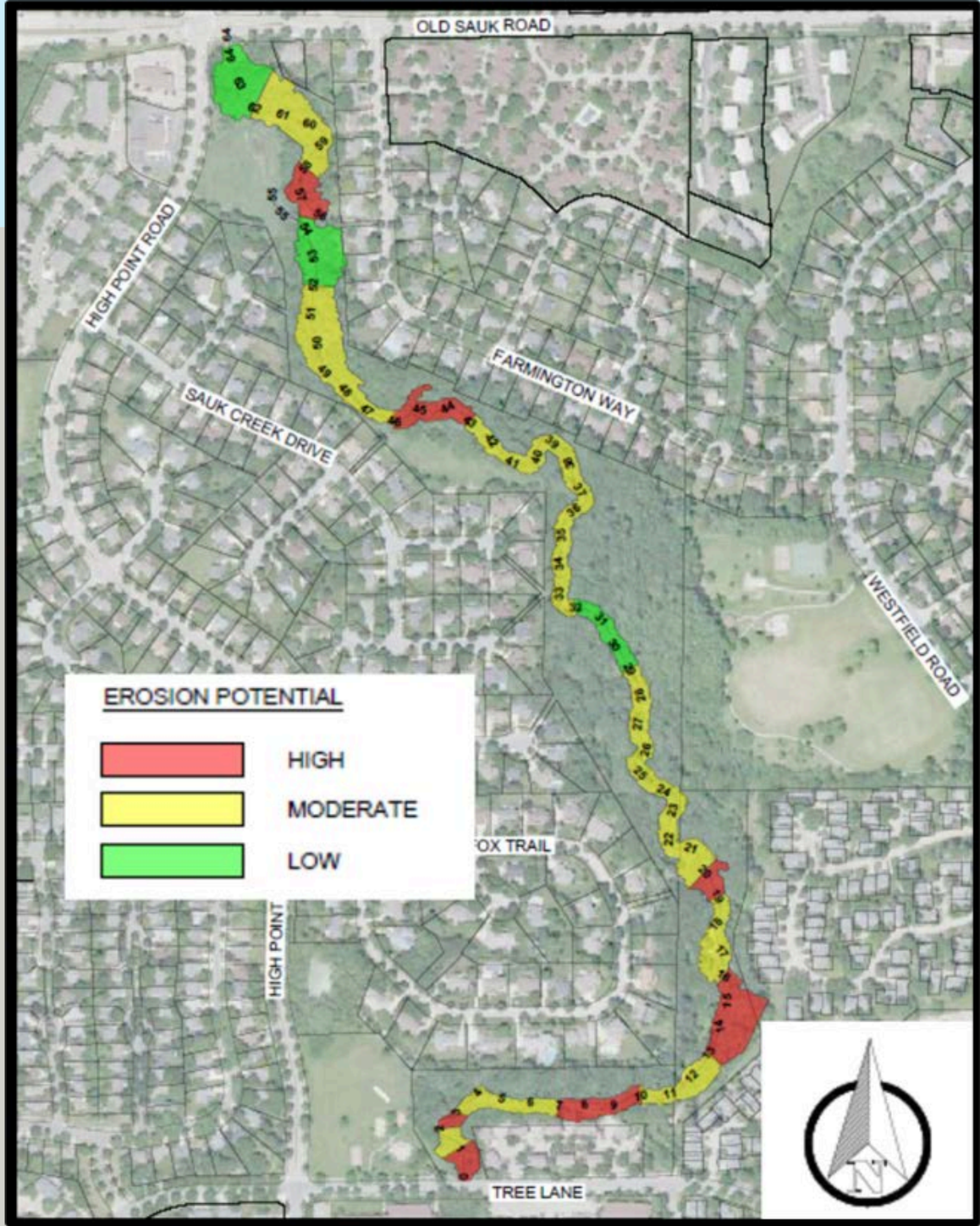

More susceptible to erosion

*Maps based on existing survey data - field verification needed to finalize exact locations.*

# Stormwater Existing Conditions - Channel Banks

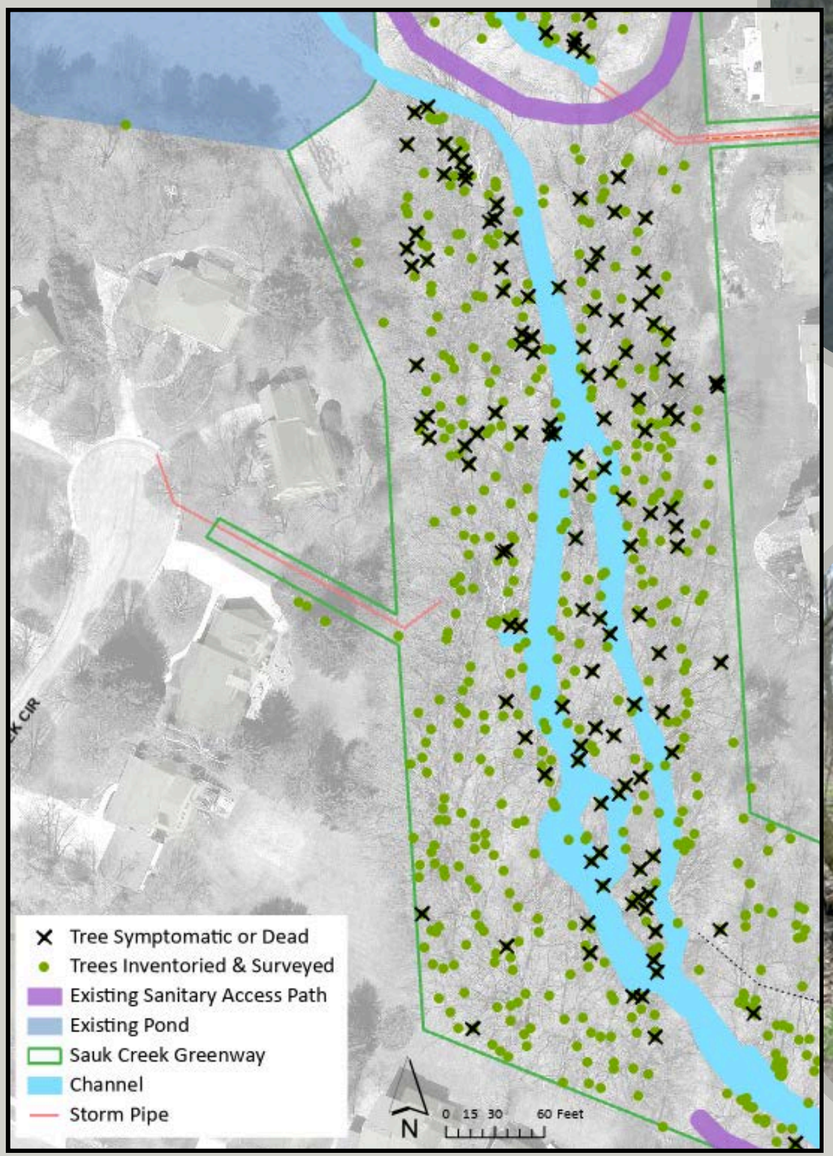
## Modeled Erosion Potential

- Erosion Potential is related to the forces caused by quickly moving stormwater (flow velocity)
- Bank erosion potential is shown for the 10% annual chance storm
- Modeled peak flow velocities



# Stormwater Existing Conditions - Sedimentation within Channel

- Active erosion has added to sedimentation accumulating in specific areas in the greenway
- The worst area is on the north end between both ponds where the slope of the channel decreases, water spreads out, slows down, and sediment can fall out of the stormwater
- This area has a high percentage of dead or symptomatic trees (24%) in comparison to the rest of the corridor (16%)

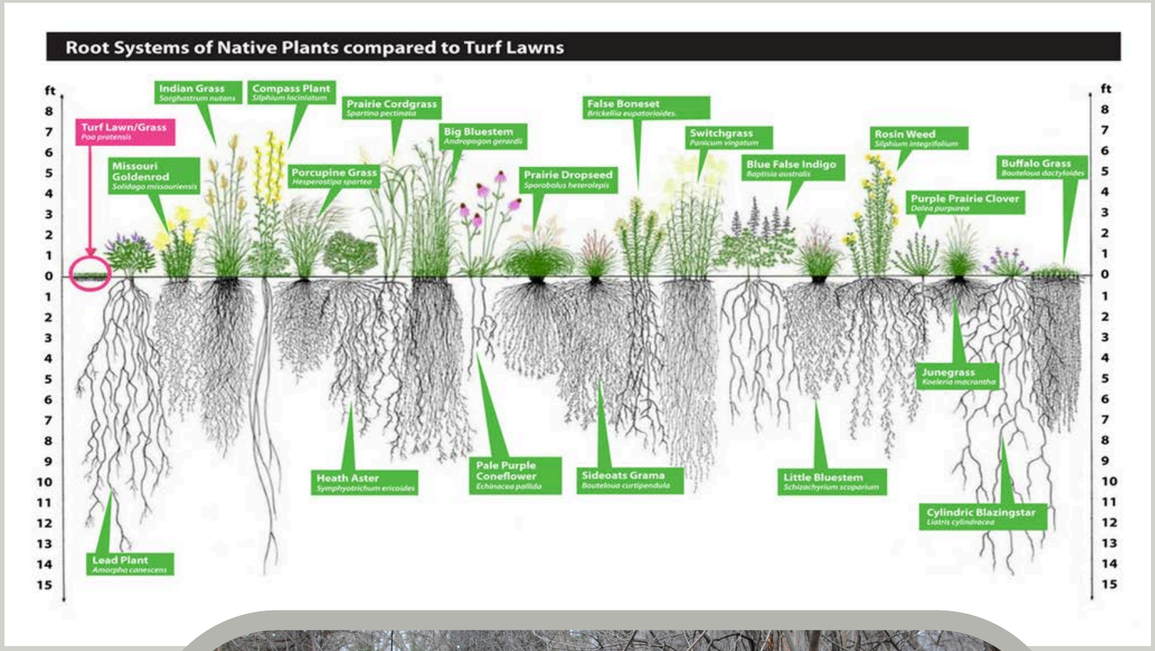


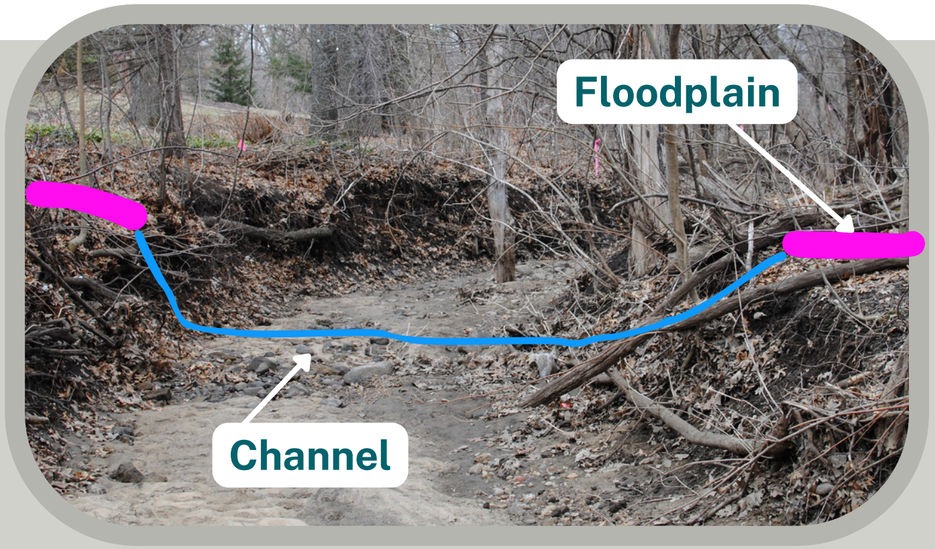

Sedimentation in channel

Sedimentation in corridor, covering tree root flare

# Stormwater Existing Conditions - Infiltration Capacity

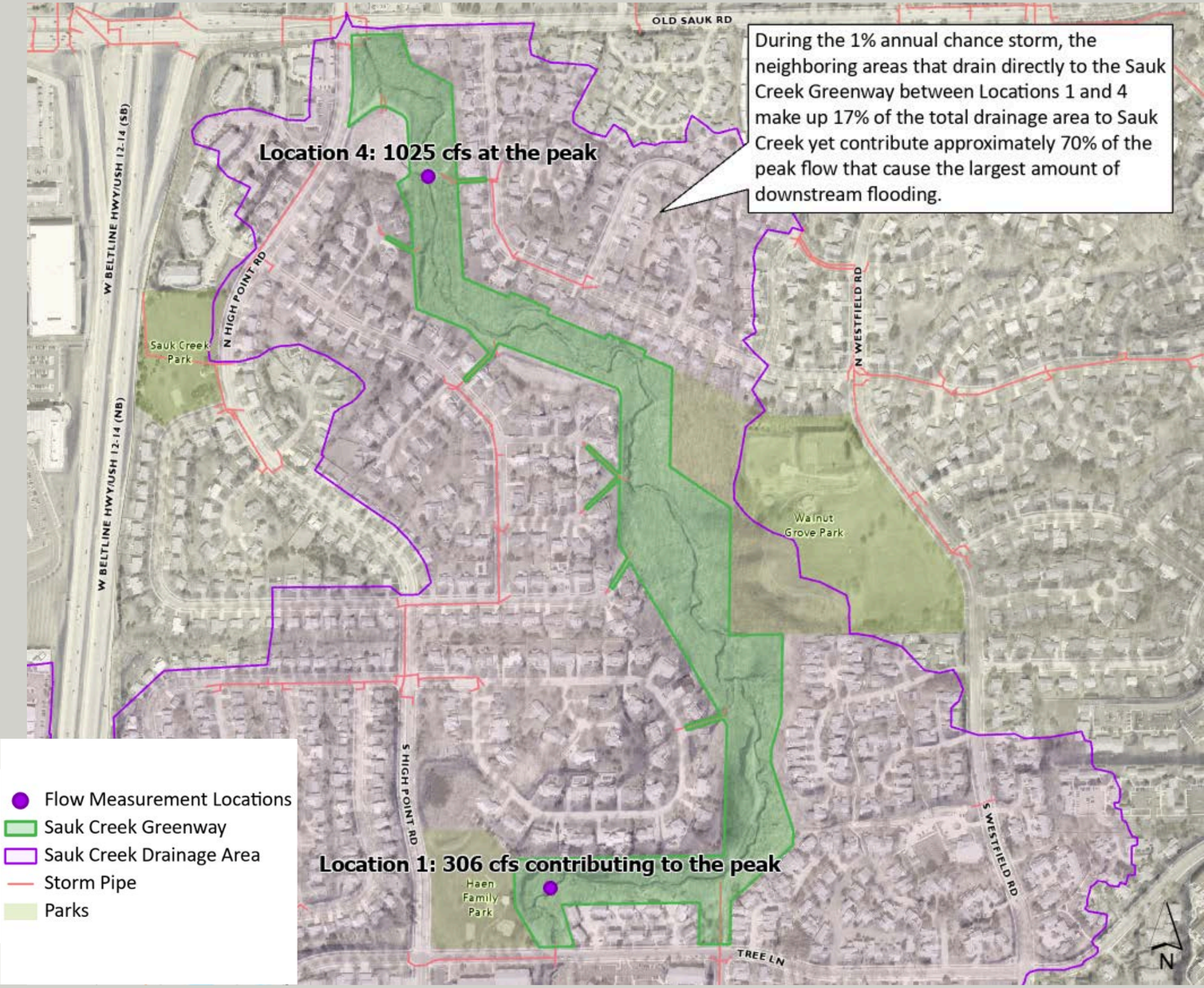
- A function of the corridor is to slow down and infiltrate stormwater
  - Note: This has a minimal impact on flood-level events due to volume of water (290 acre-feet)
- Floodplain is activated in storms >1" of rainfall, and the wooded floodplain helps slow down flows and infiltrate
- Deep rooted, native vegetation is more effective than turf lawn at infiltrating
- Stormwater that infiltrates in the greenway is not clean. It includes salt and other pollution from roads and yards (brake pads, paint chips, fertilizer etc). Some of these pollutants make it into the aquifers that serve Madison's drinking water and can cause problems.



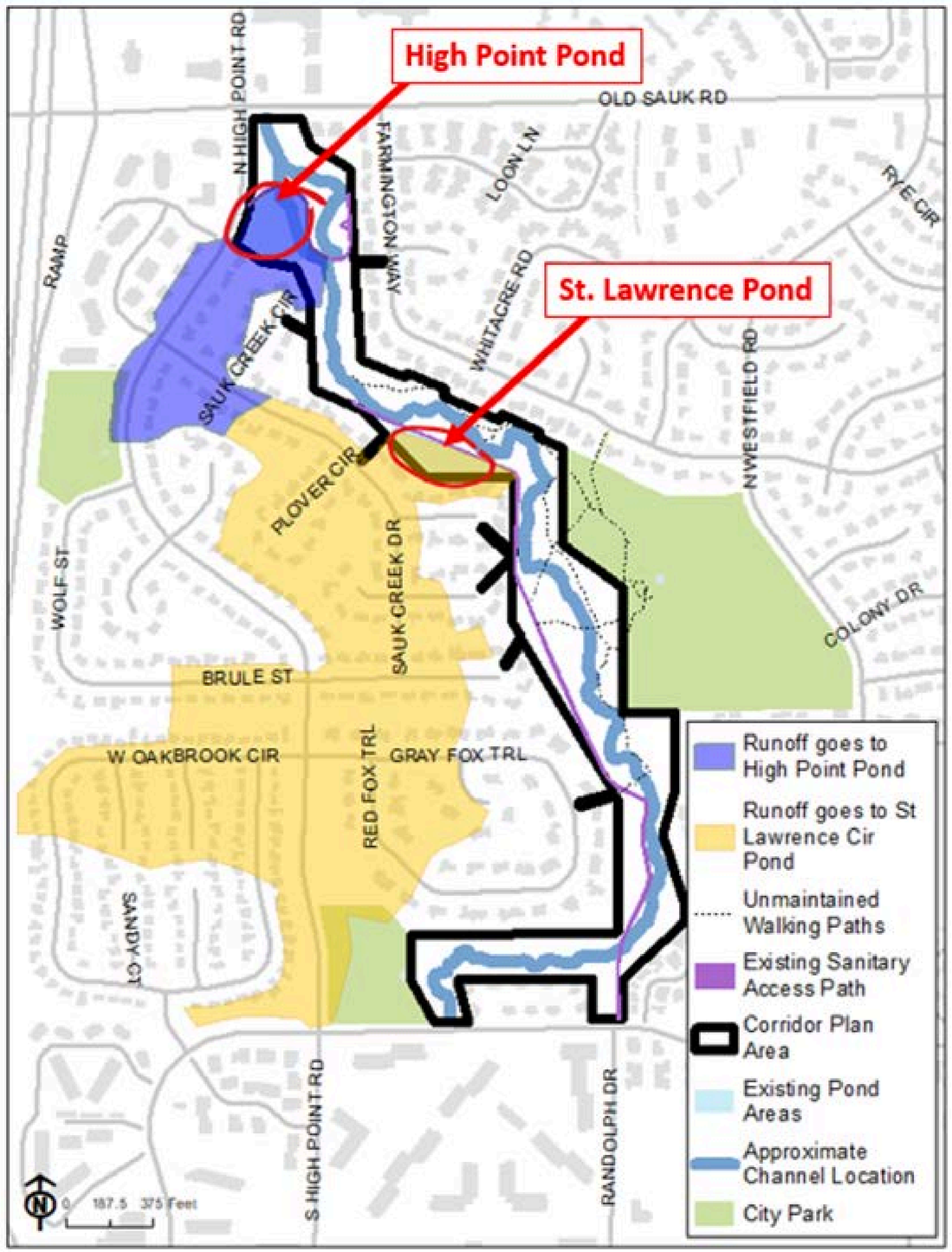
# Stormwater Existing Conditions - Infiltration Capacity

- Neighboring areas that drain to the SC Gwy make up 17% of the drainage area, yet contribute ~70% of the peak flows during a 1% annual chance storm
- Factors contributing to this include:
  - Proximity - large flows upstream are routed through ponds/gwys to slow down their peaks
  - Development standards - adjacent neighborhoods had lesser stormwater standards including a lack of an infiltration requirement



# Stormwater Existing Conditions - Ponds

- Built in 1980's/1990's to meet stormwater development ordinances of the time
  - Detention of 10% annual chance storm (10-year)
  - (Today's standard is the 0.5% chance storm, 200-year storm)
- Both ponds designed to collect flows from channel and water from neighborhoods
- Ponds are undersized and not using today's best management practices
- Only capture a small amount of sediment



# Stormwater Existing Conditions - St Lawrence Pond

- Diversion structure to treat channel water has failed, and pipes have clogged
- Only gets water from the neighborhood now, except in very large events
- Pipe bringing water from Sauk Creek Circle is broken and needs repair
- Pond currently captures 0.5% of the Total Suspended Solids (TSS), or sediment.

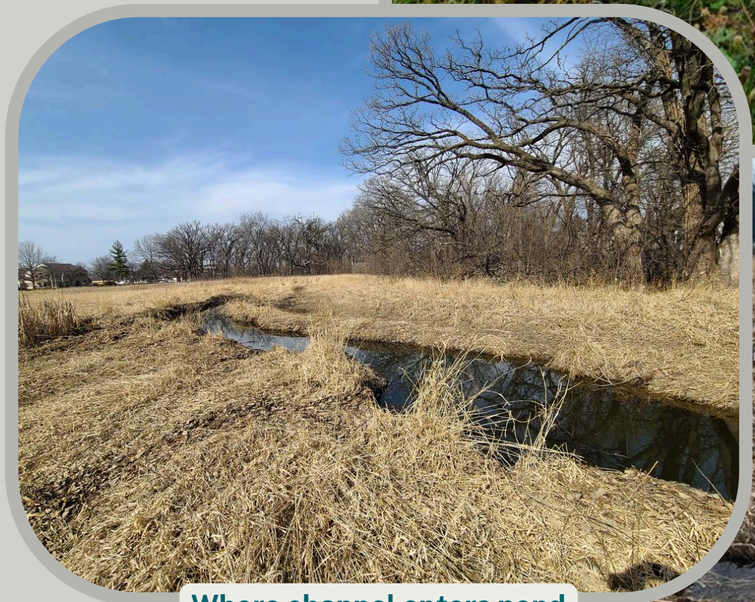
St. Lawrence pond - from Sanitary Access Path towards St Lawrence Cir

Failed diversion structure in channel

# Stormwater Existing Conditions - High Point Pond

- The 1.8 acre pond currently captures 7% of the Total Suspended Solids (TSS), or sediment, entering the pond.
- Sediment accumulating is challenging to remove
  - Would need large equipment to dredge which would disturb the existing vegetation, and re-vegetate
- Pond is actively taking channel water, effectively receiving 1,268 acres of runoff
  - Rule of thumb for new development: need ~10% of total drainage area for effective treatment to today's standards (~120 acres)
    - This is not feasible here

N High Point pond from Sanitary Access Path that's on berm on north side of pond

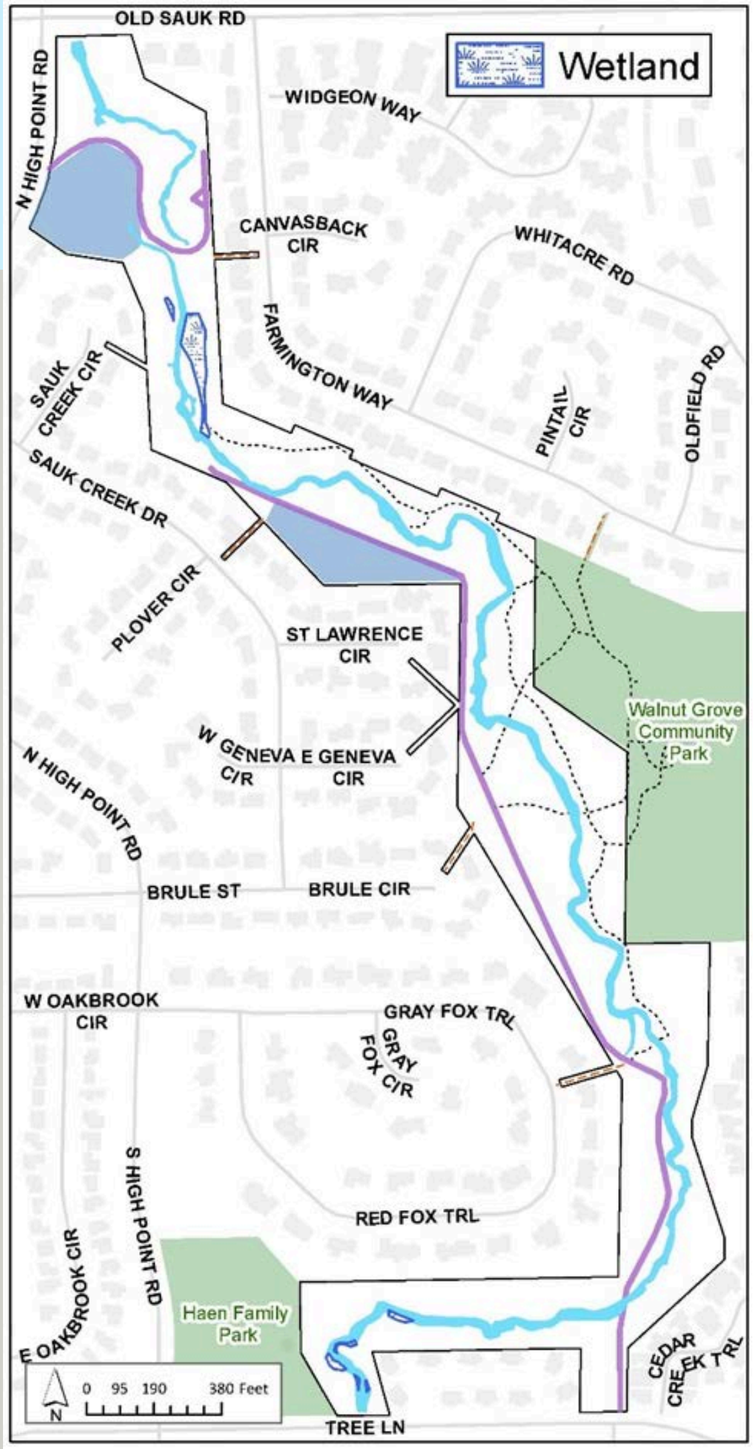


Where channel enters pond

N High Point pond outlet

# Stormwater Existing Conditions - Wetlands

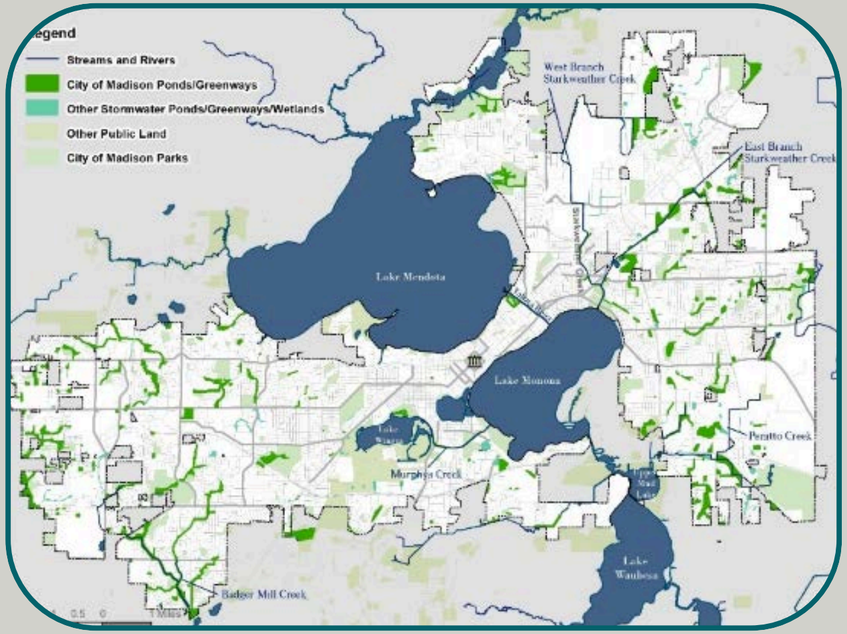
- There are a few areas of regulatory delineated wetlands within the corridor
  - Small wetland areas in Tree Lane and Haen Family Park
  - A larger wetland area along Farmington Way
- Proposed improvements largely avoid wetland impacts
  - During design phase when locations for improvements are finalized, project would be permitted for any wetland impacts



# Existing Maintenance

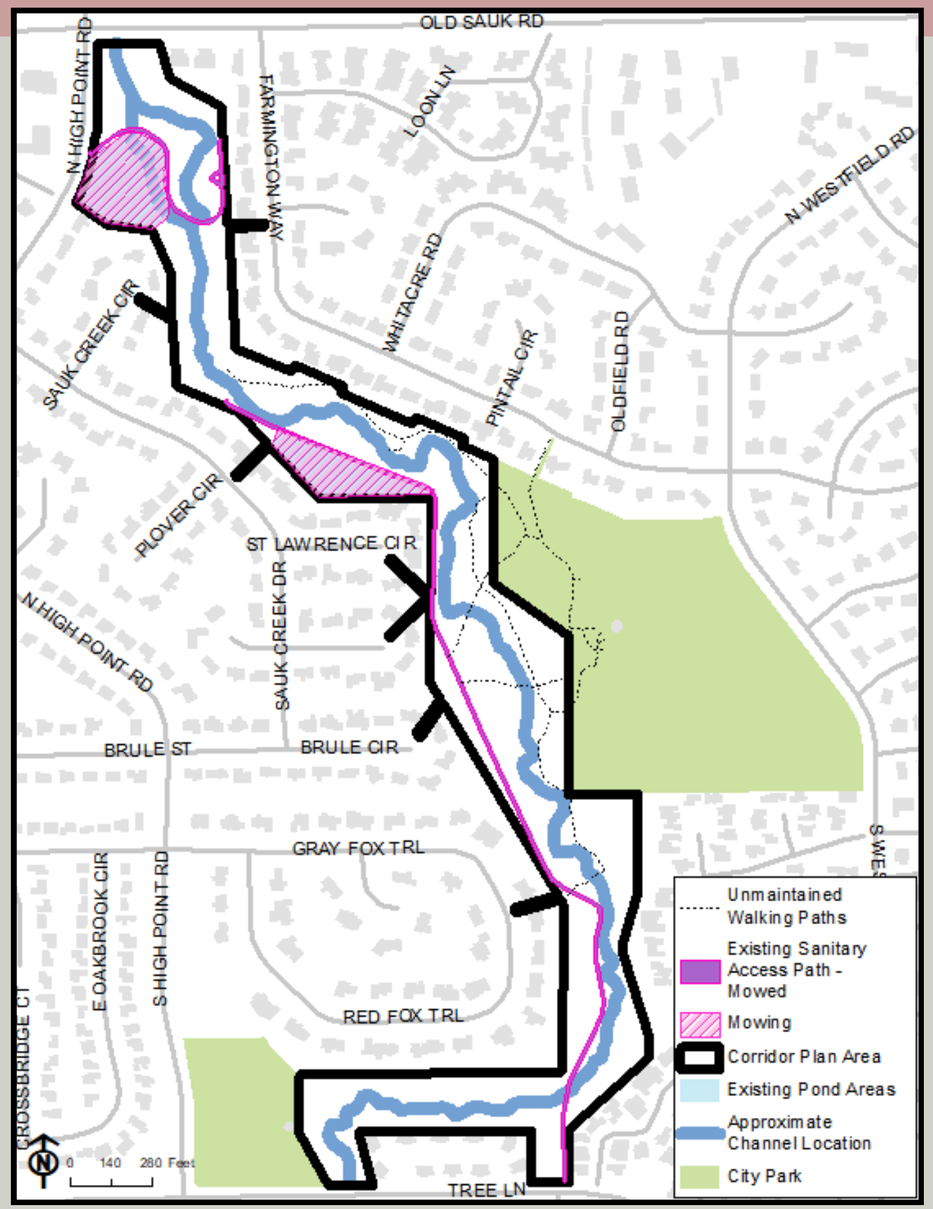
- Stormwater Utility and Sanitary Utility are tasked with maintaining effective stormwater and sanitary infrastructure Citywide.
- The funding for supporting the Utilities is provided by the monthly municipal bills collected for properties within the City.
- The Stormwater Utility (SWU) maintains ~2,000 acres of vegetated land
    - Sauk Creek Greenway is **34.9 acres, which is just 1.7% of SWU maintained land.**

- To put this into perspective, City Engineering Operations also maintains:
    - 790 miles of sanitary sewer main
    - 549 miles of storm sewer
    - 39,313 stormwater structures
    - 308 ponds, infiltration basins and raingardens

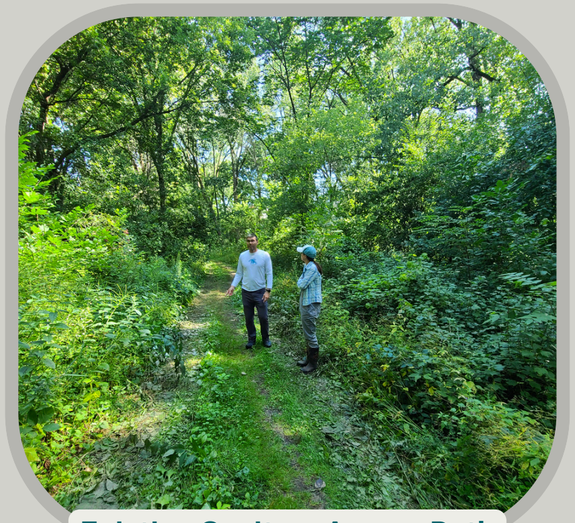



Thumbnail Image of Interactive Online Map of Ponds and Greenways

# Existing Maintenance - Mowing




Existing Sanitary Access Path

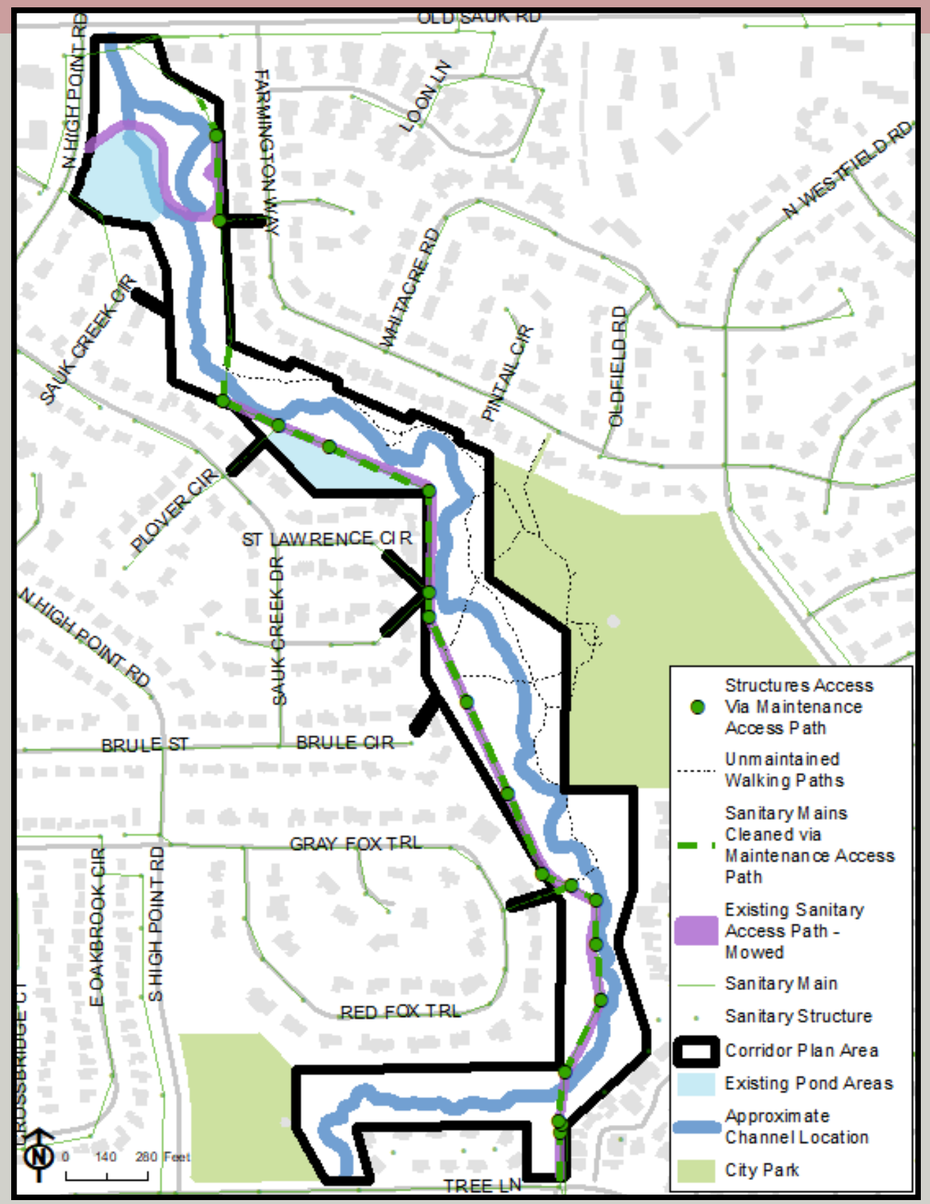


Existing Sanitary Access Path (prior to annual mowing)

- Stormwater ponds are mowed ~1 year
  - Northern pond mowed less frequently because it's often too wet
- Sanitary access path mowed prior to cleaning sanitary sewer

Existing Sanitary Access Path near St Lawrence Pond (prior to annual mowing)

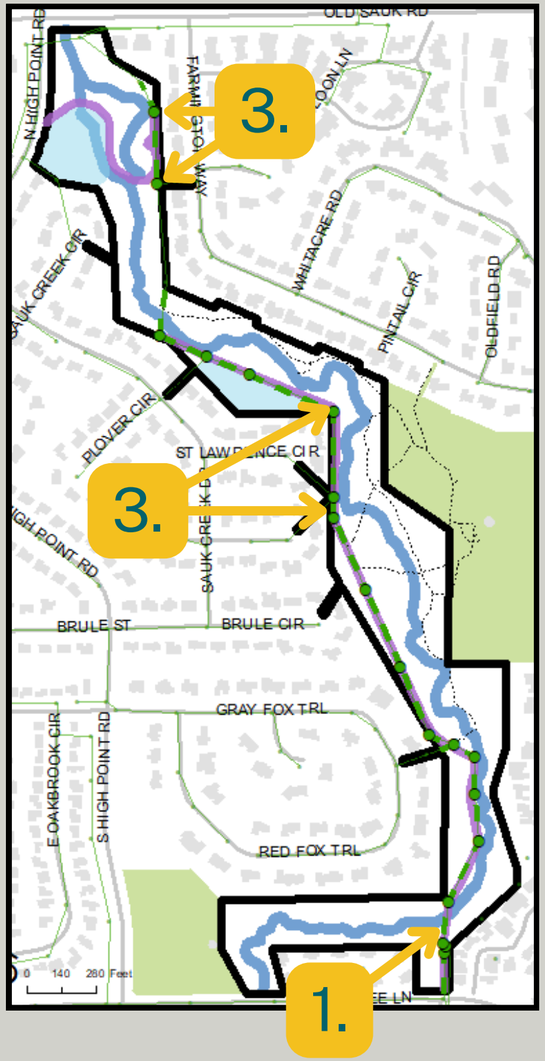
# Existing Maintenance - Sanitary




Vactor Truck used to clean sewer and address emergency back-ups

- Clean and televise 21" regional sanitary sewer main
  - Prevents back-ups
- Functional access paths allows quick response during emergencies
  - Important to be able to respond quickly, and in wet conditions

# Existing Maintenance - Sanitary



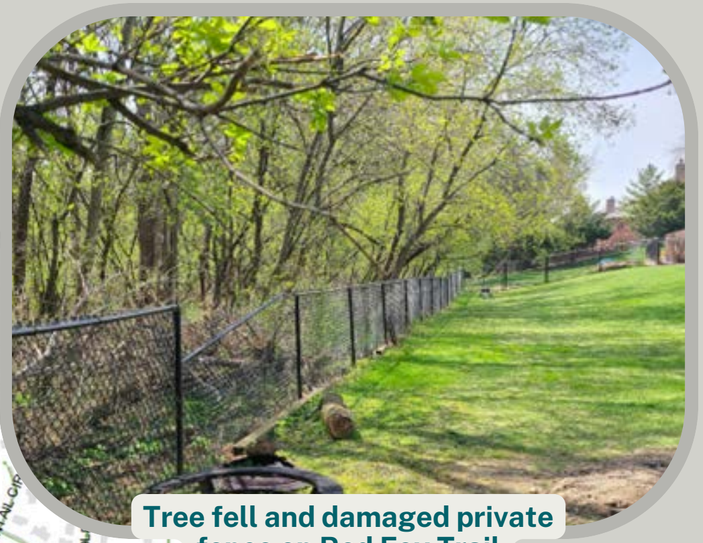

## Current challenges

1. Crossing near Tree Lane and Randolph Dr failed. Currently takes a dedicated crew 1 day to create a crossing suitable for Vactor that can only be used during dry weather
2. 6" of topsoil placed on top of sanitary access path leads to Vactors sinking into topsoil and rutting paths when there's moisture in soil (Vactor's weigh >70,000lb)
3. Turf grass-covered access is slippery when wet or dewy (sanitary access paths are no longer built this way)
4. Challenges compound during emergencies that often happen during wet weather when infiltration and inflow can overwhelm sanitary sewer and lead to overflows or back-ups

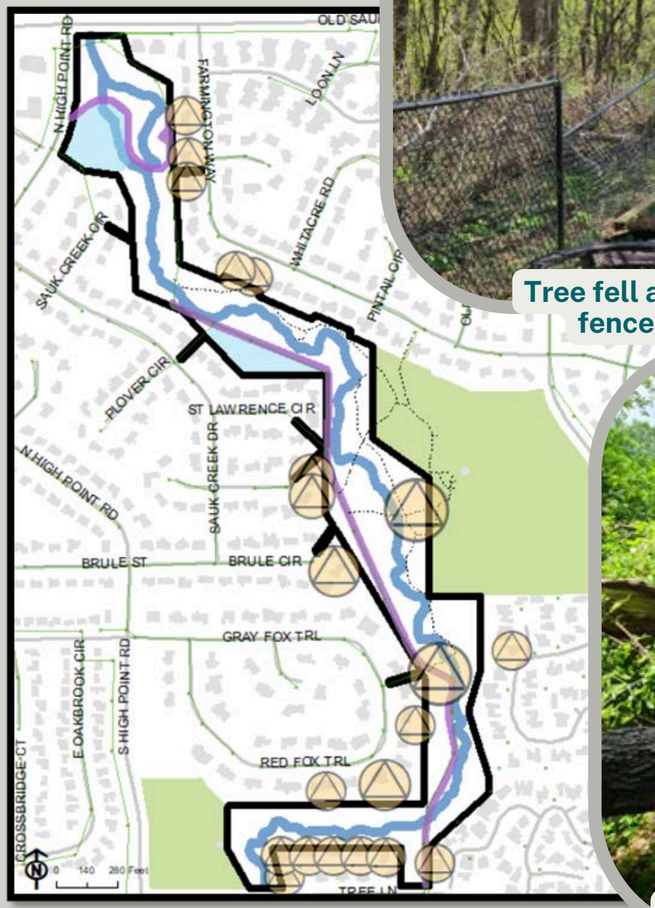
Failed crossing of Sanitary access path near Randolph Dr and Tree Ln

Sanitary access path directly behind adjacent private property

# Existing Maintenance - Trees



Tree fell and damaged private fence on Red Fox Trail




Fallen tree impacts adjacent tree behind private property

- City responds to tree removal requests from adjacent residents as quickly as possible
  - Often delayed due to limited access, or wet conditions
- The City has also received complaints about restoration following tree removal requests.
  - There are not resources dedicated to restoration following many tree removal requests without them being linked to a capital improvement project.

# Existing Maintenance - Trees

Equipment needed for tree removals, completed by City staff

1-Ton Truck


Mini Excavator


Bandit Chipper

Track bobcat

Equipment needed for more technical removals, completed by Contractor

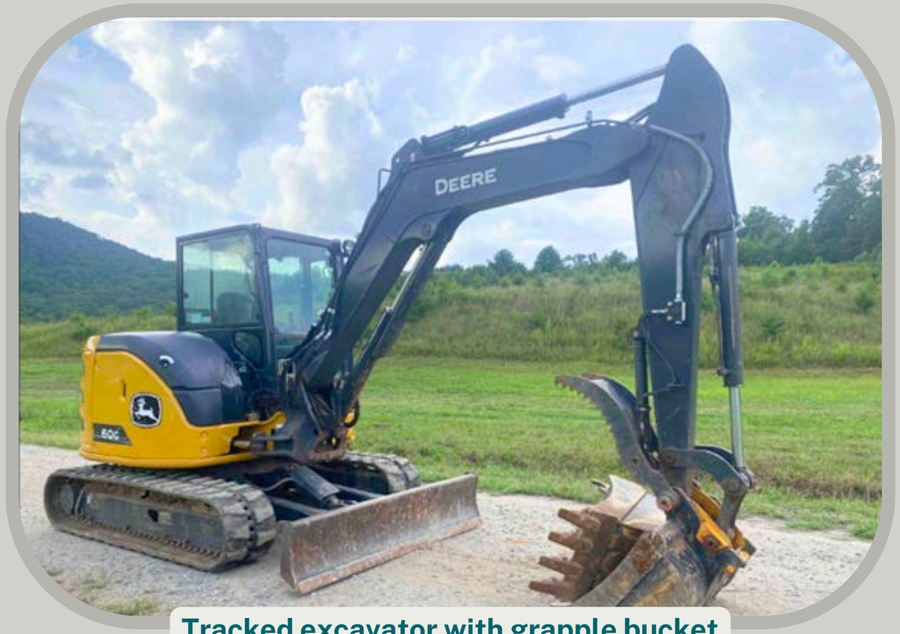

Bucket truck may be utilitzed by City-hired contractor

# Channel and Tree Maintenance Access Paths

- Currently limited access to remove large blockages because there are not access paths along much of the channel
- Large equipment often needed for large blockages due to weight of tree trunks (thousands of pounds) and risk of loaded limbs unloading their force on operators or ground cutting crews if big equipment is not used
    - Using appropriate sized equipment can mean a log jam can be managed in hours vs days

Wheeled excavator with grapple bucket

Large blockage in Sauk Creek



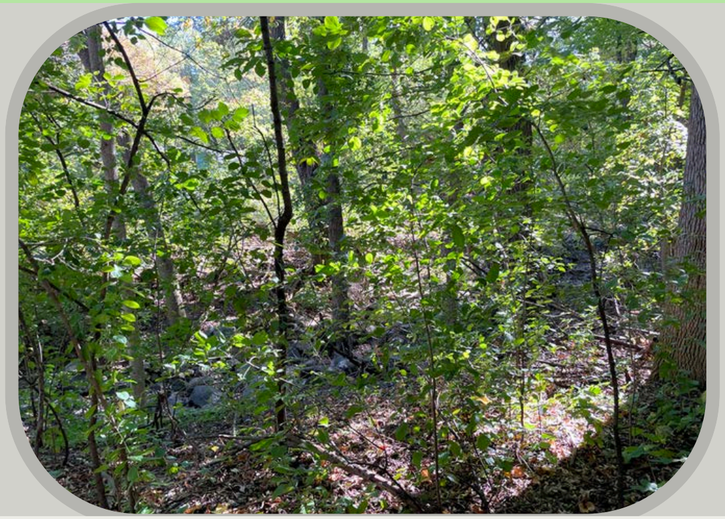

Tracked excavator with grapple bucket

# Ecological Threats to the Sauk Creek Greenway

**The ecological assessment identified several ecological threats to the greenway and the planning process highlighted several others. These include:**

- Replacement of oaks
  - Oaks are in decline
  - Lack of oak regeneration --> fewer oaks in future canopy
  - Oak wilt
- Invasive species
  - Suppress native plant growth and lead to lower biodiversity
- Land use and encroachments
  - Suppress native plant growth
  - Introduce invasive species to the greenway
  - Add nutrients and organic matter to downstream habitat
- Erosion
  - May destabilize trees
  - Loss of herbaceous groundlayer
  - Contributes sediment to downstream habitat
- Flooding and sedimentation
  - Smothering and killing trees
  - Loss of herbaceous groundlayer

Oak tree in Sauk Creek GR with roots buried under layers of sediment



Common buckthorn grows rapidly, casts dense shade, exudes a growth-suppressing chemical into the soil and produces berries that weaken and sicken birds

Non-native or invasive horticultural plants such as this lamium species may suppress woodland herbaceous plant diversity

Oak tree with exposed roots due to erosion

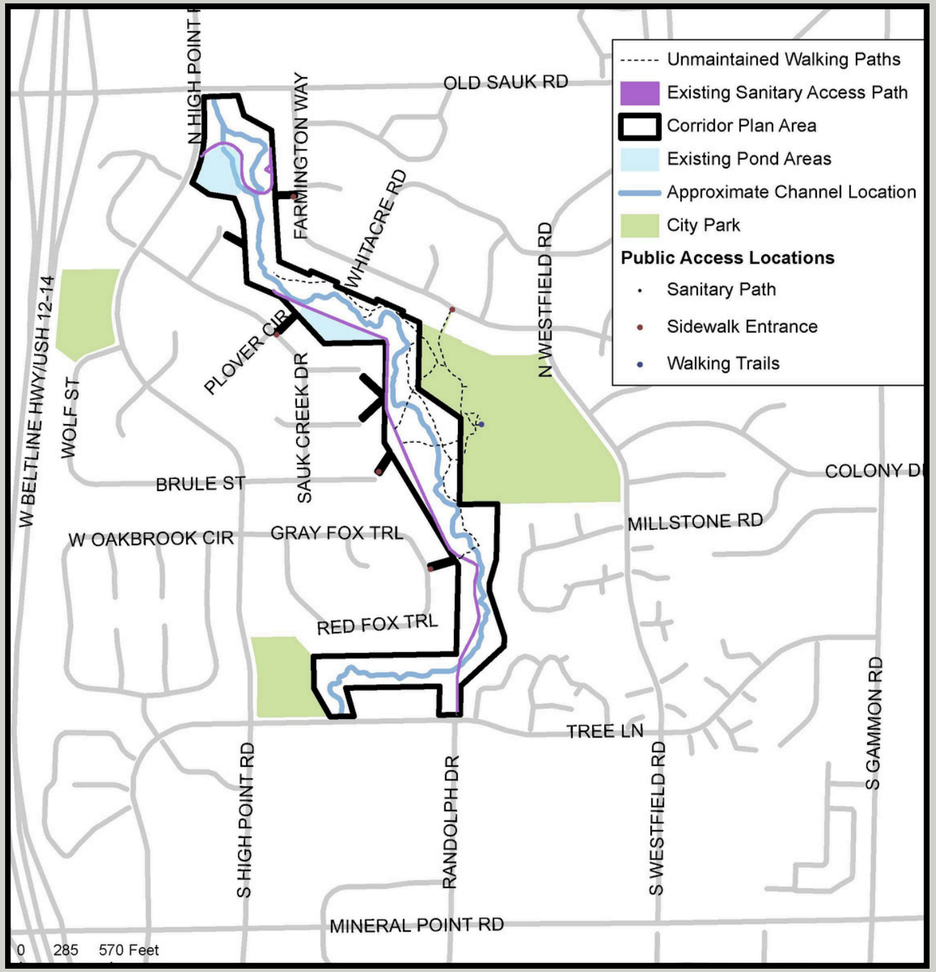
# GET TO KNOW YOU QUESTION

Q2

## Where do you live in relation to the Sauk Creek Greenway corridor?

## Single choice.

1. I live directly adjacent to the Sauk Creek Greenway Corridor
2. I live within ~5 blocks of the Sauk Creek Greenway
3. I live within walking distance of the Sauk Creek Greenway
4. I live within the City of Madison
5. Other



# Q2 - Sauk Creek Greenway PIM 5

1. Where do you live in relation to the Sauk Creek Greenway corridor?
(Single choice)

| | |
|---|---|
| I live directly adjacent to the Sauk Creek Greenway Corridor | (26/53) 49% |
| I live within ~5 blocks of the Sauk Creek Greenway | (20/53) 38% |
| I live within walking distance of the Sauk Creek Greenway | (7/53) 13% |
| I live within the City of Madison | (0/53) 0% |
| Other | (0/53) 0% |

You did not answer this question

# Corridor Plan - Engagement Review

**Public Information Meetings (PIMs)**

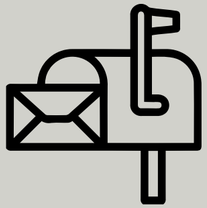
- 6 PIMs for Corridor Plan development
- 1 previous PIM (2018)
- 3 Pheasant Branch Watershed Study meetings
- 478 meeting registrants (Corridor PIMs 1-5)

**Focus Groups**

- 4 first round focus groups with 70 participants
- 5 vegetation-specific focus groups breakout rooms

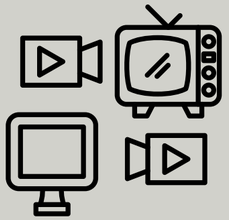
**West Area Plan Collaboration**

- 3 open house/public meetings



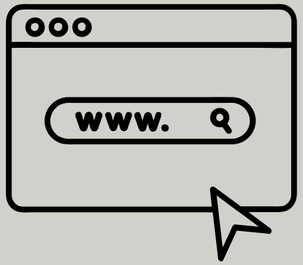
**Snail Mail**

- 29,879 postcards sent



**Media Presence**

- 7 news interviews




**Online Engagement**

- Custom webpage with subpages on main topics (water, land and people)
- 7,110 webpage views (as of 11/22/24)
- 147 people subscribed to receive email updates

**Requests for Feedback**

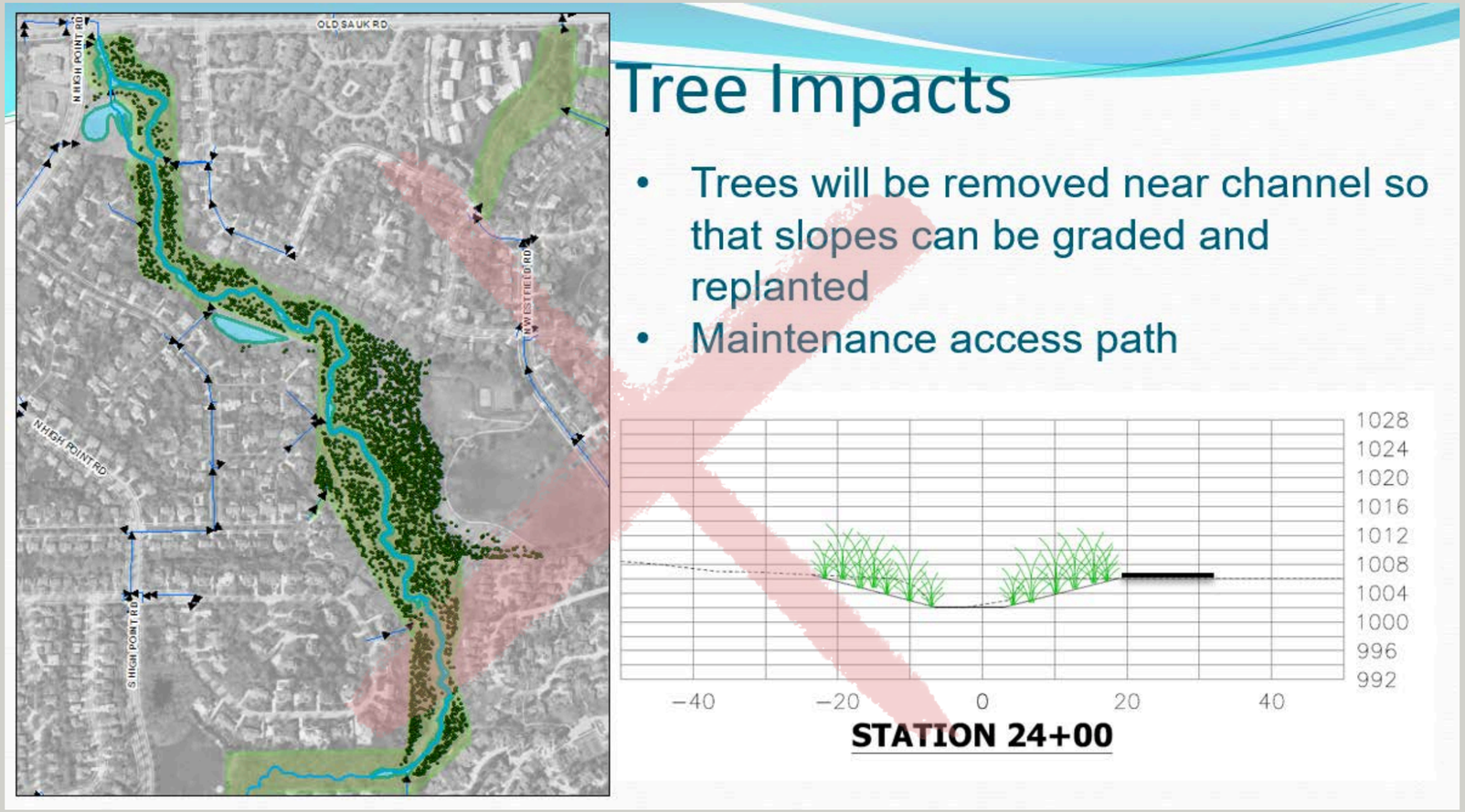
- 27 in-meeting polling questions
- 44 returned comment cards
- Goals and Values Online Survey
  - 143 participants
- Draft Corridor Plan Online Survey
  - 169 participants, 1,104 open-ended responses

**Signs in Public Spaces**

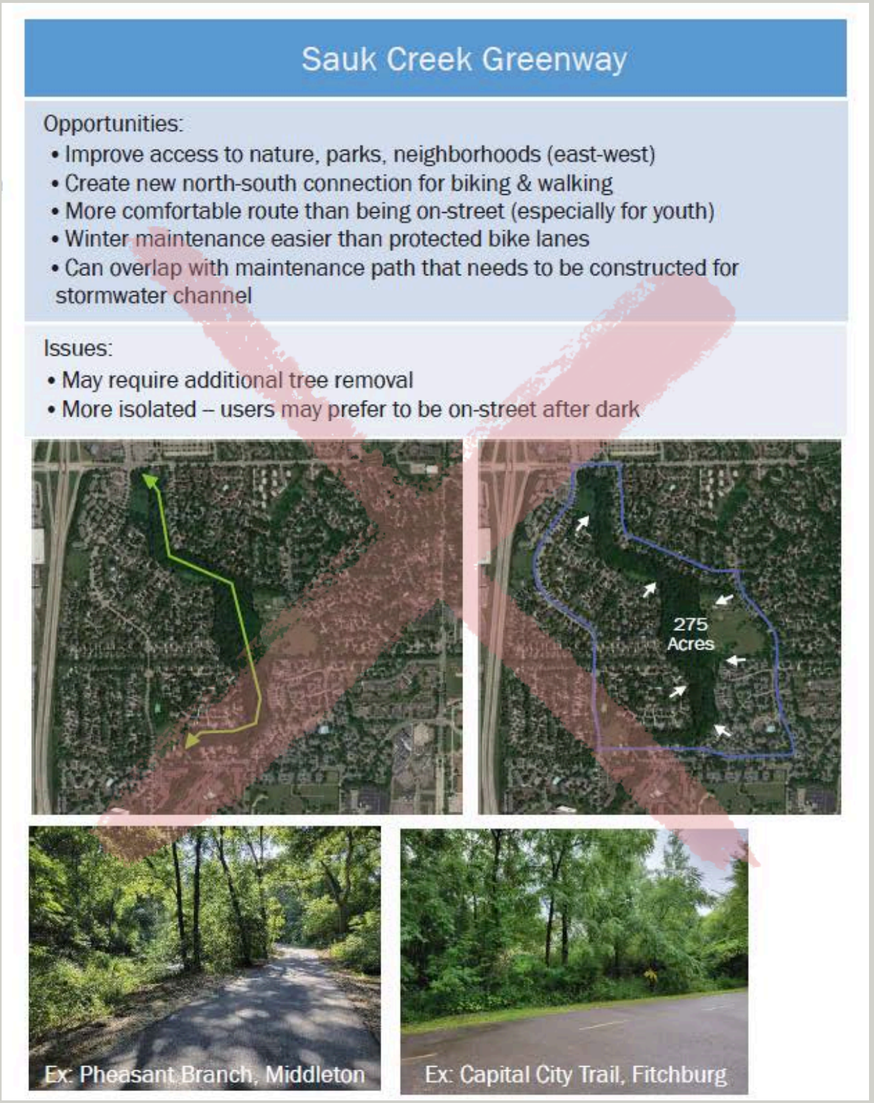
- 16 signs in greenway and adjacent parks
- 2 rounds of signs and fliers in libraries

***All outreach is additional to our typical design outreach process that will occur for each phase of design**

# Pre-Corridor Plan Concepts - NOT INCLUDED IN PLAN




INITIAL CONCEPT SHARED IN 2018 PRIOR TO STORMWATER MODELING EFFORT AND MORE DETAILED CHANNEL CONCEPT PLANNING. NOT PROPOSED IN CORRIDOR PLAN BASED ON 2018 INPUT.



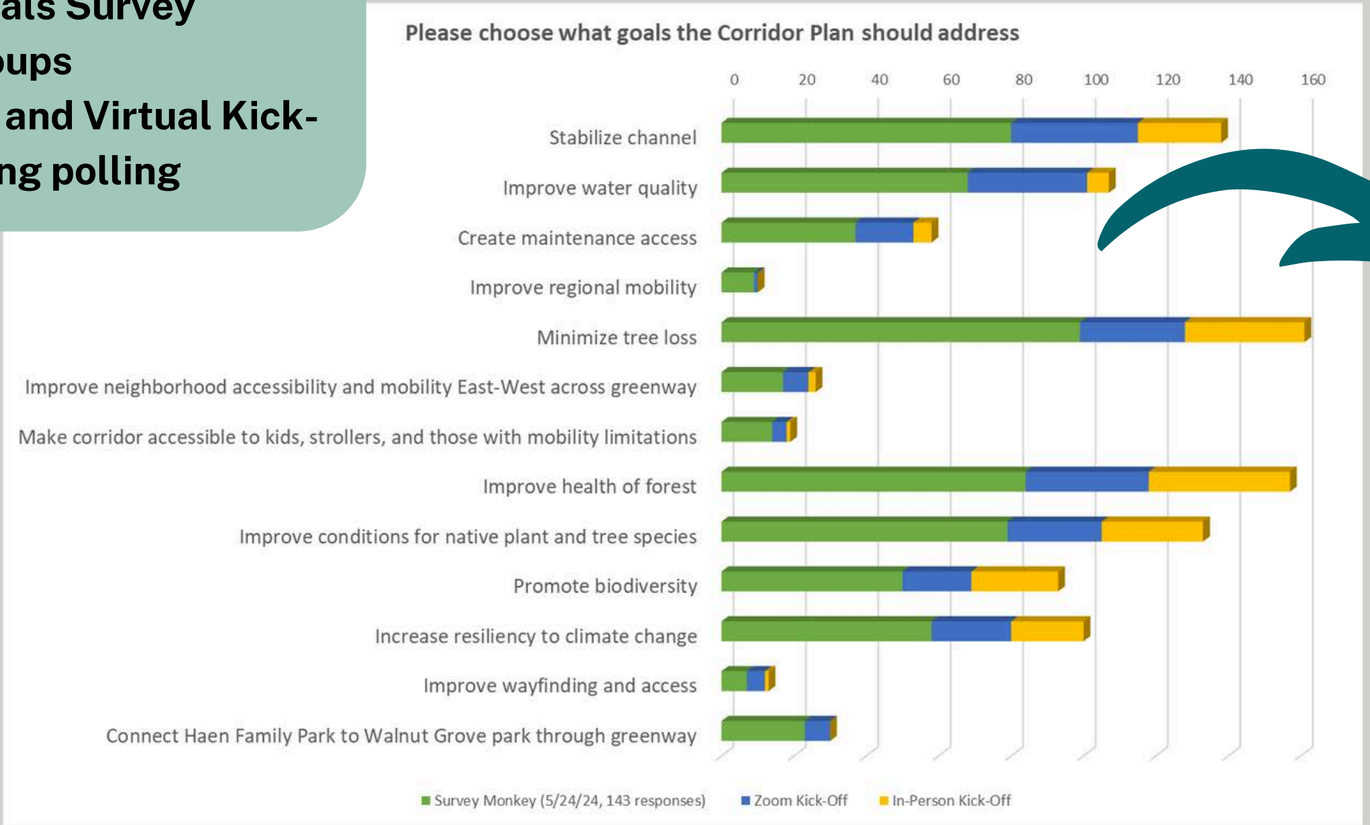

WEST AREA PLAN NORTH-SOUTH MULTI-USE PATH (REMOVED FROM FINAL PLAN BASED ON INPUT

# How Community Input Shaped the Corridor Plan

## Community Goals

### Community Feedback Gathered From:

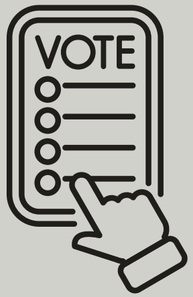
- Online Goals Survey
- Focus Groups
- In-person and Virtual Kick-Off meeting polling




### Top Community Goals for Plan

1. Minimizing tree loss
2. Improve the health of the forest
3. Stabilize the channel
4. Improve conditions for native plant and tree species
5. Improve water quality
6. Increase resiliency to climate change
7. Promote biodiversity
8. Create Maintenance Access

# How Community Input Shaped the Corridor Plan Concept Refinement Public Meeting - July 2024




## Meeting Details

- Goal to facilitate **community input to shape the corridor plan**
- **17 in-meeting poll questions**
- Of the 101 community members who registered, **91% lived within 0.5 mile and 96% lived within 1.0 mile** of the corridor

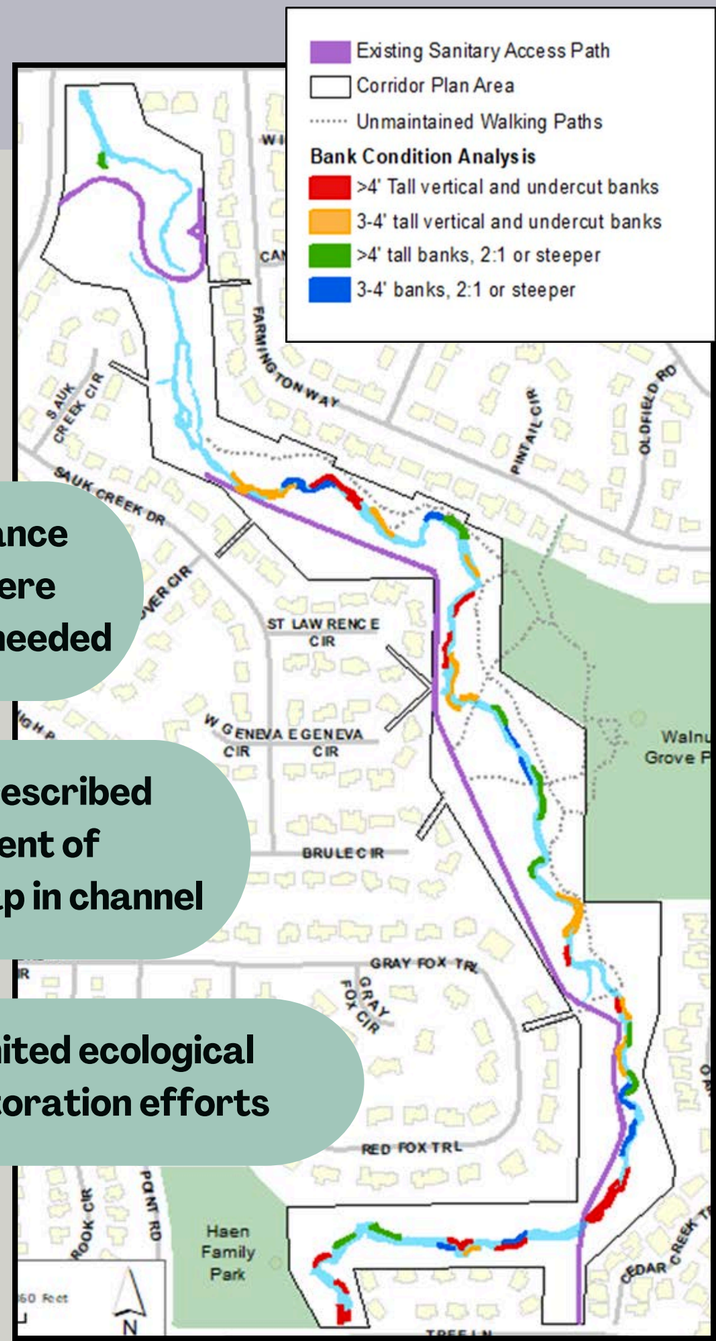
## Meeting Feedback

- **87% of respondents** - it is somewhat or very important to me that the City have **access** to the greenway to **remove dead/downed trees**
- **68% of respondents** - would be **OK with gravel cover** where increased access is needed
- **45% of respondents** - Begin by stabilizing **least stable banks only**
- **44% of respondents** - Begin by stabilizing **steep or vertical/undercut banks**
- **60% of respondents** - **Use boulders (riprap)** to stabilize channel
- **87% of respondents** - I am somewhat or very interested in expanding coverage and **increasing the diversity of native herbaceous species**

**Gravel maintenance access path where increase access is needed**

**Limited prescribed placement of boulder riprap in channel**

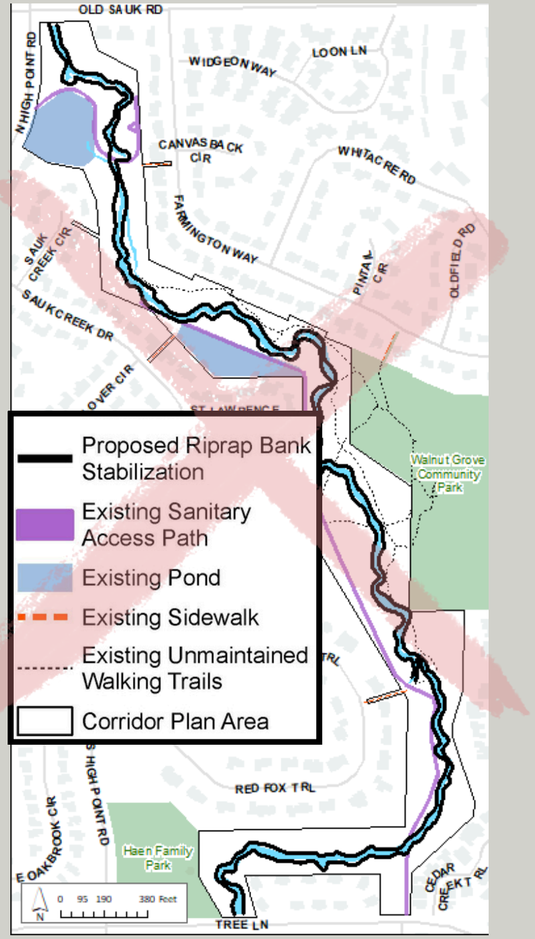
**Limited ecological restoration efforts**



# How Community Input Shaped the Corridor Plan
# Concept Refinement Public Meeting - July 2024

## Options offered, NOT selected with in-meeting polling

**X - Stabilizing all banks in corridor**

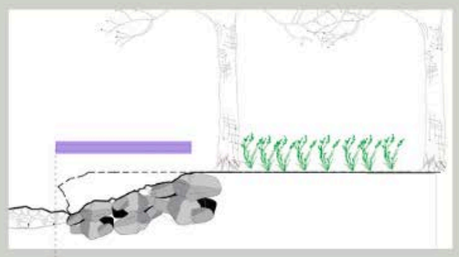



**X - Stabilizing banks with soil lifts, or vegetation**

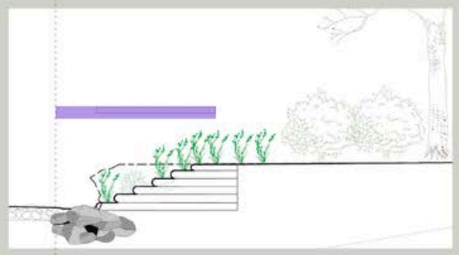
### Bank Protection Options

Less grading, less adjacent impacts

- **Boulders (Riprap)**
  - More permanent
  - Less in-channel habitat
  - Challenging to manage weeds and volunteer trees that can eventually grow into riprap

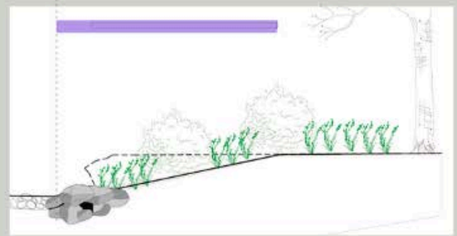


- **Boulder footer with Soil Lifts**
  - Challenging to build
  - Challenging to establish vegetation
  - Selective thinning needed adjacent to bank for light to reach vegetation
  - Most expensive
  - Medium long-term maintenance



More grading, more adjacent impacts

- **Boulder footer and vegetation**
  - Challenging to establish
  - Selective thinning needed adjacent to bank for light to reach vegetation
  - Most long-term maintenance



**X - Paved access paths**

# How Community Input Shaped the Corridor Plan
# Preliminary Corridor Plan - October 22, 2024

## Meeting Details

- Goal to facilitate **community input to refine the corridor plan**
- **4 in-meeting poll questions**
- Of the 54 community members who registered, **89% lived within 0.5 mile and 93% lived within 1.0 mile** of the corridor

## Meeting Feedback

- **75% of respondents** - Prefer or are OK with **stabilizing banks and adding maintenance access** in the **middle** of the corridor (2b)

→ **Additional riprap stabilization and maintenance access path connected thru 2b**

- **84% of respondents** - Want, or could live with **maintenance access added** to the **upper** corridor (2d)

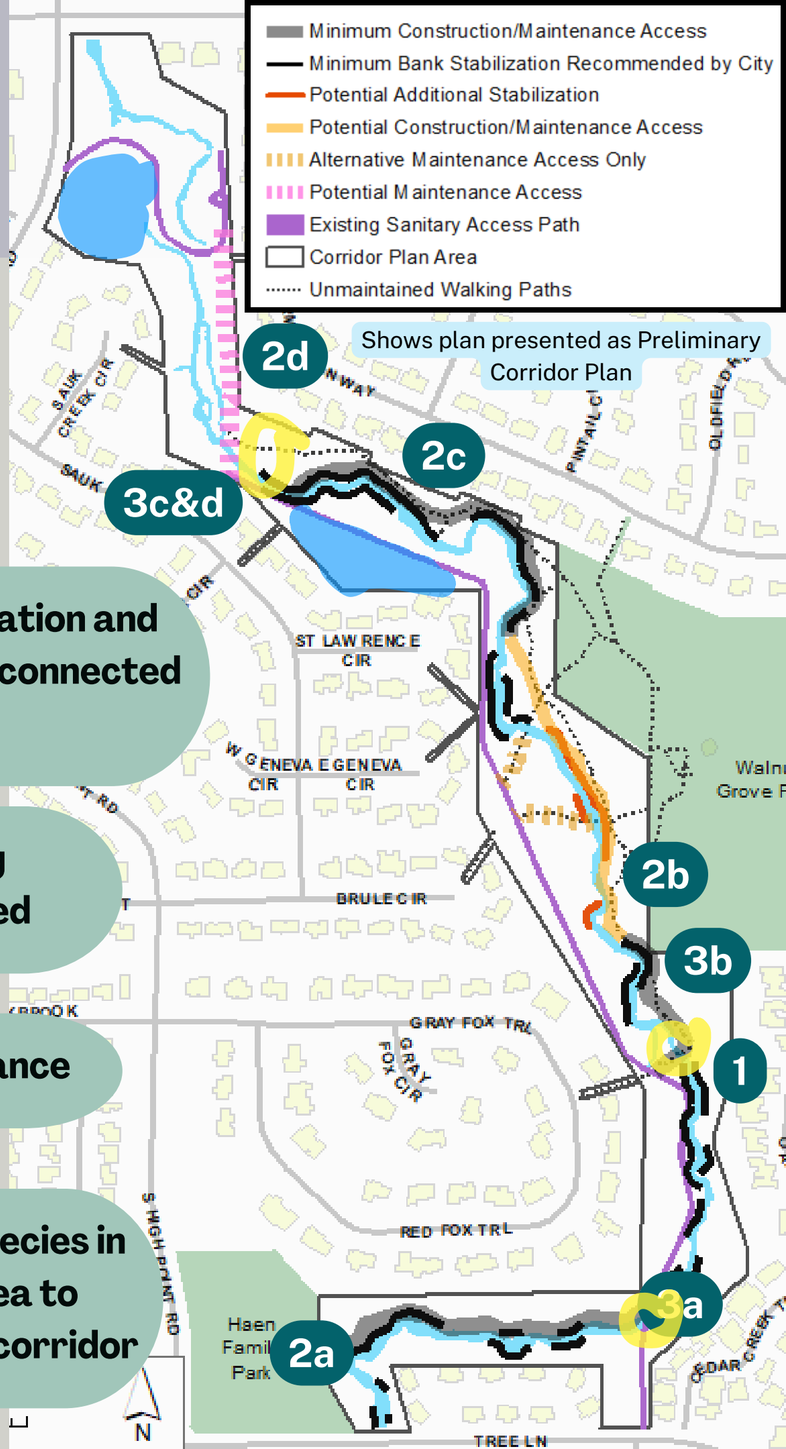
→ **Maintenance access along Farmington Way (2d) included**

- **85% of respondents** - Agree City should **prioritize design around the largest quantity of healthy, native trees** that are included in the natural ecological communities identified in the ecological assessment

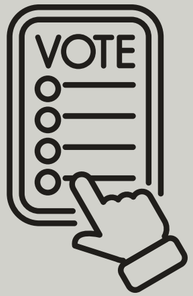
→ **Recorded design guidance**

- **80% of respondents** - **Remove all or the majority of DNR NR 40 invasive species to create tree replanting opportunities** within 10-20' of project area

→ **Thinning of DNR invasives species in buffer outside project area to improve ecological health of corridor**



# How Community Input Shaped the Corridor Plan
# Draft Corridor Plan - December 4, 2024



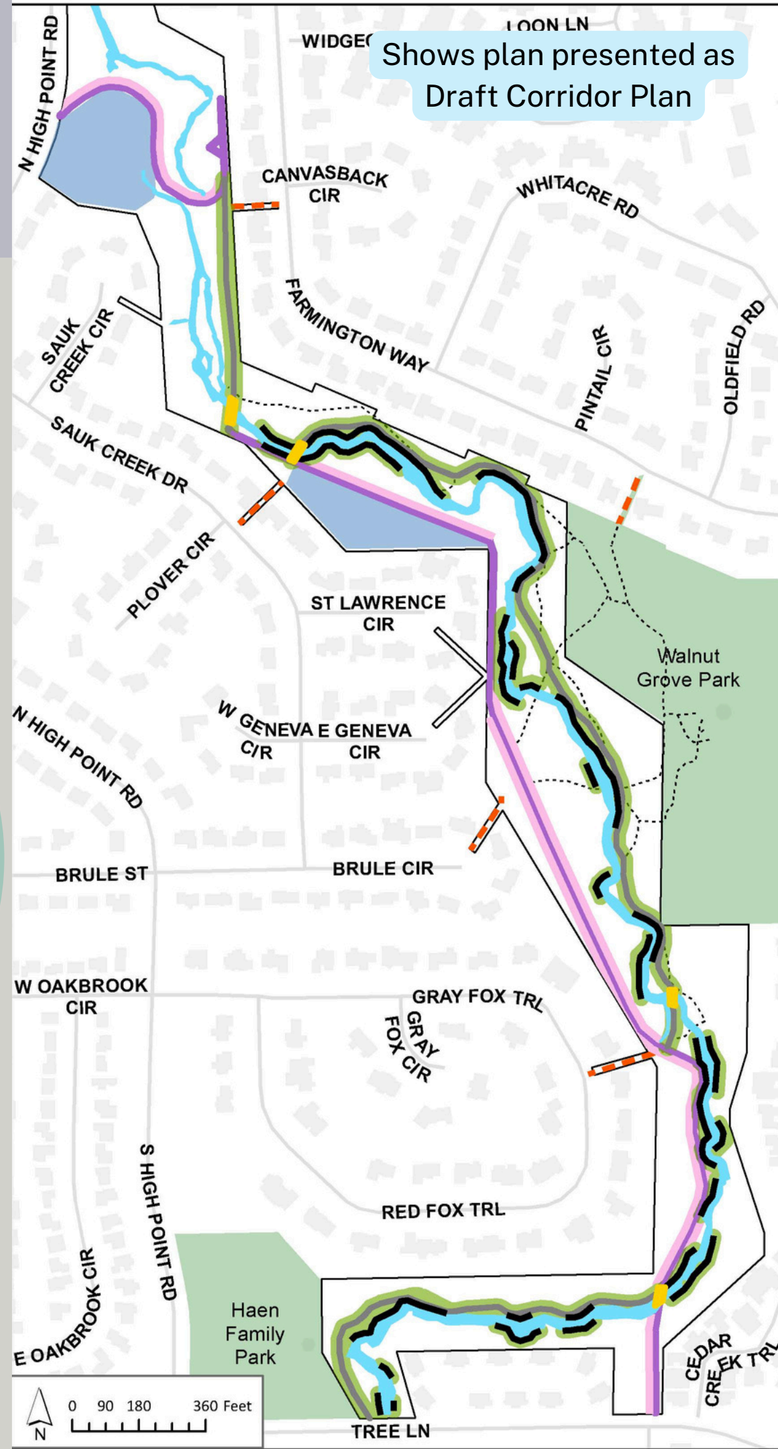

## Meeting Details

- Goal to **share draft corridor plan** and **gather input**
- **1 in-meeting poll questions**
- Of the 73 community members who registered, **88% lived within 0.5 mile and 92% lived within 1.0 mile** of the corridor

## Meeting Feedback

- **61% of respondents - Remove all or the majority of DNR NR 40 invasive species for tree replanting opportunities** within 10-20' of sanitary access path

**Thinning of DNR invasives species in buffer outside construction access area to improve ecological health of corridor (area is largely devoid of trees currently)**



# How Community Input Shaped the Corridor Plan

# Draft Corridor Plan - December 4, 2024

## Meeting Details

- Goal to **share draft corridor plan** and **gather input**
- **1 in-meeting poll questions**
- Of the 73 community members who registered, **88% lived within 0.5 mile** and **92% lived within 1.0 mile** of the corridor

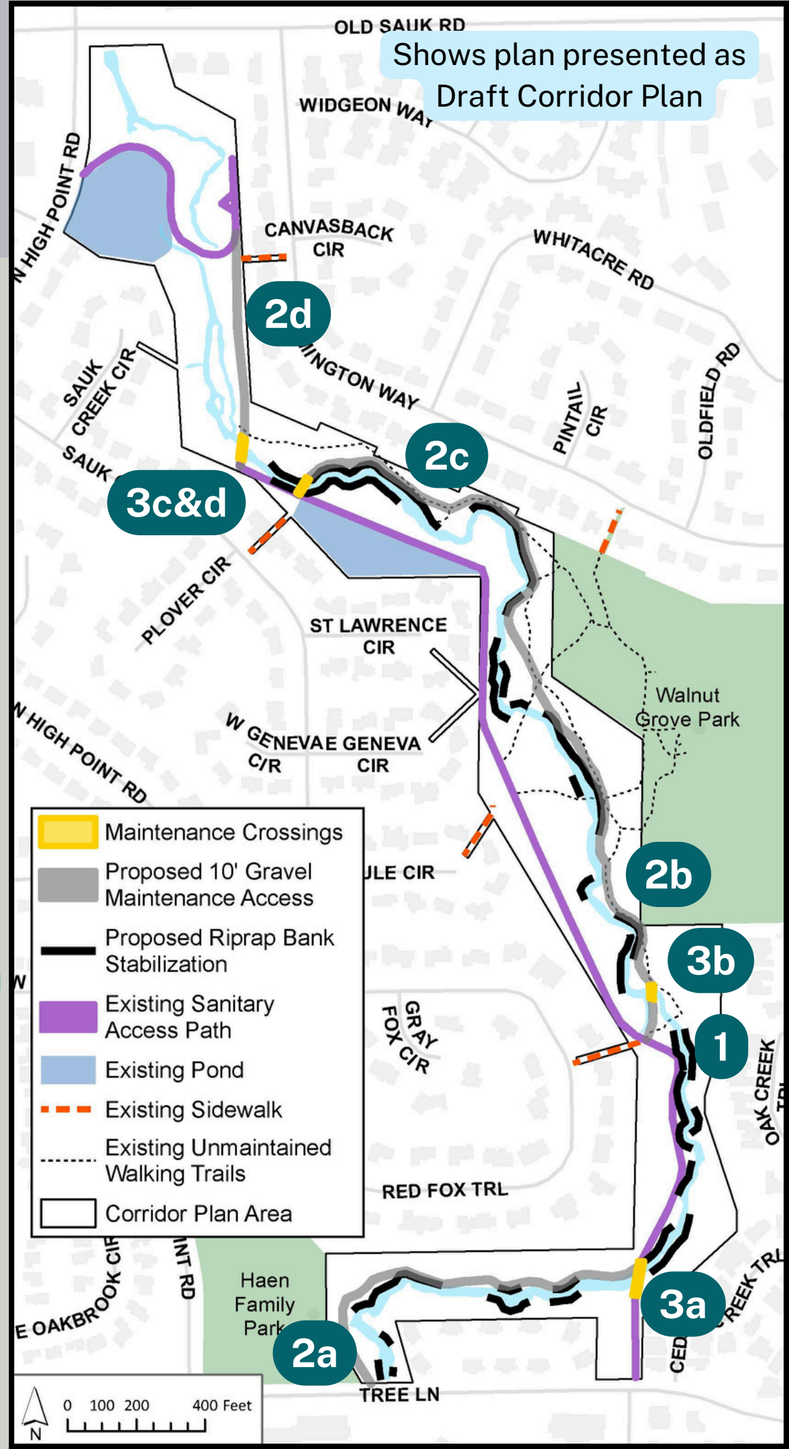
## Proposed improvements:

- 1 - proposed riprap bank stabilization
- 10' wide gravel maintenance access path
  - 2a - Haen Family Park to Sanitary Access Path
  - 2b - Middle Corridor along Walnut Grove Park
  - 2c - Plover Circle to St Lawrence Circle along Farmington Way
  - 2d - Upper corridor along Farmington Way between ponds
- Channel crossings for maintenance access
  - 3a - Culvert crossing for sanitary access
  - 3b - Concrete ford for channel maintenance access
  - 3c & d - Concrete ford(s) for channel maintenance access *(will analyze how to address crossing needs during design)*
- Generalized goals for pond improvements
  - St Lawrence Circle Pond
  - N High Point Pond

**Community concerns about gravel maintenance access paths**

**Community concerns about 2c and 2d proximity to private property**

**Community concerns about repairing sanitary access path with gravel**



# Recent input

- Emails and comments
- Community Walk Throughs on 12/17/24
- Draft corridor plan  online survey (open 12/4/24 - 1/5/25)

# Public Input - Draft Corridor Plan
# Community Site Walk Throughs, 12/17/24

## Site Walk Through Details

- **Two community greenway walk throughs** host by the City
- One for each the **northern and southern sections**
- Provided the community the opportunity to **show specific areas of concern** and ask questions
- Provided the City the opportunity to help community members **visualize the proposed improvements and their impacts** in the greenway

## General Feedback

- **Minimize tree** and **wildlife impacts**
- Generally **receptive to ecological restoration**
- Preference to try to slow down and **infiltrate** water
- Requests to complete **no bank stabilization**
- **Confusion** around various aspects of the project
- Concerns about locating gravel access paths where there are large amount of **private property runoff**

## Feedback - Southern Section

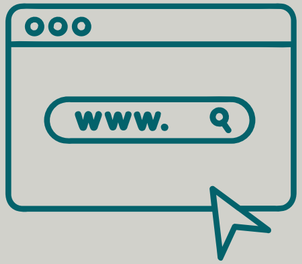
- Concerns about section maintenance path near crossing 2b
  - Disturbance of natives, including blood root
  - Low points with erosion

## Feedback - Northern Section

- Concerns about more people using the public greenway
- Preference by others to more clearly mark private property for more easy access
- Not interested in 2d maintenance access path along Farmington Way between ponds. Interest in shifting west of the channel.
- General concerns about repairing the existing sanitary access path with gravel
- Concerns about 2c maintenance access path proximity to private property

# Public Input - Draft Corridor Plan Online Survey

## Online Survey Details




- Open from **12/4/2024 - 1/6/2025**
- Survey included:
  - **18 open-ended question** to provide feedback on specific areas of the draft corridor plan
  - **4 multiple choice questions** to gage overall impressions of the corridor plan process
  - Several questions to help better understand respondents' **previous levels of engagement**
- **169 unique respondents** with a total of **1,104 responses** to the open-ended survey questions

## General Insights

- Opinions of the Draft Plan
  - ~**31%** (52 total) of respondents expressed they were **generally opposed**
  - ~**55%** (93 total) of respondents expressed they felt **generally neutral** or did not leave positive or negative comments
  - ~**14%** (24 total) of respondents expressed they were **generally supportive**
- There was still a significant amount of **confusion** on project details. **33%** of respondents stated they had **not viewed any information about the draft plan**

## Feedback Received

- **Feedback varied greatly** across the respondents who took the survey:
  - Some expressed that they were **not supportive of any elements** or **only a few elements** of the draft plan
  - Some preferred little or **no stabilization** of banks and the regular **dredging of Wexford Pond** as alternative
  - Others preferred **more and easier access** to the greenway, as well as **more sturdy infrastructure** such as asphalt paths
- Some **detailed suggestions on path placement**
- Some **concerns about long-term maintenance** of various aspects of the project
- Many expressed the desire to **save as many trees as possible**

# Exploring Input on Draft Corridor Plan

- Community recommendation: Dredge Wexford Pond regularly instead of stabilizing channel
  - Wexford is only 40% effective at removing sediment, and dredging it cost $1M
- Community recommendation: Complete pond improvements first to avoid needing to do channel stabilization
  - Ponds are downstream of channel banks that need stabilization. Their improvements will not have an impact on the erosivity of upstream stormwater.

Wexford Pond algae bloom from upstream sediment and phosphorus

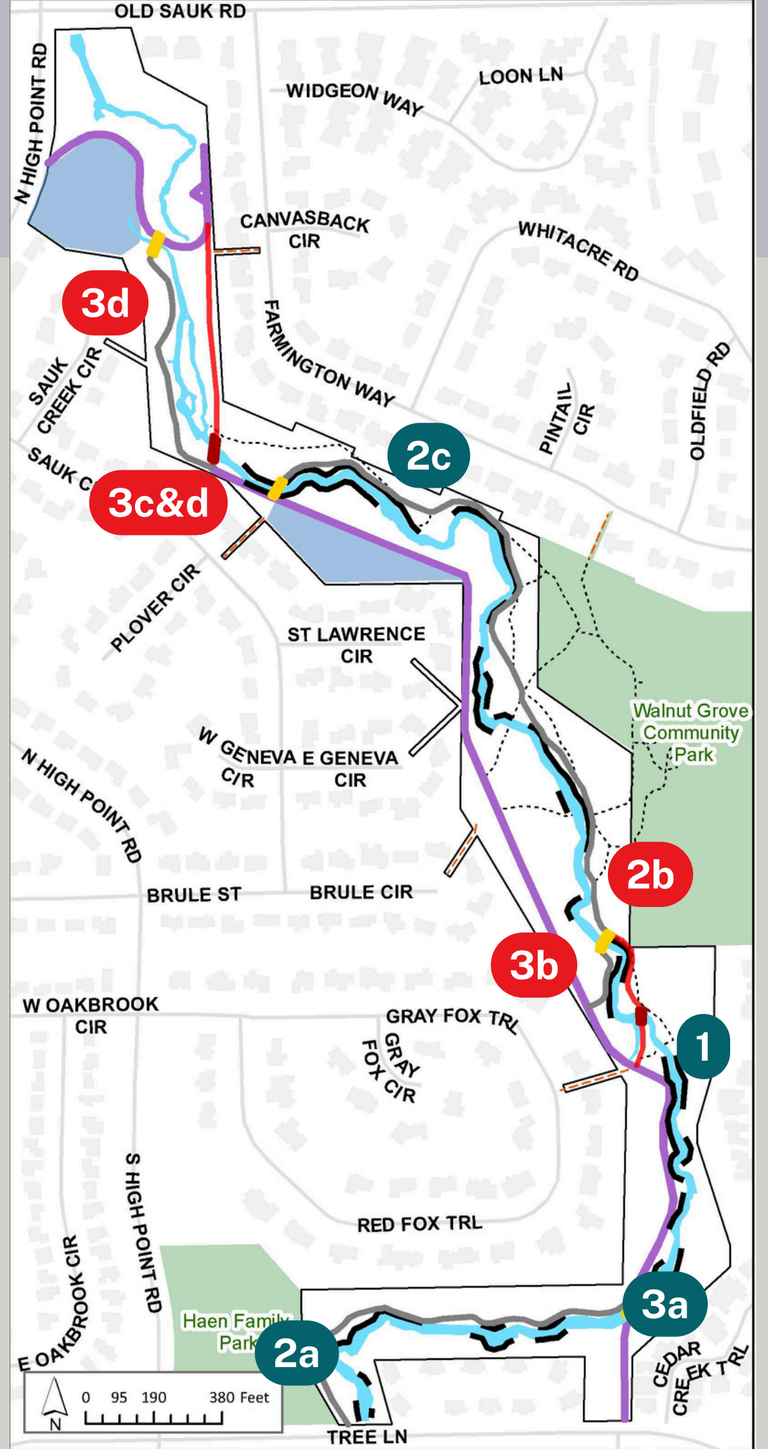
# Final Corridor Plan - What's Changed

# Conceptual stormwater improvements

## Proposed improvements:

- 1 - proposed riprap bank stabilization
- 10' wide ~~gravel~~ maintenance access path (gravel or vegetated to be decided for each section during design phase)
  - 2a - Haen Family Park to Sanitary Access Path
  - 2b - Middle Corridor along Walnut Grove Park *Modified location based on input
  - 2c - Plover Circle to St Lawrence Circle along Farmington Way
  - 2d - Upper corridor along Farmington Way between ponds *New location
- Channel crossings for maintenance access
  - 3a - Culvert crossing for sanitary access
  - 3b - Concrete ford for channel maintenance access *Modified location based on input
  - 3c - Concrete ford for channel maintenance access
  - 3d - Concrete ford for channel maintenance access *New location
- Generalized goals for pond improvements
  - St Lawrence Circle Pond
  - N High Point Pond

*Note: Map shows a conceptual plan and general location of proposed improvements. Final location of all improvements will be adjusted based on detailed design including minimizing grading impacts, minimizing tree impacts (per design guidance received from community during corridor plan process), and addressing additional community concerns related to detailed design development.*



# How Community Input Shaped the Corridor Plan

## Community Goals

### What the community did NOT want

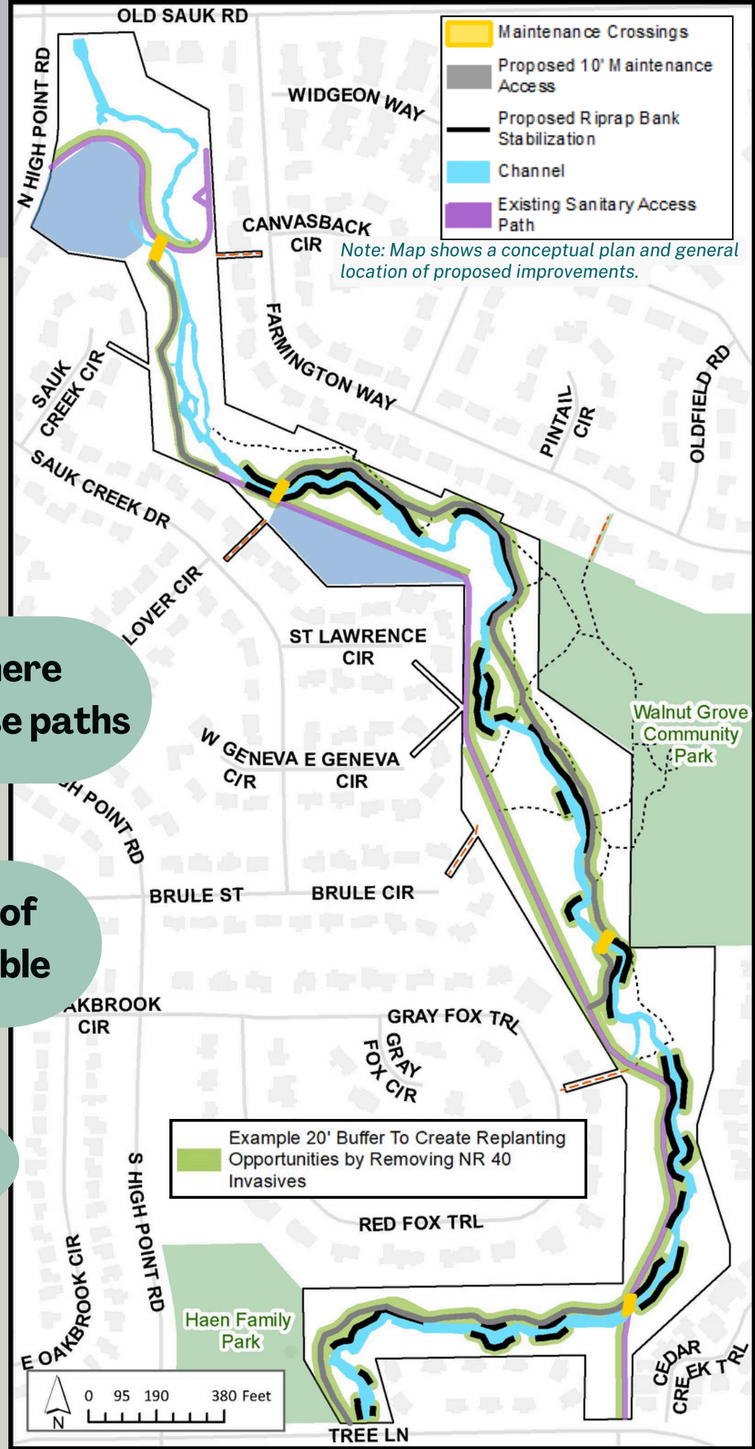
- Full corridor engineering channel design
- Accumulated sediment removal between ponds 4a and 4b
- North-south multi-use path
- East-west multi-use path
- Access path along entire length of channel
- Bridges crossing channel
- Excessive tree loss

**Scaled back project scope**

**Maintenance access path only where increase access is needed, no multi-use paths**

**Use of concrete fords instead of bridges for access where possible**

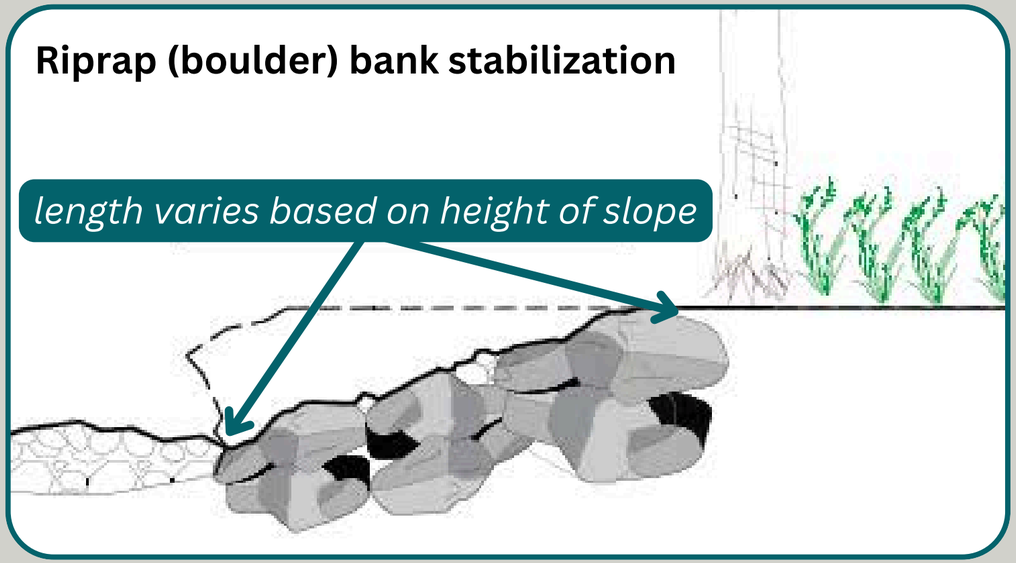
**Minimized tree impacts**

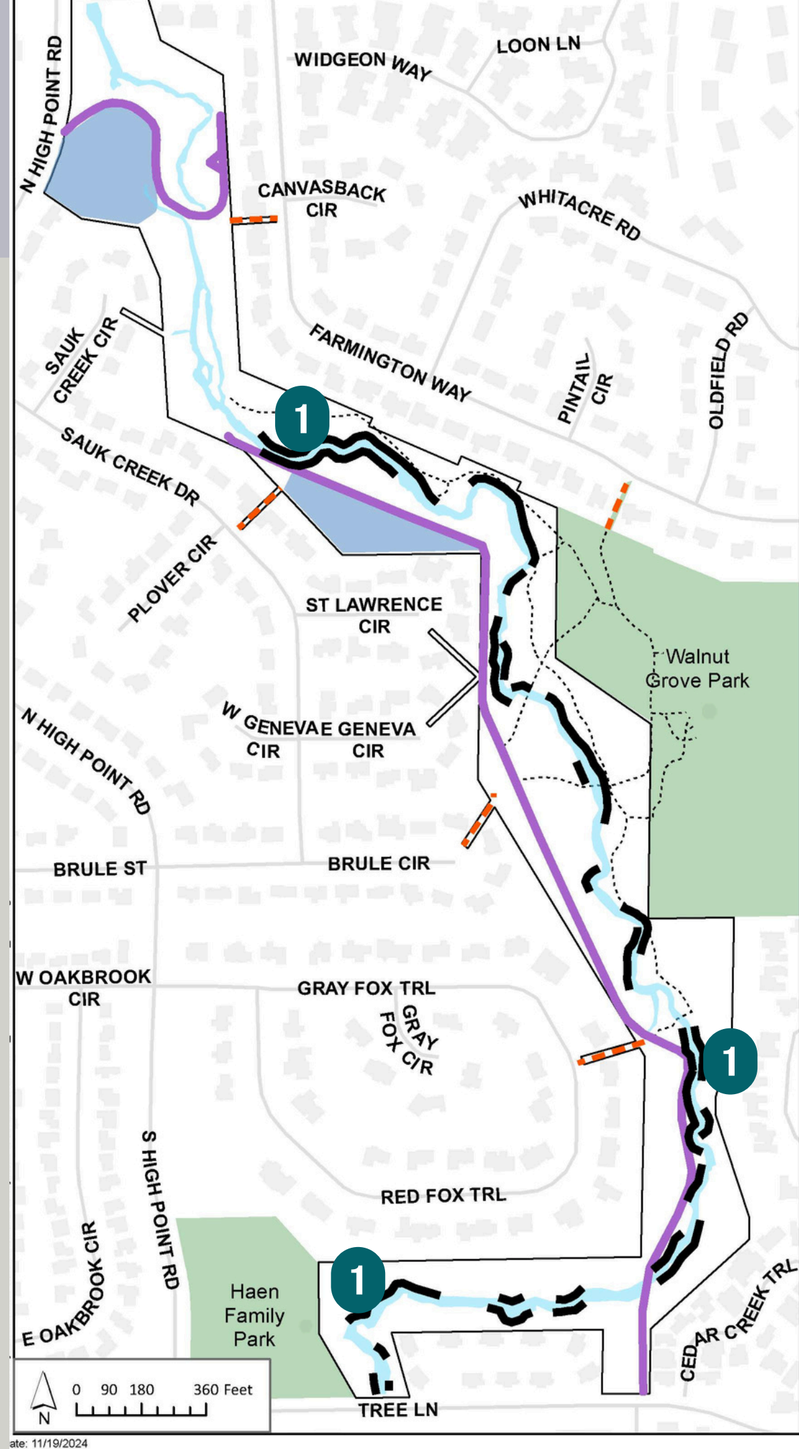


# Final Corridor Plan - Conceptual stormwater improvements

**Spot Riprap Bank Stabilization (1)**

- **60% of respondents - Use boulders (riprap)** to stabilize channel
- **89% of respondents** - selected to stabilize areas that were **steep** and/or **vertical/undercut**




*Note: Map shows a conceptual plan and general location of proposed improvements. Final location of all improvements will be adjusted based on detailed design including minimizing grading impacts, minimizing tree impacts (per design guidance received from community during corridor plan process), and addressing additional community concerns related to detailed design development.*

# Final Corridor Plan - Conceptual stormwater improvements

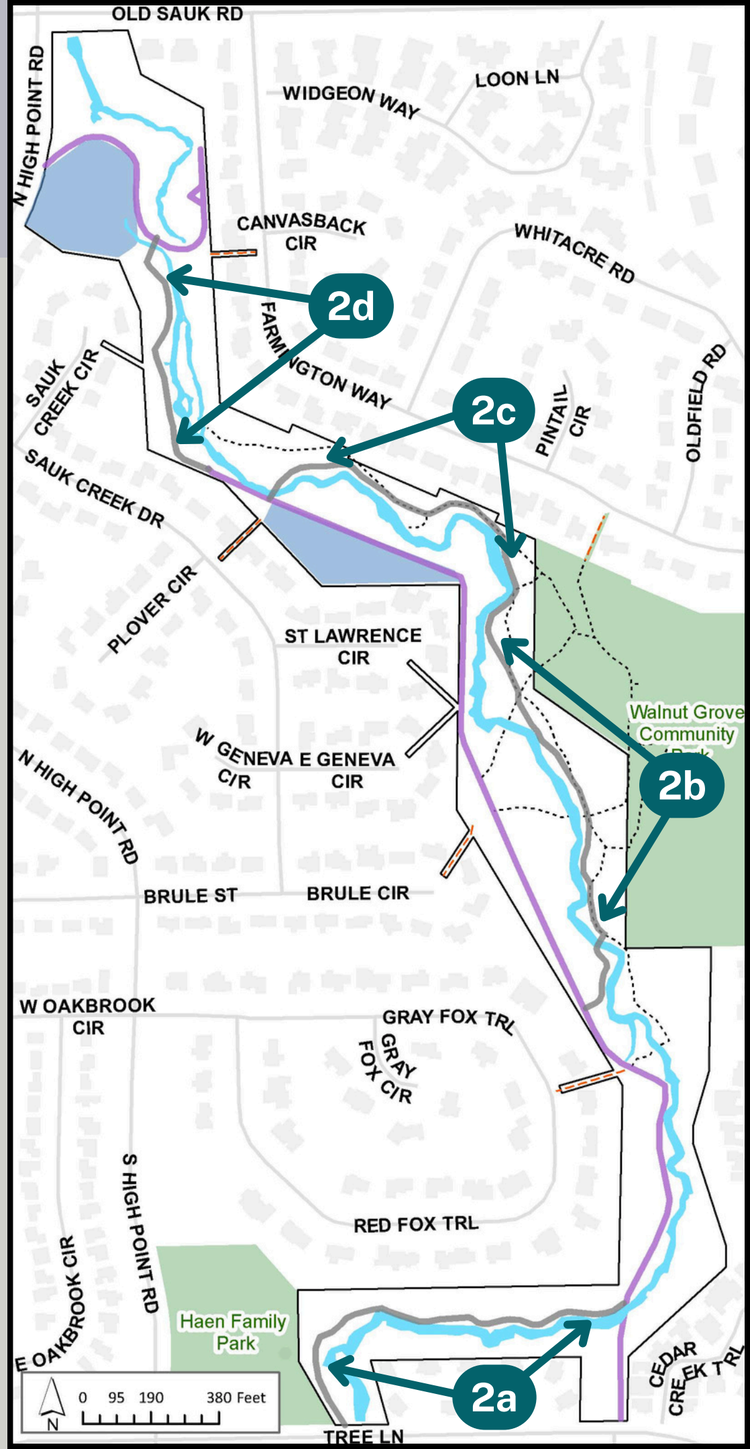
## 10' wide maintenance access path (2a-2d)

- **87% of respondents** - important for City to have access to **remove dead/down trees**
- **91% of respondents** - important for City to **remove trees** that **block channel flow**
- **68% of respondents** - want **gravel** or **vegetation** for path cover
  - **Draft plan input** - will be decided based on final design for each section
- **75% of respondents** - support/neutral - **connect access paths** and stabilize channel sections in **middle corridor (2b)**
- **85% of respondents** - Support/neutral - add **maintenance access** in upper corridor (2d)
  - **Draft plan input** - shifted proposed path to **west** of the channel

Heritage Prairie Gwy, Gravel,~7 years post path construction

Sauk Creek Gwy, Vegetated ~12 years post path construction

Wexford Park, nearby example of ~10' wide paths that wind through woods. City is *not* proposing woodchips as a cover for the paths in the Sauk Creek Greenway




*Note: Map shows a conceptual plan and general location of proposed improvements. Final location of all improvements will be adjusted based on detailed design including minimizing grading impacts, minimizing tree impacts (per design guidance received from community during corridor plan process), and addressing additional community concerns related to detailed design development.*

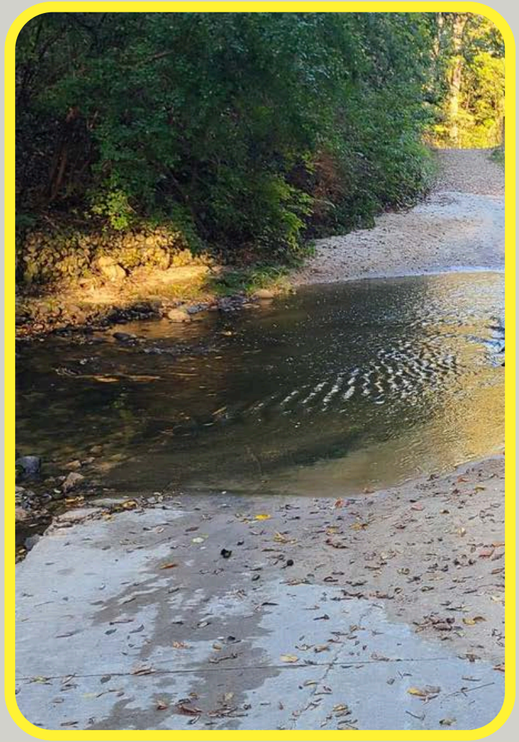
# Draft Final Corridor Plan - Conceptual stormwater improvements

## Channel crossings for maintenance access (3a-3d)

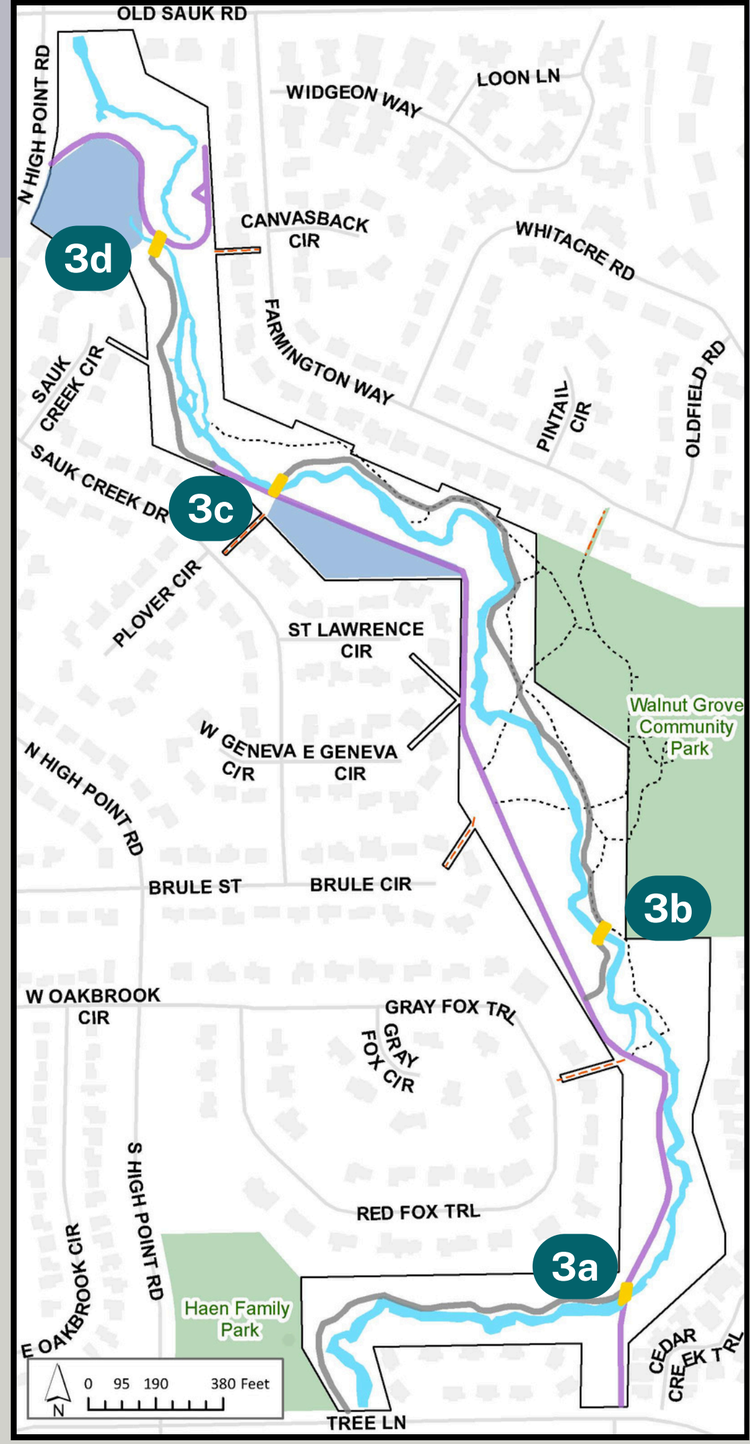
- 3a - **Culvert** crossing for **sanitary access**
- 3b - **Concrete ford** for **channel maintenance access**
  - **Draft plan input** - shifted concrete ford crossing **north**
- 3c - **Concrete ford** for **channel maintenance access**
- 3d - **Concrete ford** for **corridor maintenance access**
  - **Draft plan input** - moved concrete ford crossing **north to pond inlet**

**3a -Culverts at sanitary access path crossing - allows consistent and safer vactor access**

***note: material over top of culvert will be concrete for stability****

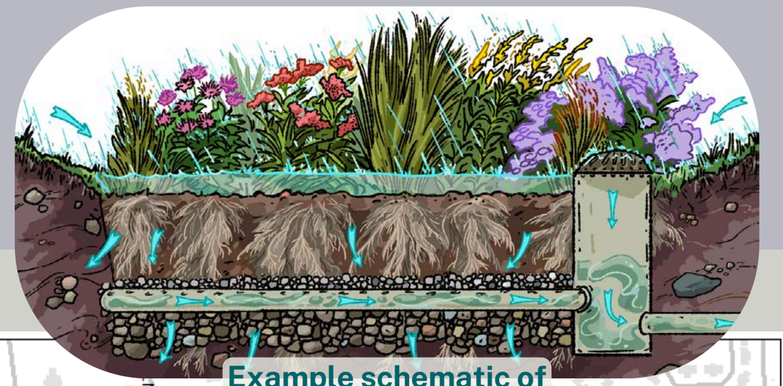


**3b-d: Concrete Ford Construction/ Channel Maintenance crossing**




*Note: Map shows a conceptual plan and general location of proposed improvements. Final location of all improvements will be adjusted based on detailed design including minimizing grading impacts, minimizing tree impacts (per design guidance received from community during corridor plan process), and addressing additional community concerns related to detailed design development.*

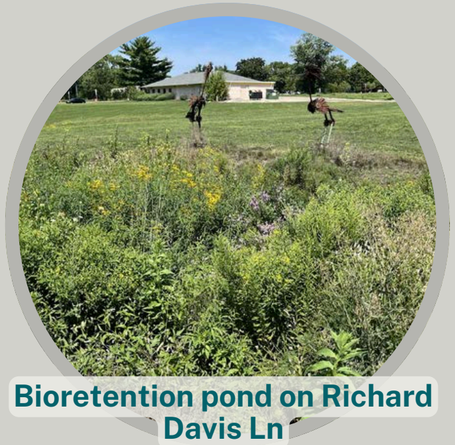
# Draft Final Corridor Plan - Conceptual stormwater improvements



Example schematic of biofiltration pond

## Pond Improvements (4a, 4b)

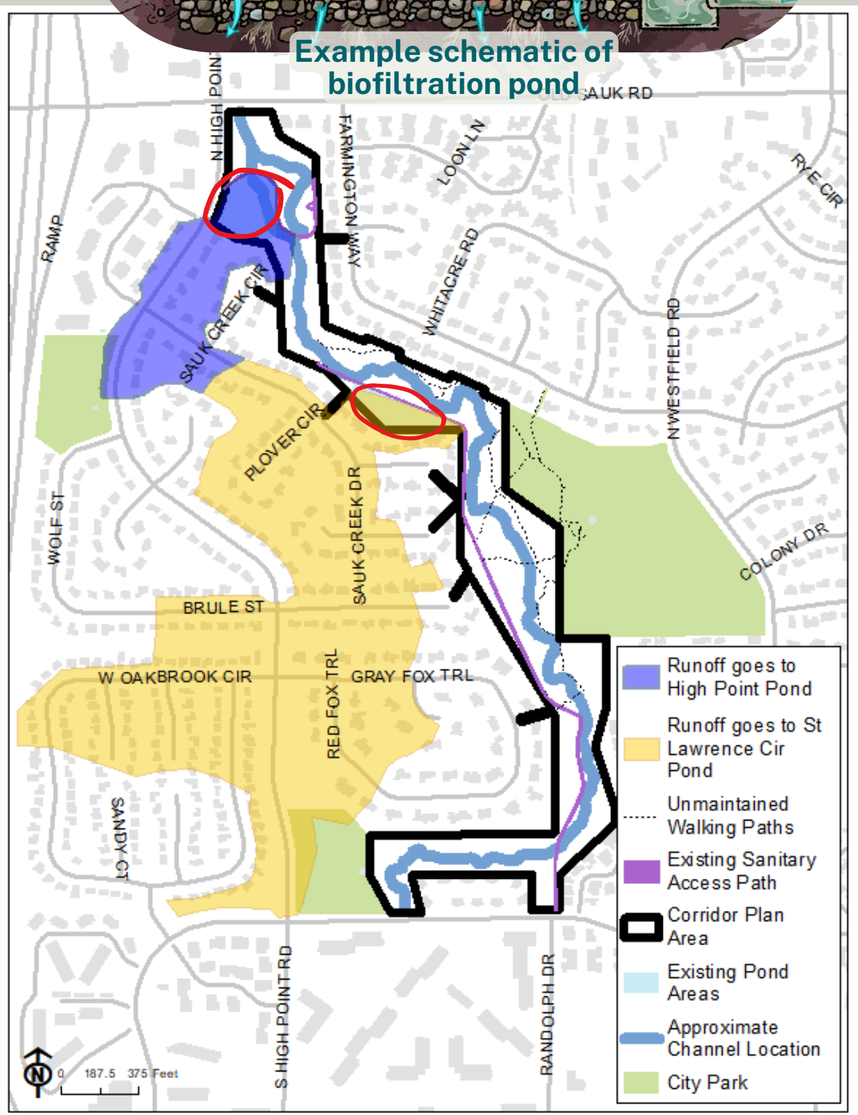
- **Draft plan input -** promote **infiltration**
- **107 Respondents** shared goal to **improve downstream quality** during Goals and Values survey



Bioretention pond on Richard Davis Ln

- **St Lawrence Circle pond potential improvements**
  - Improve flow of water into pond near Plover Circle (repair + clear out pipes and outlet)
  - Deepen and add filtration medium. Add underdrain. Restore with native plants to promote infiltration (improve water quality)
  - Remove failed diversion structure from channel
  - >>will help pre-treat and infiltrate some of the stormwater from the area in yellow in small events. It will not have a notable impact on channel capacity.
- **High Point pond potential improvements**
  - Improve design so sediment can be removed
  - Reconnect main channel to bypass pond
  - Assess sediment loading after channel stabilization to determine improvement options

*Note: ponds may receive incremental improvements with adjacent phases, where logical.*



# Draft Final Corridor Plan - Conceptual ecological improvements

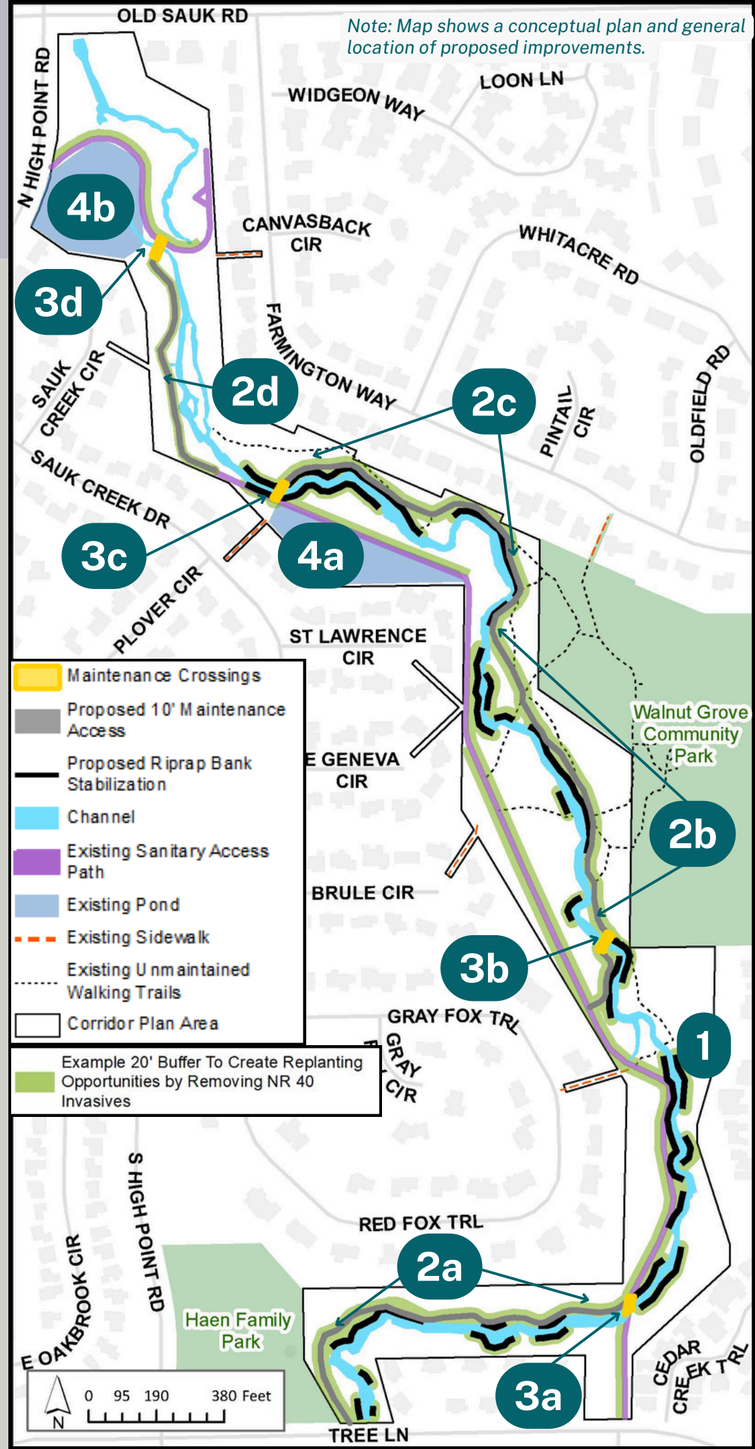
## Proposed Ecological Restoration

- **87% of respondents** - I am interested in **expanding coverage** and **increasing the diversity** of **native herbaceous species**
- **85% of respondents - Agree** City should prioritize **design around the largest quantity of healthy, native trees** that are included in the natural ecological communities identified in the ecological assessment
- **80% of respondents - Remove** all or the majority of DNR NR 40 **invasive species** to create **tree replanting opportunities** within 10-20' of project area
- **61% of respondents - Remove** all or the majority of DNR NR 40 **invasive species** for **tree replanting opportunities** within 10-20' of sanitary access path

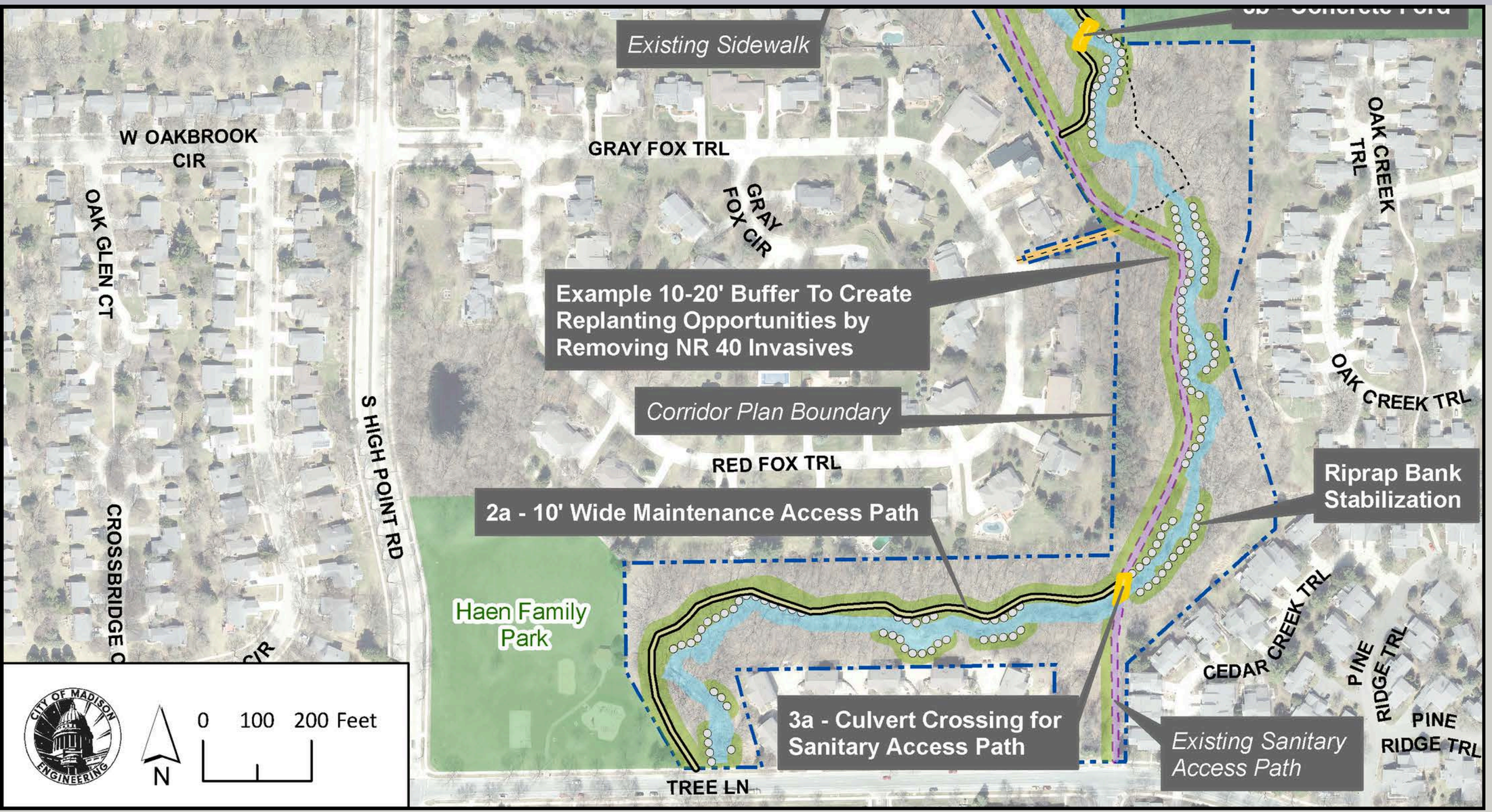
Wild geranium in Sauk Creek greenway

Young oak regeneration where pockets of light are created.

Native rosy sedge and Virginia creeper on a wooded stormwater pond

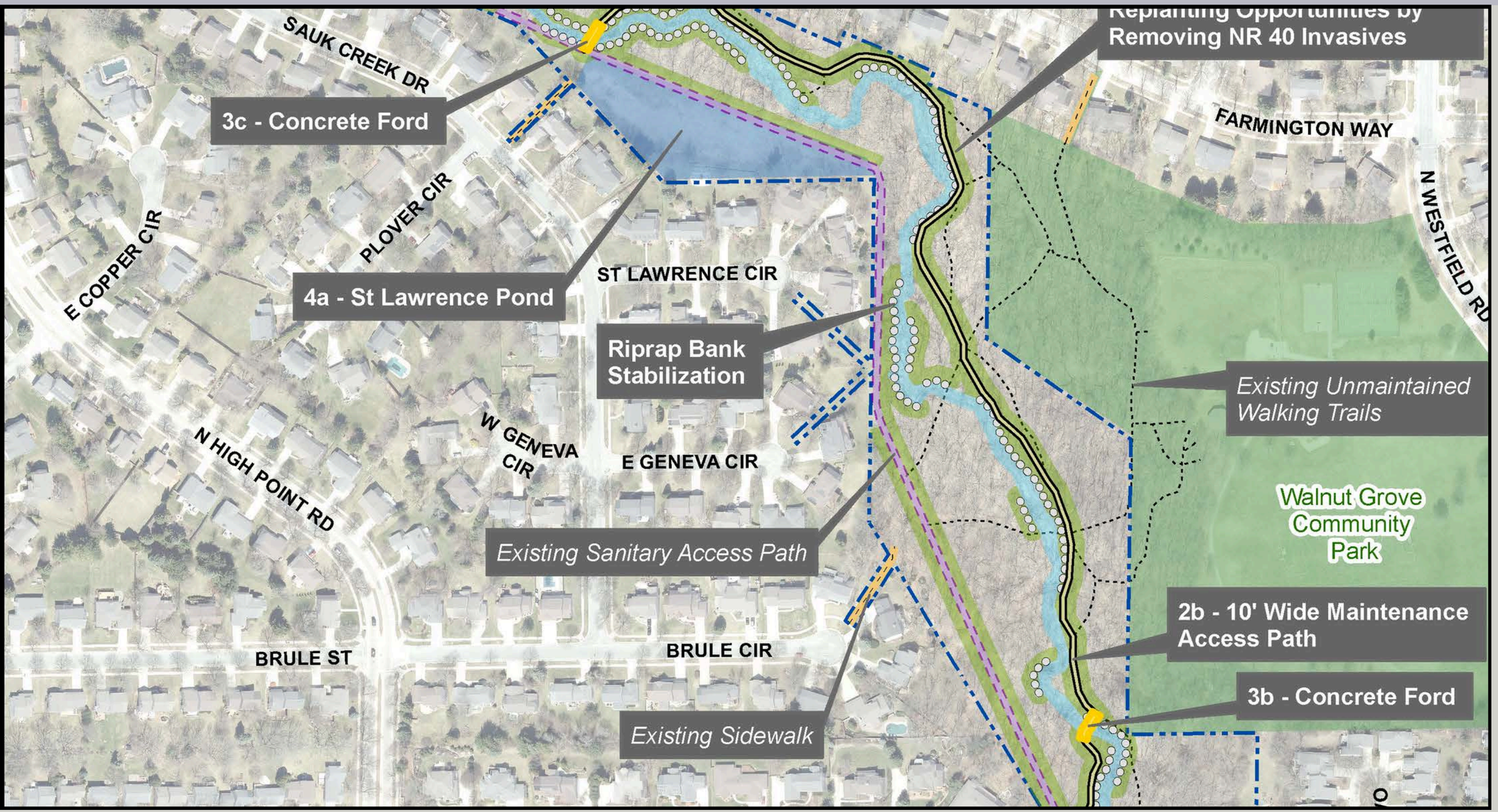


# Draft Final Corridor Plan - Lower Section
# Conceptual stormwater improvements



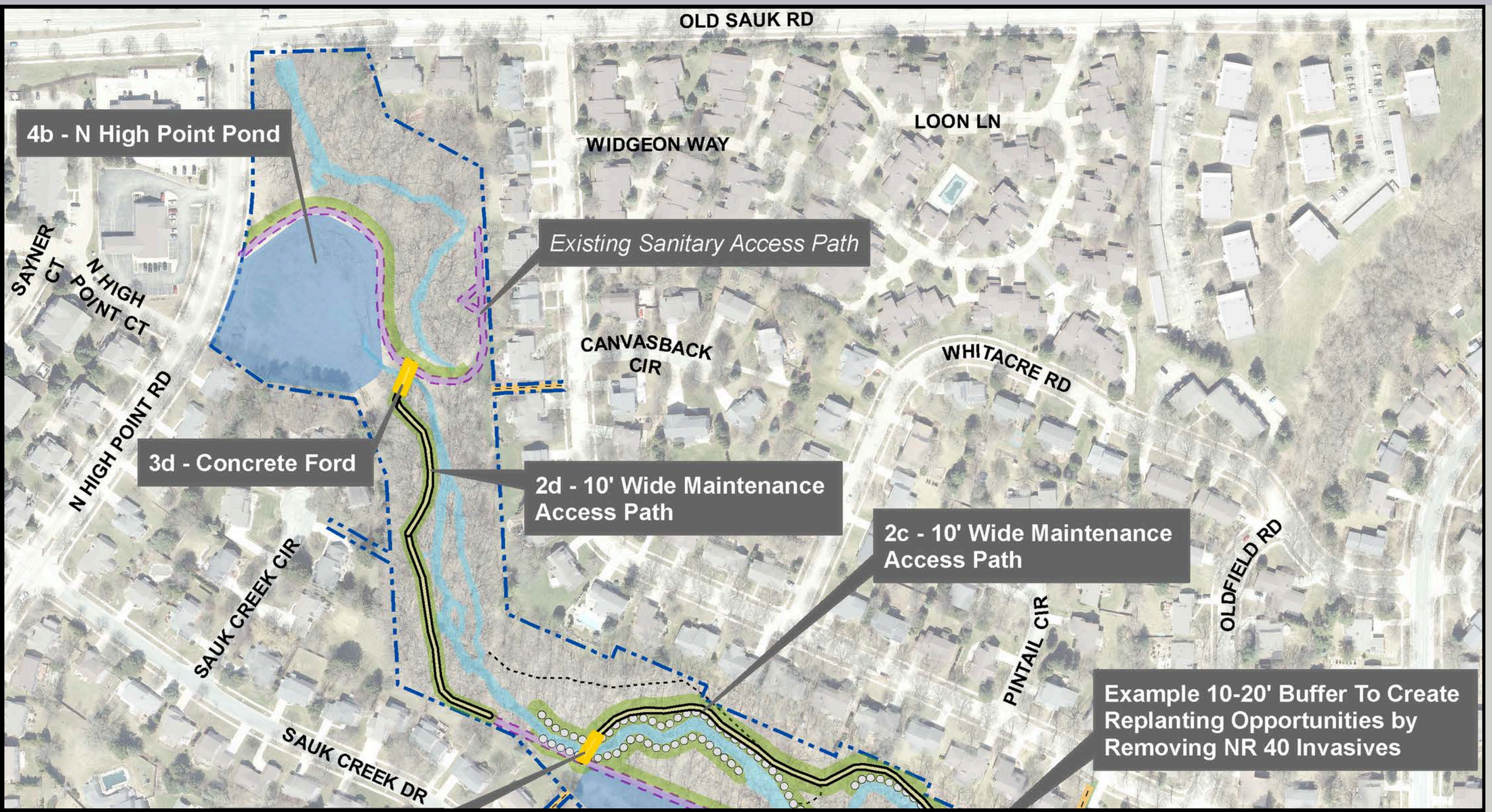

[View full Corridor Plan here]

# Draft Final Corridor Plan - Middle Section
# Conceptual stormwater improvements




[View full Corridor Plan here]

# Draft Final Corridor Plan - Upper Section
# Conceptual stormwater improvements




View full Corridor Plan here

# Community's High-Level Values and Goals

Large concern about threats identified in Ecological Assessment -
Invasive Species, Erosion, Replacement of Oaks, Flooding and Sedimentation from the channel

Minimize impacts to trees

Improve health of forest and conditions for native plant and tree species. Specifically concern about protecting existing oaks, and replanting new oaks

Stabilize channel and improve downstream water quality

Increase resiliency to climate change

Wildlife concerns

Important that the City have access to remove dead/down trees

**Important that the City have access to remove dead/down trees**

- Providing maintenance/construction access in more areas, especially where bank stabilization is proposed
- Siting maintenance access along areas with frequent tree removal requests
- Offering options for improved maintenance access along property lines in the southern East-West section

**Ecological Assessment Threats:**

- Thinning invasive species within 10-20' of project area to protect restored areas from adjacent invasives
- Replanting with native herbaceous and shrub species suitable in wooded areas
- Creating light openings and planting new oaks
- Stabilizing channel to reduce downstream sedimentation

# How Community's High Level Values and Goals Shaped the Plan

**Improve health of forest and conditions for native plant and tree species**

- Thinning canopy crowding around mature oaks
- Thinning buckthorn to reduce negative impacts to birds and negative impacts to the soil from its allelopathic chemicals
- Replanting oaks and other native trees, native shrub layer and native woodland wildflowers, grasses and sedges
- Controlling invasive herbaceous species like garlic mustard, Dame's rocket, burdock
- Monitoring and planning for oak wilt impacts

**Stabilize channel and improve downstream water quality**

-Stabilizing banks most susceptible to erosion with boulders (riprap)

-Pond improvement goals will increase stormwater treatment, infiltration, and maintenance

-Expanding native groundcover to encourage additional infiltration within the corridor

# How Community's High Level Values and Goals Shaped the Plan

**Minimize impacts to trees**

- Ecological restoration to promote new generation of forest
-Limiting channel stabilization to spot treatments instead a full-channel stabilization project
- Utilizing existing access paths where possible
- Stabilizing channel with riprap as opposed to alternative options that require additional grading
- Hiring an arborist to assist during design phases & construction

**Increase resiliency to climate change**

-Improving conditions for existing oaks and hickories that are stressed in changing climate
-Reducing impact on canopy with projects by minimizing channel restoration areas
-Stabilizing channel and improving ground cover will reduce erosion during larger storm events
-Improving access to the sanitary sewer to reduce the risk of back-ups impacting adjacent homes or the greenway

**Wildlife concerns**

-Improving habitat offerings with appropriate ecological restoration
-Collecting wildlife sightings via iNaturalist data, eBird to improve species specific responses
-Timing construction to avoid nestingseasons whenever possible
-Evaluating the potential of herptile relocation efforts for turtles, frogs, and salamanders before construction
-Working with UW Urban Canid lab to track fox and coyote denning in area

# DESIGN GUIDANCE

**During a previous meeting the community agreed (85% + 12% neutral) in the following prioritization in considering trees while designing the specific location of the improvements (i.e. shifting channel stabilization or maintenance access to avoiding specific trees) during the future design phases.**

- **Priority 1:** Design around the largest quantity of healthy, native trees that are included in the natural ecological communities identified in the ecological assessment

- **Priority 2:** Design around healthy trees not included in the natural ecological communities identified in the ecological assessment

# Goals for Ecological Restoration

Goals for ecological restoration on the greenway were shaped by the ecological assessment, Internal Advisory Committee, community expert feedback, contracted arborist inventories and consultations, and Engineering staff.  Based upon this feedback the following goals were identified:

**1. Direct the growth of the future canopy towards native hardwood growth with an emphasis on keystone oak species**

**2. Preserve as many existing mature canopy trees as possible**

**3. Direct revegetation efforts towards natural communities identified in the ecological assessment**

**4. Create or enhance existing wildlife habitat and proceed with sensitivity towards wildlife already using the greenway**

Mature healthy oaks and regenerating oaks at Sauk Creek GR

Native spring ephemeral *Anemone quinquefolia* at base of mature oak tree on Sauk Creek GR

# How Ecological Restoration Goals will be Achieved

**1. Direct the growth of the future canopy towards native hardwood growth with an emphasis on keystone oak species**

- Plant oaks and other native trees in project areas and adjacent areas where thinning of buckthorn and other invasive woodies allows
- Plant native shrubs as competition for invasive tree and shrub saplings
- Control invasive woody plant growth
- Pursue ongoing ecological maintenance in project areas with ecological restoration contractor (first 2-3 years following project) and in-house Eng Conservation staff

**2. Preserve as many existing mature canopy trees as possible**

- Design around mature, healthy trees during design phase of project
- Design adequate protection before construction begins for trees identified to be saved, and provide on-site monitoring during construction by contracted certified arborist

Native wild geraniums on Sauk Creek Greenway

**3. Direct revegetation efforts towards natural communities identified in the ecological assessment**

- Replant native trees, shrubs and herbaceous plants appropriate for woodland and varying moisture conditions
- Sow native woodland/wetland herbaceous species across all disturbed project areas
- Control invasive woody and herbaceous plant growth
- Pursue ongoing ecological maintenance in project areas with ecological restoration contractor (first 2-3 years following project) and in-house Eng Conservation staff

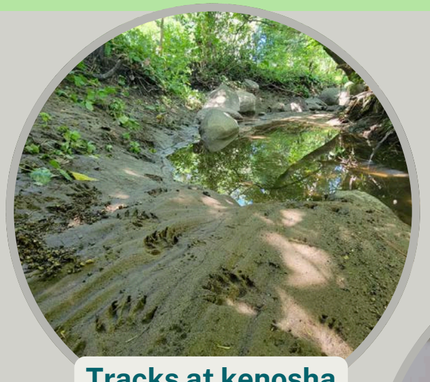
**4. Create or enhance existing wildlife habitat and proceed with sensitivity towards wildlife already using the greenway**

- Protect mature, healthy canopy trees, especially oaks
- Avoid disturbing populations of native herbaceous or shrub woodland species
- Leave dead standing trees and naturally felled trees if they are not in areas where they will pose a hazard to people or property or will not cause stormwater drainage issues
- Coordinate with wildlife biologists on ways to improve habitat
- Replant native trees, shrubs and herbaceous plants appropriate for woodland and varying moisture conditions
- Sow native woodland/wetland herbaceous species across all disturbed project areas
- Control invasive woody and herbaceous plant growth
- Pursue ongoing ecological maintenance in project areas with ecological restoration contractor (first 2-3 years following project) and in-house Eng Conservation staff

# Proposed Ecological Restoration Benefits

## Ecological lift and benefits

- Increased biodiversity
- Decreased invasive species
- Increase in pollinators
- Increased wildlife habitat
- Increased ability to filter pollutants
- Bio-infiltration – higher permeability
- Decreased potential for washout/erosion



Tracks at kenosha greenway

Bloodroot in Sauk Creek Gwy

Monarch caterpillar at Regent St median rain gardens

Tree frog on cup plant at Grassman Ponds

Endangered Rusty Patch Bumble Bee - South Point biobasin

Sweat bee on aromatic aster

Wild geranium in Sauk Creek Gwy

Swallowtail caterpillar at Zeier Lein

Dragonfly at Lake Mendota Drive

Fox at Linda Vista rain garden

# Habitat and Wildlife Considerations

## Protect and Preserve

- Preserve mature trees--esp. oaks
  - Design around
  - Monitor during construction
- Preserve dead standing or felled trees
- Preserve pockets of native herbaceous or shrub species
- Consult wildlife biologists
  - Use citizen science/resident wildlife observations
- Relocate herptiles if necessary/possible

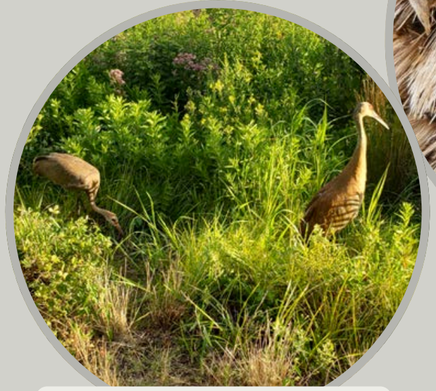
## Enhance and Restore

- Restore native trees, shrubs and herbaceous species to enhance diversity using natural communities as guidelines
- Control invasive species, esp. shrubs/saplings that outcompete keystone species
- Provide a variety of resources--wetland species near channel, upland plants on higher ground, pockets of shade and light, early, mid and late blooming plants

Wild turkey nesting on stormwater pond

Tiger swallowtail butterfly on Joe Pye weed

Grasshopper utilizing native liatris



Sandhill cranes utilizing an urban rain garden

Endangered Rusty Patch Bumble Bee - South Point biobasin

Turtle at Ashworth Dr pond

Downy woodpecker utilizing native purple Angelica

Fox at Linda Vista rain garden

# Environmental Stewardship on Private Property

## What can I do on my property to be a good environmental steward?

**Plant a tree in your yard! Consider planting a native tree.**

- DNR Tree sale https://dnr.wisconsin.gov/topic/treeplanting/order
- Columbia County Tree Sale https://www.co.columbia.wi.us/columbiacounty/lwcd/Land-Water-Home/Programs-Projects/Tree-Sale-Program

**Create native habitat in your yard**

- Convert lawn to native landscaping https://www.audubon.org/plantsforbirds; https://xerces.org/pollinator-conservation/pollinator-friendly-plant-lists
- Leave the leaf https://xerces.org/blog/leave-the-leaves
- Avoid using invasive plants in landscaping https://hort.extension.wisc.edu/articles/landscaping-alternatives-for-terrestrial-invasive-flowers-and-grasses/

**Be a good stormwater steward**

- Keep leaves out of the street https://www.cityofmadison.com/engineering/stormwater/programs-initiatives/leaf-collection-program-study
- Build a rain garden https://dnr.wisconsin.gov/topic/Stormwater/raingarden

**Be mindful of Oak Wilt**

- https://dnr.wisconsin.gov/topic/foresthealth/oakwilt

A happy new bur oak tree planting

Native plants belong everywhere!

# Maintenance Plan - 10' wide access paths

**Where adjacent to the channel**

- Install riprap bank stabilization
- Maintain channel by removing severe blockages that created dams and are at risk of causing severe erosion

**Where nearby adjacent properties**

- Remove adjacent trees that are at risk of damaging private property
- Allows more opportunity to remove the large piles of felled tree material if desired by the adjacent property owner, and are not needed for wildlife habitat

**In general paths provide**

1. Improved response time for emergencies, and general maintenance requests
2. Better access throughout the corridor for residents who utilize the space to recreate as City will manage trees that fall on access paths where currently volunteers maintain the unofficial walking paths
3. Limit the need of to obtain right of entry's entry agreements that delay maintenance crews from addressing problems.
4. Having designed access in an emergency limits long term impacts, such as a sanitary repair/SSO sanitary sewer overflows into the watershed, downed trees on private property.
5. Access helps reduce the need of private contractors, allowing more work to be scheduled in -house, which could reduce response time in emergencies.
6. Access allows alternate tree removal techniques and equipment to be used, reducing cost and reducing impacts to surrounding vegetation, option to remove felled material from site.
7. More proactive maintenance approach vs reactive.
8. May allow removal of adjacent recently dead red oak trees that are key contributors to the spread of oak wilt

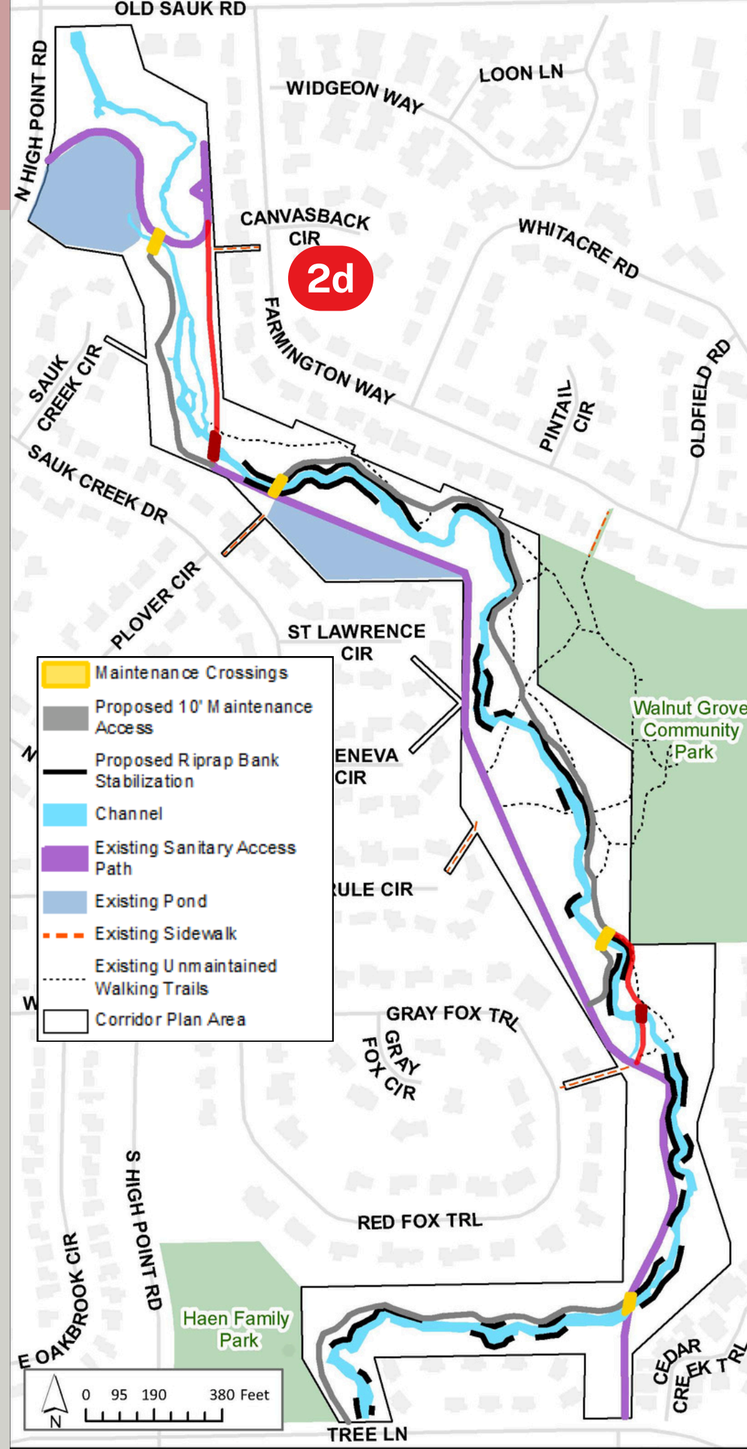
# Maintenance Limitations

## Existing unmaintained walking trails

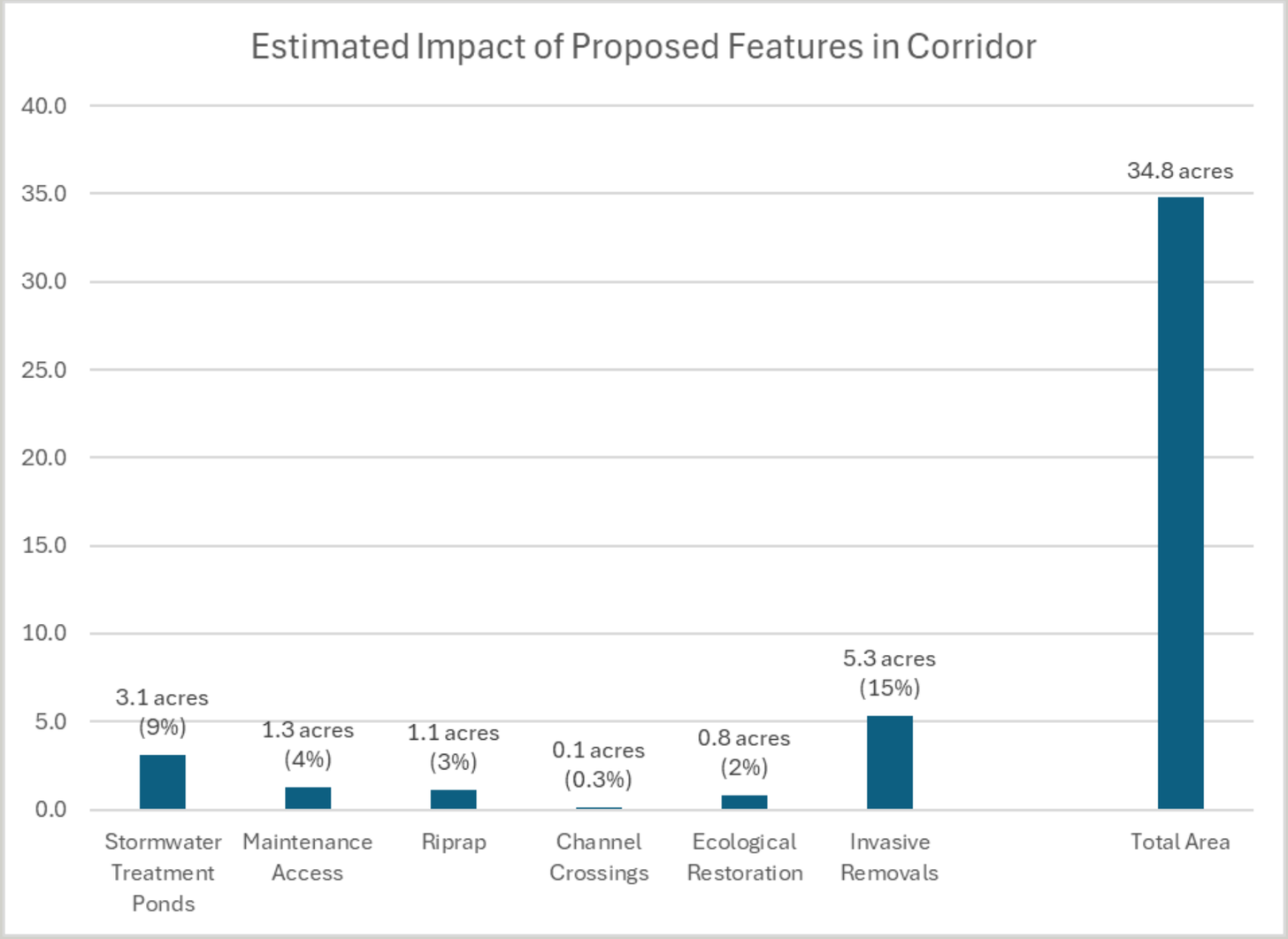
- Will continue to not be maintained by the City, except where they overlap constructed 10’ wide maintenance access paths

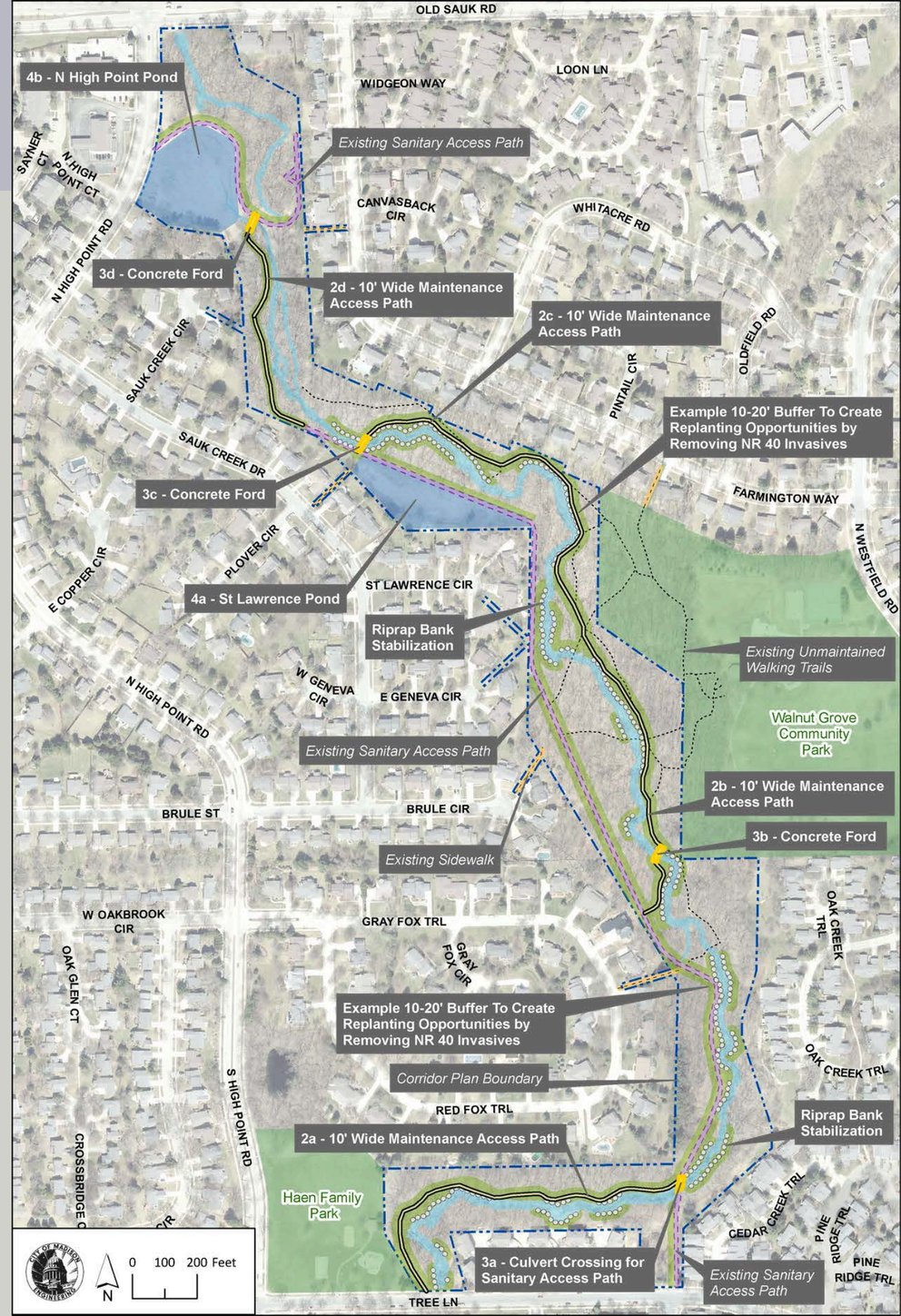
## Area behind 7617 Farmington Way to 7629 Farmington Way

- In location where the 2d path was originally proposed, residents will continue to see delays in tree removal requests, and material will not be able to be hauled away.

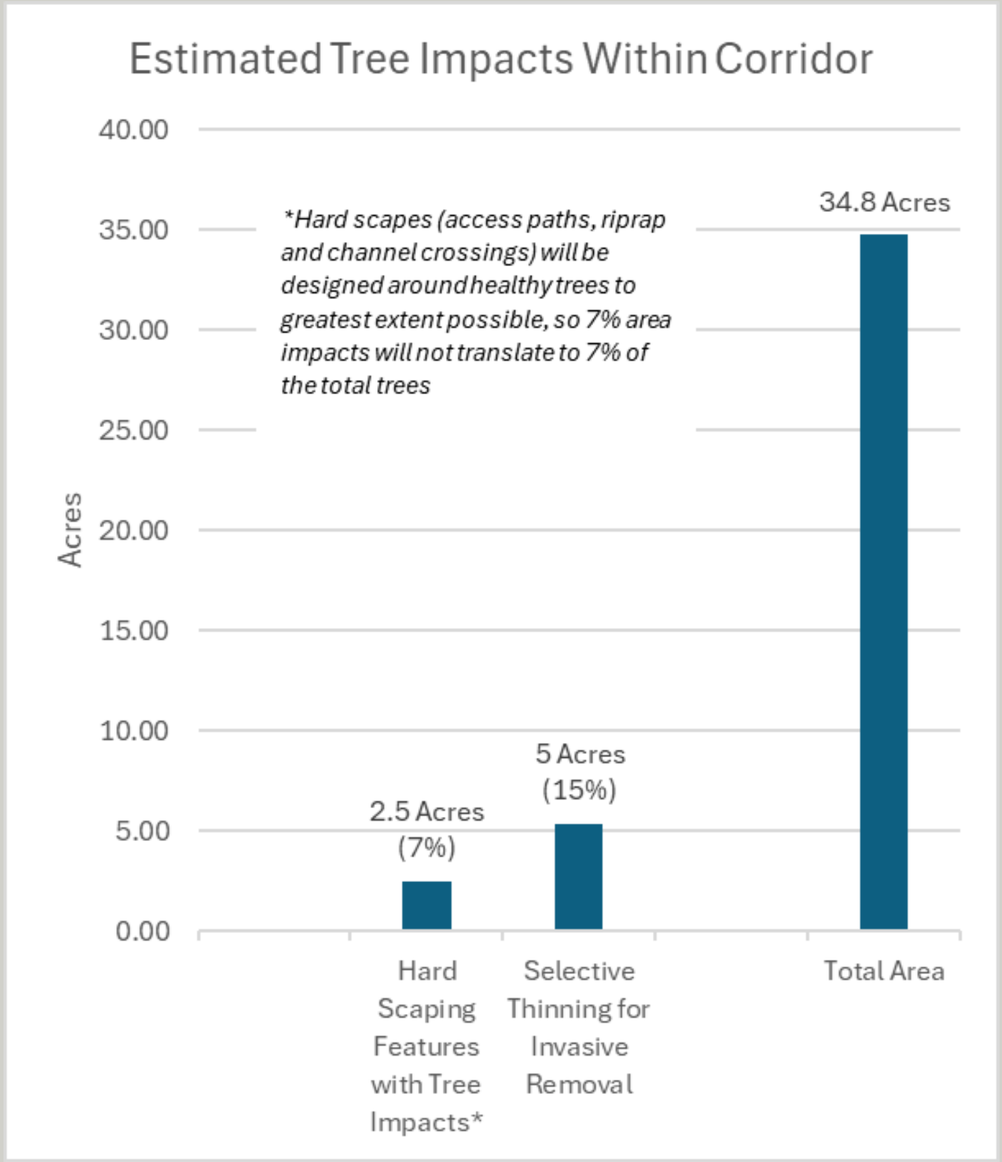


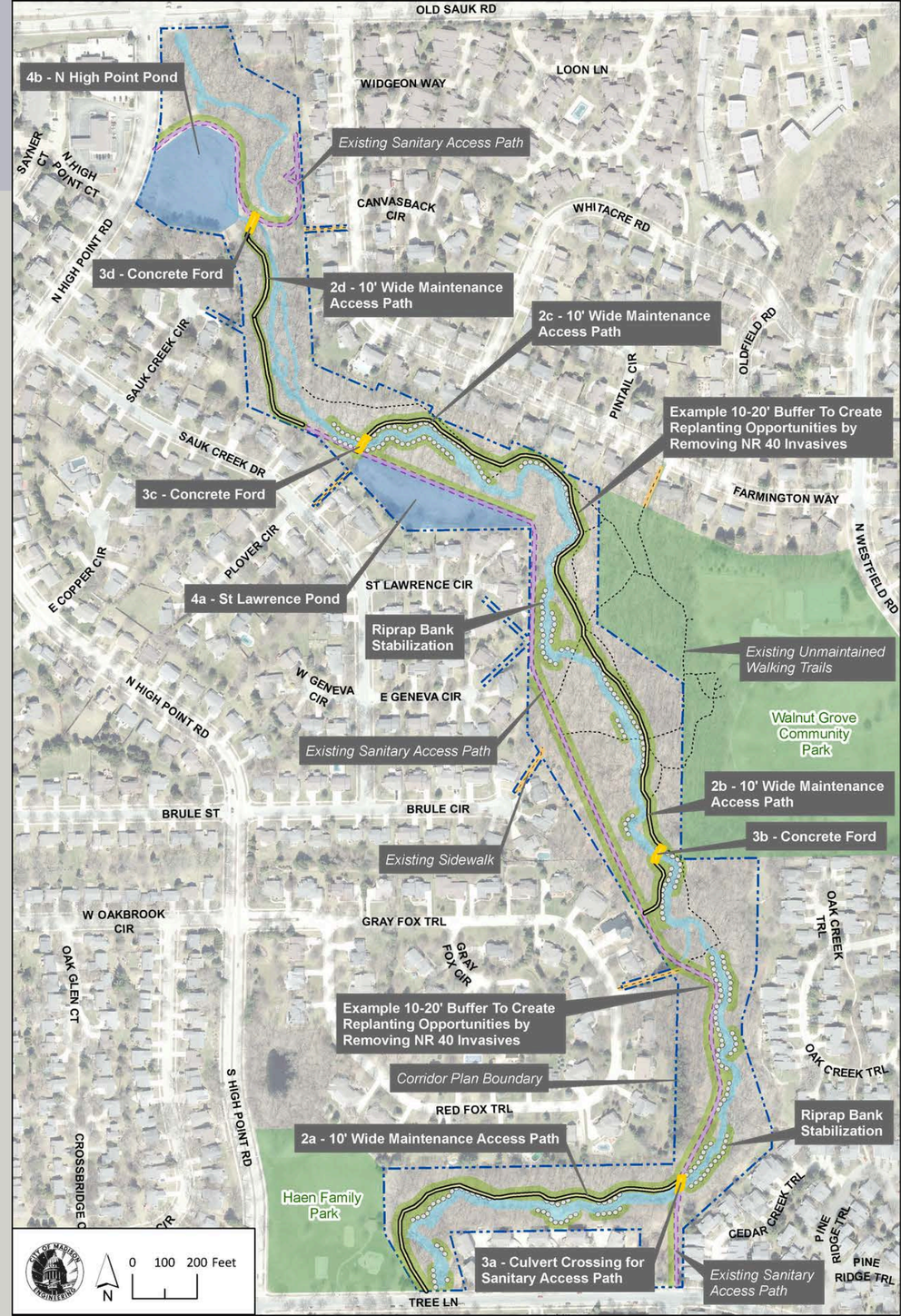
# Estimated Impacts



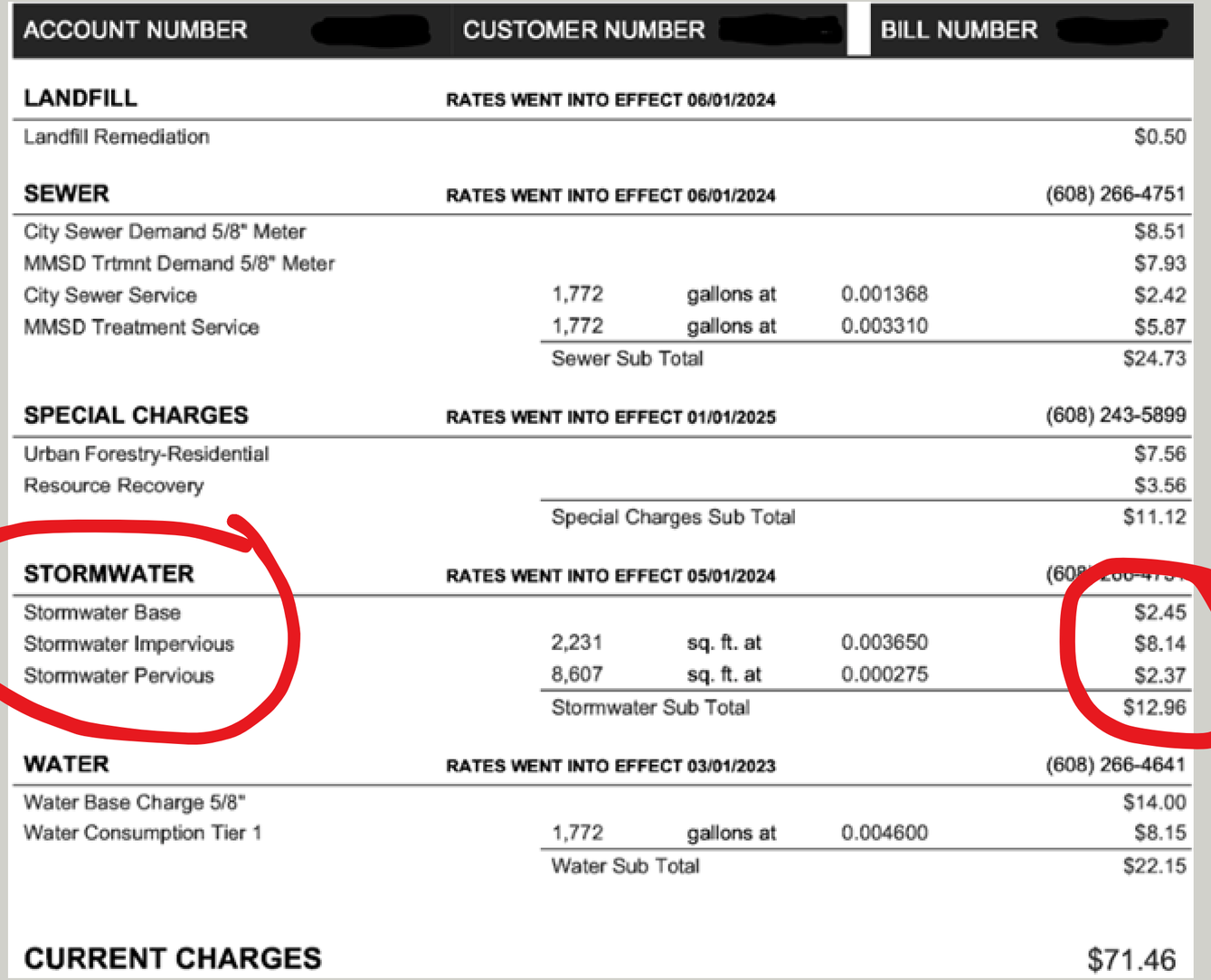
# Estimated Impacts



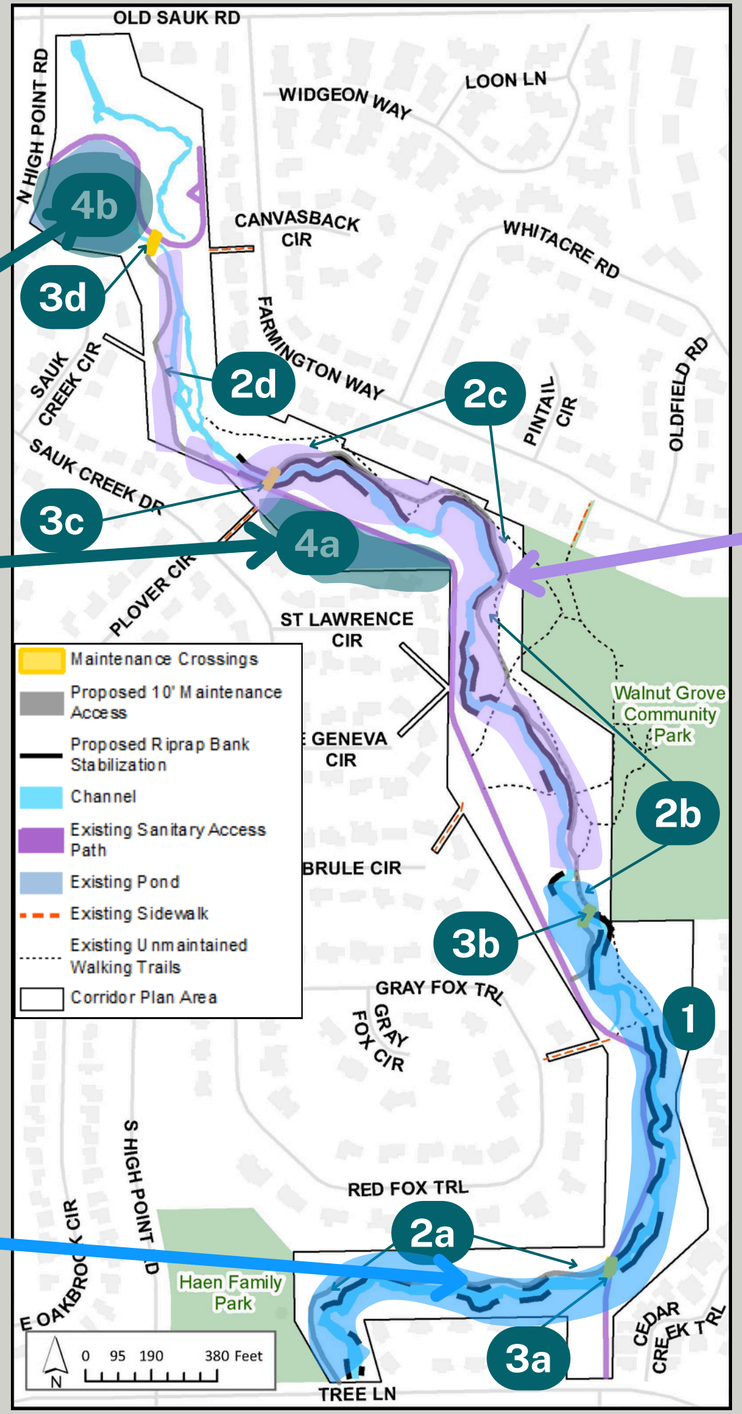
# Stormwater Utility Funding

- **Not** funded from property taxes, which funds the General Fund
- All stormwater related improvements are funded through a charge on your monthly municipal services bill called “stormwater”.
- The average single family house pays **$12-$13/month** (2025 numbers) which is used to fund **ALL the operations of the entire stormwater sewer system as well as funding capital projects.**



| ACCOUNT NUMBER [redacted] | CUSTOMER NUMBER [redacted] | | | BILL NUMBER [redacted] |
|---|---|---|---|---|
| **LANDFILL** | **RATES WENT INTO EFFECT 06/01/2024** | | | |
| Landfill Remediation | | | | $0.50 |
| **SEWER** | **RATES WENT INTO EFFECT 06/01/2024** | | | (608) 266-4751 |
| City Sewer Demand 5/8" Meter | | | | $8.51 |
| MMSD Trtmnt Demand 5/8" Meter | | | | $7.93 |
| City Sewer Service | 1,772 | gallons at | 0.001368 | $2.42 |
| MMSD Treatment Service | 1,772 | gallons at | 0.003310 | $5.87 |
| | Sewer Sub Total | | | $24.73 |
| **SPECIAL CHARGES** | **RATES WENT INTO EFFECT 01/01/2025** | | | (608) 243-5899 |
| Urban Forestry-Residential | | | | $7.56 |
| Resource Recovery | | | | $3.56 |
| | Special Charges Sub Total | | | $11.12 |
| **STORMWATER** | **RATES WENT INTO EFFECT 05/01/2024** | | | (608) [redacted] |
| Stormwater Base | | | | $2.45 |
| Stormwater Impervious | 2,231 | sq. ft. at | 0.003650 | $8.14 |
| Stormwater Pervious | 8,607 | sq. ft. at | 0.000275 | $2.37 |
| | Stormwater Sub Total | | | $12.96 |
| **WATER** | **RATES WENT INTO EFFECT 03/01/2023** | | | (608) 266-4641 |
| Water Base Charge 5/8" | | | | $14.00 |
| Water Consumption Tier 1 | 1,772 | gallons at | 0.004600 | $8.15 |
| | Water Sub Total | | | $22.15 |
| **CURRENT CHARGES** | | | | $71.46 |

# Draft Phasing of Improvements




## Phase 3 - Pond improvements

**Project will Begin: Date TBD**
**(not programmed in 6-year budget)**
**Design/engagement/permitting: ~1 year**
**Construction duration: less than 1 year, but dependent on final improvements**

## Priority Phase 2

**Project will Begin: next 3-6 years**
**Design/engagement/permitting: ~1 year**
**Construction duration: less than 1 year**

## Priority Phase 1 -

**Project will Begin: next 2-3 years**
**Design/engagement/permitting: ~1 year**
**Construction duration: less than 1 year**

*Estimates based on known priorities and best available data -- Extents of each phase and timing are subject to change*

# Design Considerations - All Phases

## 1 – Proposed riprap bank stabilization

- Field inspect all proposed riprap locations and minimize limits of stabilization wherever possible

## 3b-d: Concrete ford crossing for maintenance access path

- Minimize impacts to adjacent trees
- Design with rough surface to maintain foot traction
- Design to minimize impacts to adjacent area
- Closely consider crossing locations based on surrounding erosion and adjacent runoff from Tamarack
- Consider ways to improve crossings for pedestrians including investigating similar energy dissipaters that function as stepping stones (similar to what are seen at the Pheasant Branch Conservancy concrete ford crossings).

# Design Considerations - Phase 1

## 1 – Proposed riprap bank stabilization

- Assess bank on east side of creek near E Geneva Cir and St Lawrence Cir to verify if banks will begin undermining the sanitary access road and/or sanitary sewer, and should be stabilized as part of Phase 1. If so, assess whether in-channel stabilization can be achieved.

## 2a: Maintenance Access Path from Tree Lane to the sanitary access path

- Prevent impact to high quality trees
- Minimize impacts to trees along Haen Family Park to ensure there is still sufficient tree coverage to separate the park from the creek
- Create clear walking connection from Haen Family Park to access path
- Stay close to channel to avoid excessive grading of topography near Haen Family Park
- Requested to minimize wildlife impacts

## 2b: Maintenance Access Path in Middle Corridor along Haen Family Park

- Consider alternative alignments to
  - Minimize impacts to hillside with bloodroot and other native wildflowers near the proposed 3B crossing
  - Minimize new access where Sanitary Access Path can be used
  - Minimize impacts from Tamarack run-off

## 3a: Culvert channel crossing of existing sanitary access path

- Minimize impacts to adjacent trees
- Design culvert to be property sized

## Preventing down trees on neighbor's fences/yards along Tree Lane and Red Fox Trail

- Request input from adjacent properties to see if buffer should be designed and maintained to prevent trees from growing into their property

# Design Considerations - Phase 2

## 1 – Proposed riprap bank stabilization

- Remove failed in-stream dam from St. Lawrence pond and determine if riprap stabilization is needed on adjacent banks
- Field inspect all proposed riprap locations and minimize limits of stabilization wherever possible

## 2c: Maintenance Access Path Plover Circle to St Lawrence Circle along Farmington Way

- Prevent impact to high quality trees
- Keep path as far from private property along Farmington Way as possible
- Consider lining property line with native shrubs for additional screening where path is close to private property

## 2d: Maintenance Access Path Upper corridor west of channel between ponds

- Keep path near channel to make more desirable for walkers viewing nature, and less close to backyards
- Consider lining property line with native shrubs for additional screening where path is close to private property

## 3a: Culvert channel crossing of existing sanitary access path

- Minimize impacts to adjacent trees
- Design culvert to be property sized

## Construction Access on Existing Sanitary Access Path

- Use riprap to keep channel from migrating closer to private property
- Where possible on western bank, install riprap steeper to minimize grading and tree impacts
- Investigate the impact on healthy, native trees of shifting the channel east
- Minimize additional thinning of WDNR NR 40 invasive trees between the western bank and the access path
- Look at ways to shift the sanitary access path towards the channel (balancing tree impacts with path location)
- If desired, consider planting native shrubs along property line if space allows to buffer sight lines from private yards to gravel sanitary maintenance access path within the greenway.

# Design Considerations - Phase 3

## 4a: St Lawrence Circle Pond (Southern Pond)

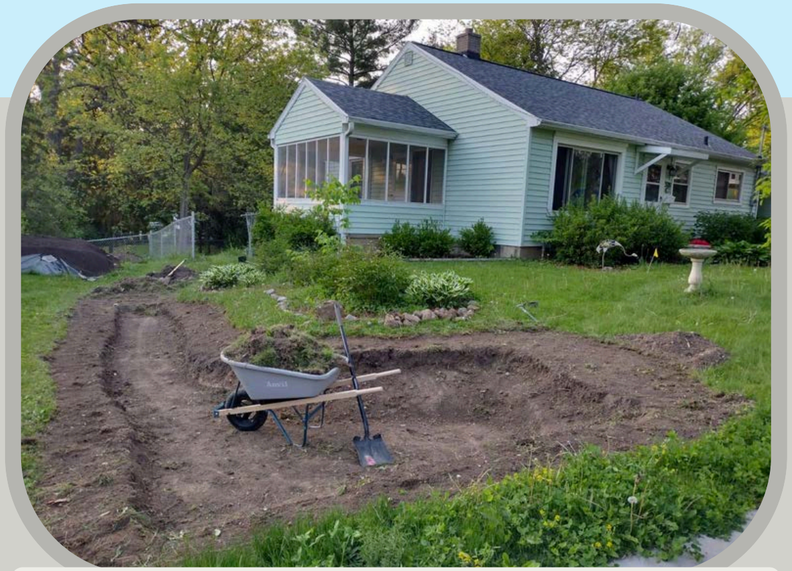
- Provide ongoing maintenance

## 4b: N High Point Pond (Northern Pond)

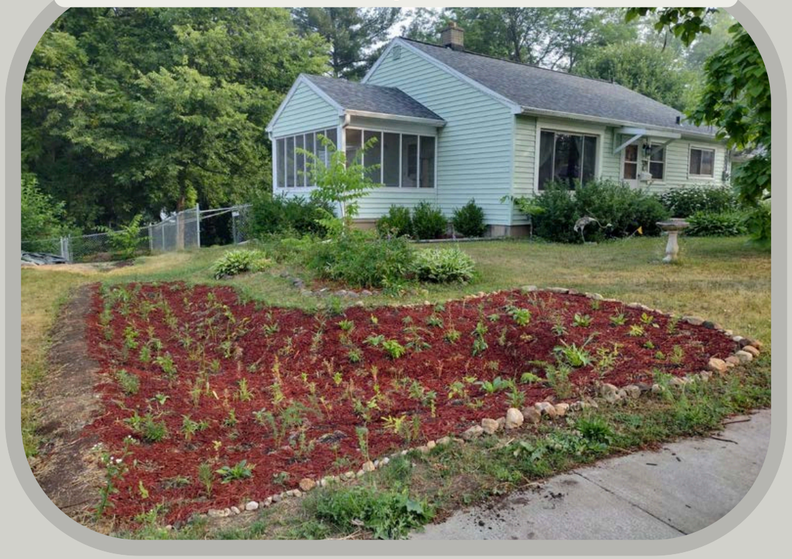
- Prefer final vegetation is tall for deer bedding habitat
- Consider planting upland spaces with full sunlight to plant oaks or have them seed in naturally

# What is Green Infrastructure (GI)

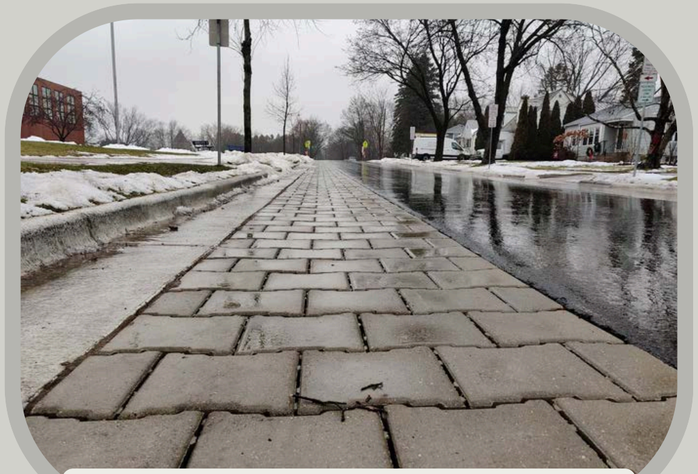
- GI is smaller infrastructure that **filters and absorbs stormwater where it falls**.
- GI uses plant or soil systems, permeable pavement or other permeable surfaces to **store, infiltrate, or evapotranspirate stormwater** and **reduce flows** to sewer systems or to surface waters.
- The City encourages GI use through the stormwater ordinance, the rain garden program, and a GI Pilot Study.



A rain garden on private property treats and infiltrates stormwater on-site and provides wildlife habitat



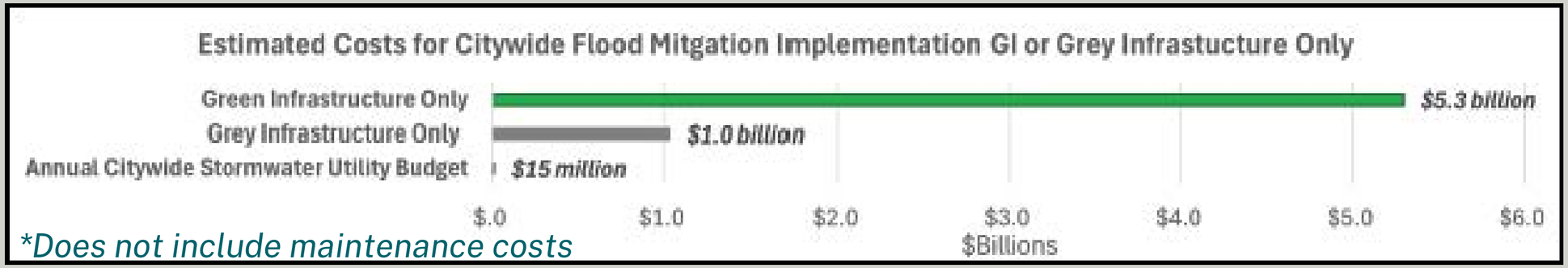
Green Roof on Regent Street - Photo Credit: CRG, Chapter at Madison



Permeable Pavement installed in City of Madison with Green Infrastructure Study

# Green Infrastructure (GI) Analysis

- A GI analysis was completed with the Pheasant Branch Watershed study to evaluate **GI as a means to reach our flood mitigation targets**
- Found **significant** GI needed to meet flood reduction targets
  - This is because GI is meant to improve water quality, and is designed for smaller frequent storms (which carry most of the pollutants), not large flood storms. When GI fills up at the start of a large storm, the water flows out like a cup that is full.
- Citywide implementation of GI as the primary flood control measure would exceed **$5 billion**, **several times the cost** of necessary **grey infrastructure** (pipes, ponds, greenways proposed in watershed studies).



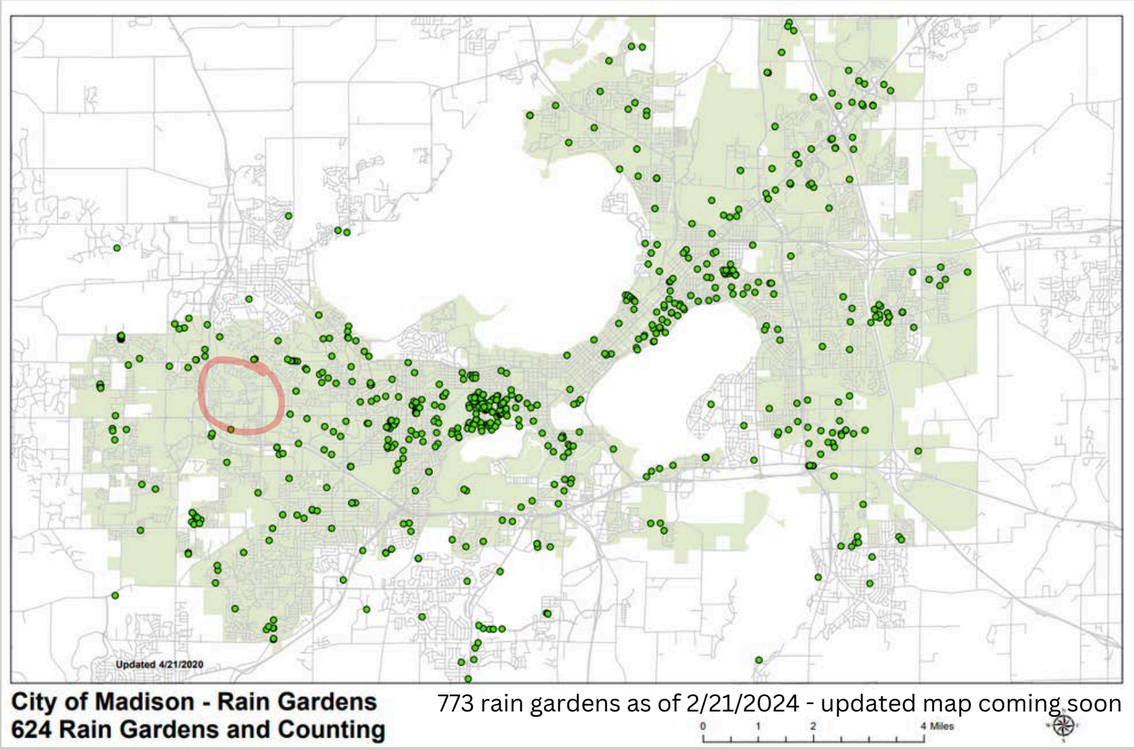

- GI will continue to be a **piece of the larger** puzzle for flooding. GI has many **ecological, water quality, and social benefits**; and it can **add resilience** to the stormwater system
- The City encourages GI use through the **stormwater ordinance**, the **rain garden program**, and a **GI Pilot Study**.

For more information, including the GI analysis report, and summary fact sheet, please visit:
www.cityofmadison.com/flooding/city-initiatives/watershed-studies/watershed-study-learning-hub/green-infrastructure-water

# Rain Gardens - Citywide Goals

*Stormwater that infiltrates in the greenway is not clean. It includes salt and other pollution from roads and yards (brake pads, paint chips, fertilizer etc). Some of these pollutants make it into the aquifers that serve Madison's drinking water and can cause problems.*

- GI's many benefits, specifically recharging groundwater (or aquifers) are increased when we are able to **infiltrate clean water**. Clean water that we can infiltrate is roof water. Residents building rain gardens to infiltrate roof water is a great way to help!
  - If you install a rain garden, you can receive credit on your stormwater bill
- City has **1,000 rain gardens goal** -- we are currently >773 (map shows 624)
  - Currently no rain gardens are on the City's map around the Sauk Creek area
    - If you have a rain garden, let us know!
- You can learn how to install a rain garden on your own property at the link below
- City staff are available to provide guidance on how to size and site your rain gardens!
  - You can email Phil Gaebler at: pgaebler@cityofmadison.com




**www.cityofmadison.com/engineering/stormwater/programs-initiatives/rain-gardens**

# How you can help improve infiltration!

- Common theme from draft corridor plan survey responses was **community desire to increase infiltration in corridor** as top priority
- Proposed changes to the corridor plan should not significantly impact infiltration because we aren't impacting channel capacity, so the floodplain will be activated as frequently as it is today
    - Pond improvements should increase infiltration
- Community members also concerned about infiltration (sharing concerns about our groundwater and aquifers) or decreasing flows into the greenway **can install rain gardens** to **treat their (clean!) roof water** for the 1% annual chance storm (6.66 inches of rain in 24 hours).
    - If all homes did this, there could be large increases in community infiltration and would begin to make an impact on flows reaching the greenway.

Scan me!

# Public Use of Corridor

## Multi-use paths

- The City views a multi-use path as a paved path that is maintained and within the City's transportation network.
- There are **no** proposed multi-use paths proposed with the corridor plan

## Improving Wayfinding and Access

- City hopes to improve access and wayfinding by including maps of official maintenance access paths, and marking the greenway as public space at entrances
- City will look at possibilities to install educational signage to utilize greenway as outdoor classroom


Example information signage installed at rain garden

# Public Use of Corridor - Ecological Work

## Updates on Volunteers

1. City will reach out to those that were interested in being a volunteer liaison per the Online Survey. These liaisons will serve as volunteer liaison to organize volunteer work days, share volunteer activities with interested community members and communicate with City staff
2. City will share lists of people interested in volunteering per the Online Survey with the liaisons with approved workplans.


## Minimal restoration work has been occurring in the corridor and will continue prior to construction projects

**Goals of this work have been to foster a new generation of native, hardwood canopy trees and protect the older specimen trees as well as improve overall native plant diversity, ecosystem functionality and wildlife habitat in limited, targeted areas.**

- Removing NR 40 woody invasives under mature oak canopy near intersection of N High Point Rd & Old Sauk Rd
- Pulling garlic mustard from areas with high native herbaceous plant diversity
- Targeted removal of seed-bearing woody invasives in middle of corridor away from property lines by chainsaw certified volunteers

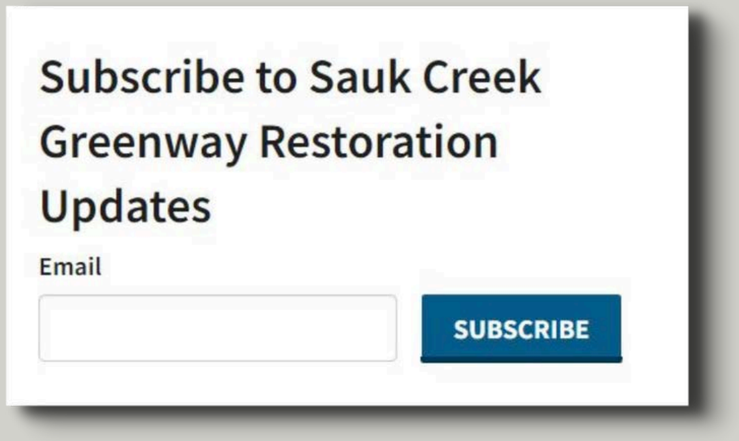
# Contact Information & Resources

## Contacts

- Project Manager, Jojo O’Brien
  - Email: jobrien@cityofmadison.com

## Project website

- **www.cityofmadison.com/SaukCreekGwy**
  - Sign-up for project email updates on the website
  - Read Draft Corridor Plan report
  - Watch Sauk Creek Greenway Walk and Talk video
  - See Facts sheet for more answers to common questions
  - Recording for virtual meeting, and meeting slides will be posted

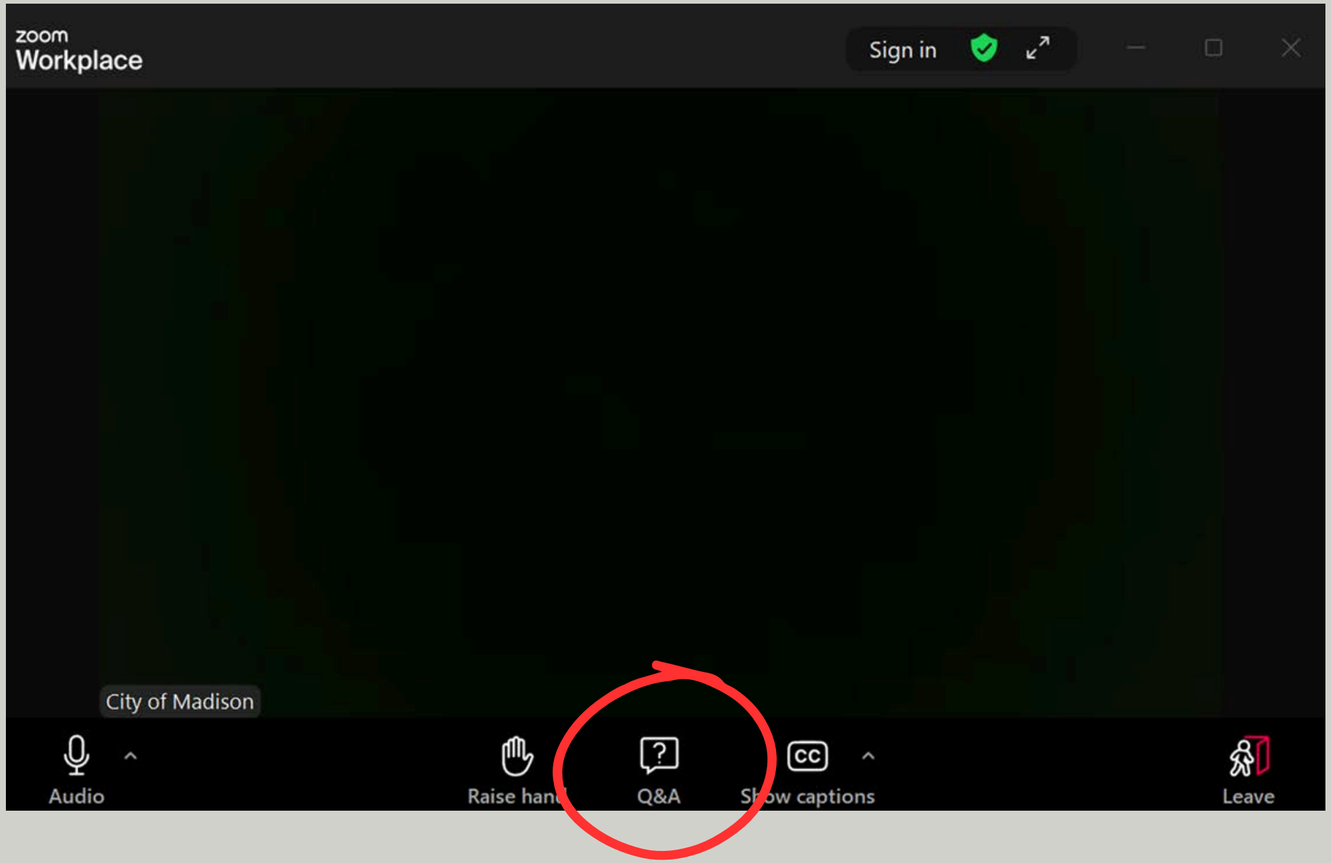



## Please take our survey to:

- Provide input on the corridor planning process
- Provide final comments (in lieu of emailing, to be appended to the final report)
- https://www.surveymonkey.com/r/JHS7TKY

Scan QR code with phone photo app

# Questions?




Use Q&A button, or raise your hand to be unmuted for comments or ask additional questions.

# Thank you for coming!

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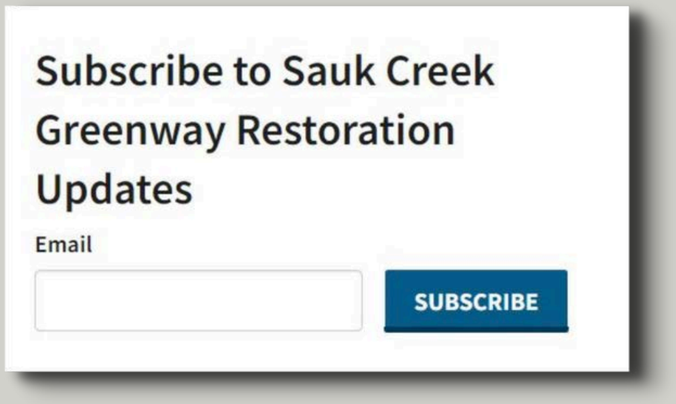


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# END