



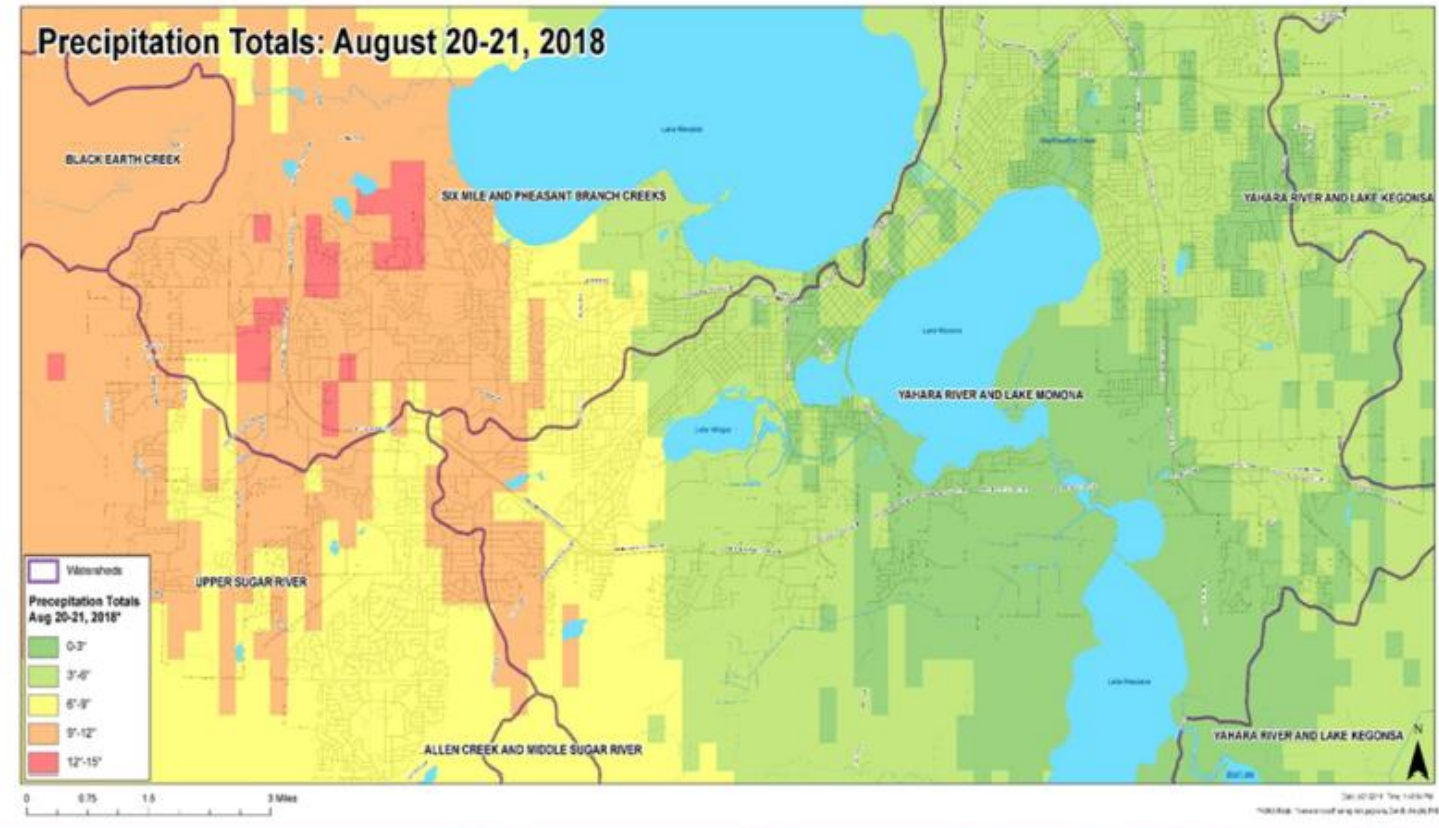
Differentiating Upcoming Stormwater Projects

Informational Item- BPW
1/24/24



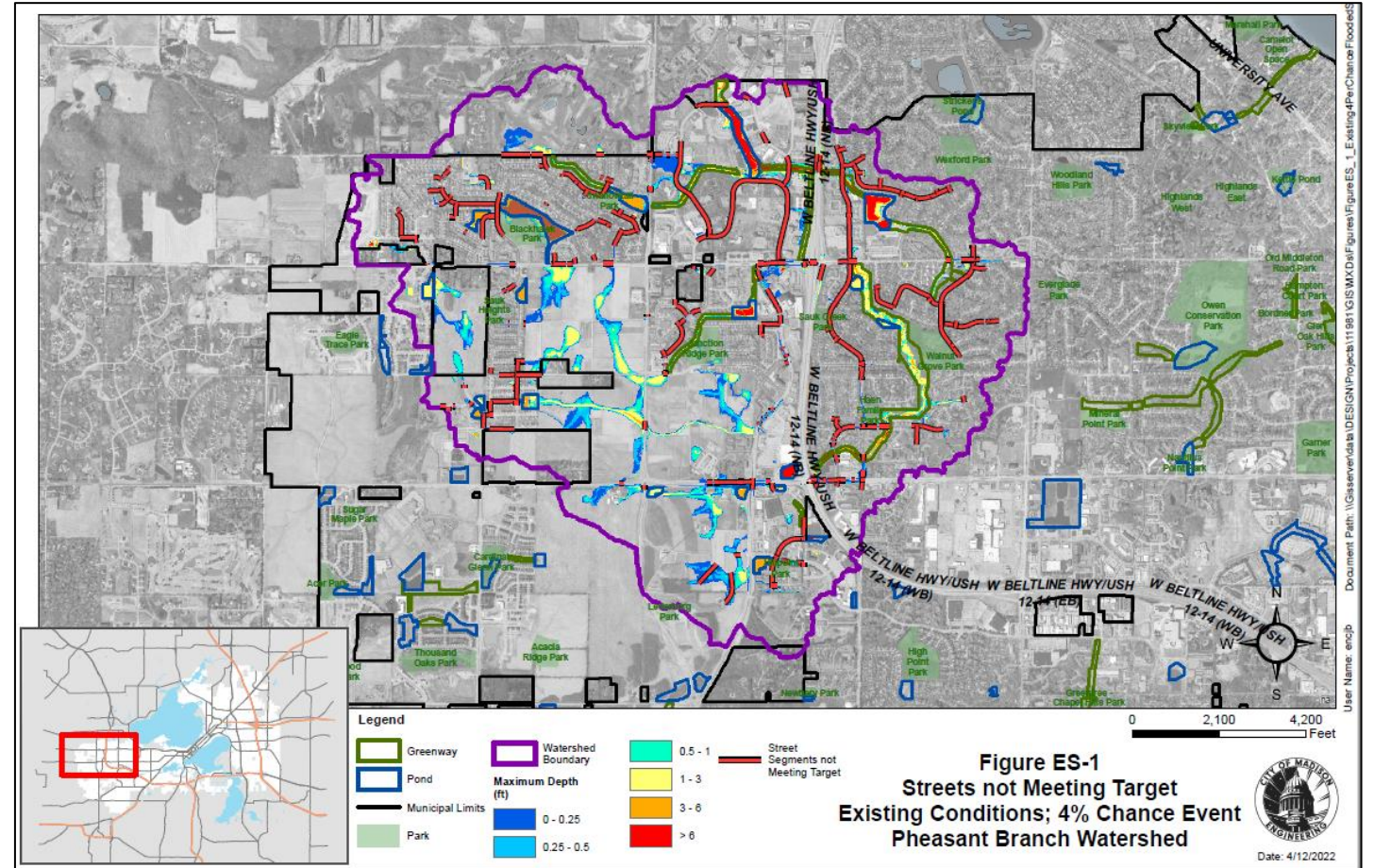
Watershed Studies

- Following series of flood events, including August 20, 2018, City began watershed studies
- Established Flood Targets:
 - Roads accessible to emergency vehicles in 4% annual chance event
 - No structure flooding in 1% annual chance event



Pheasant Branch Watershed Study

- Study lasted 2019 – 2022
- Flooding issues throughout watershed
 - Streets not passible for emergency vehicles shown in image
 - 113 structures flood in 1% annual chance event

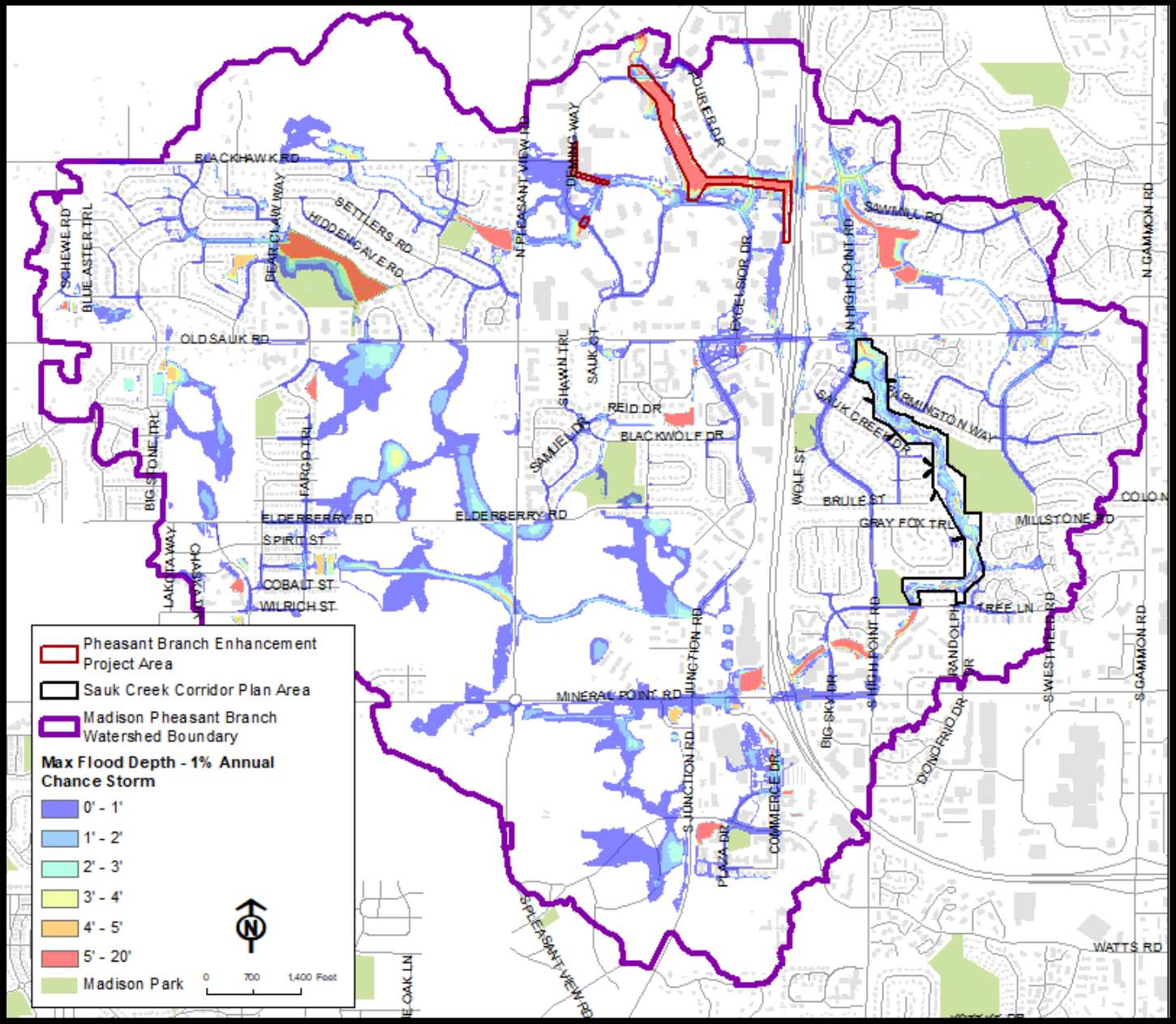


Pheasant Branch Watershed Study Solutions

- 12 large stormwater projects were the result of the study
- 2 projects are in varying levels of design and planning
 - Pheasant Branch Enhancement
 - Sauk Creek Greenway
- You'll be seeing and hearing about both projects in coming months
 - Emails/news/ etc
- Projects appear similar, but there are more differences than similarities

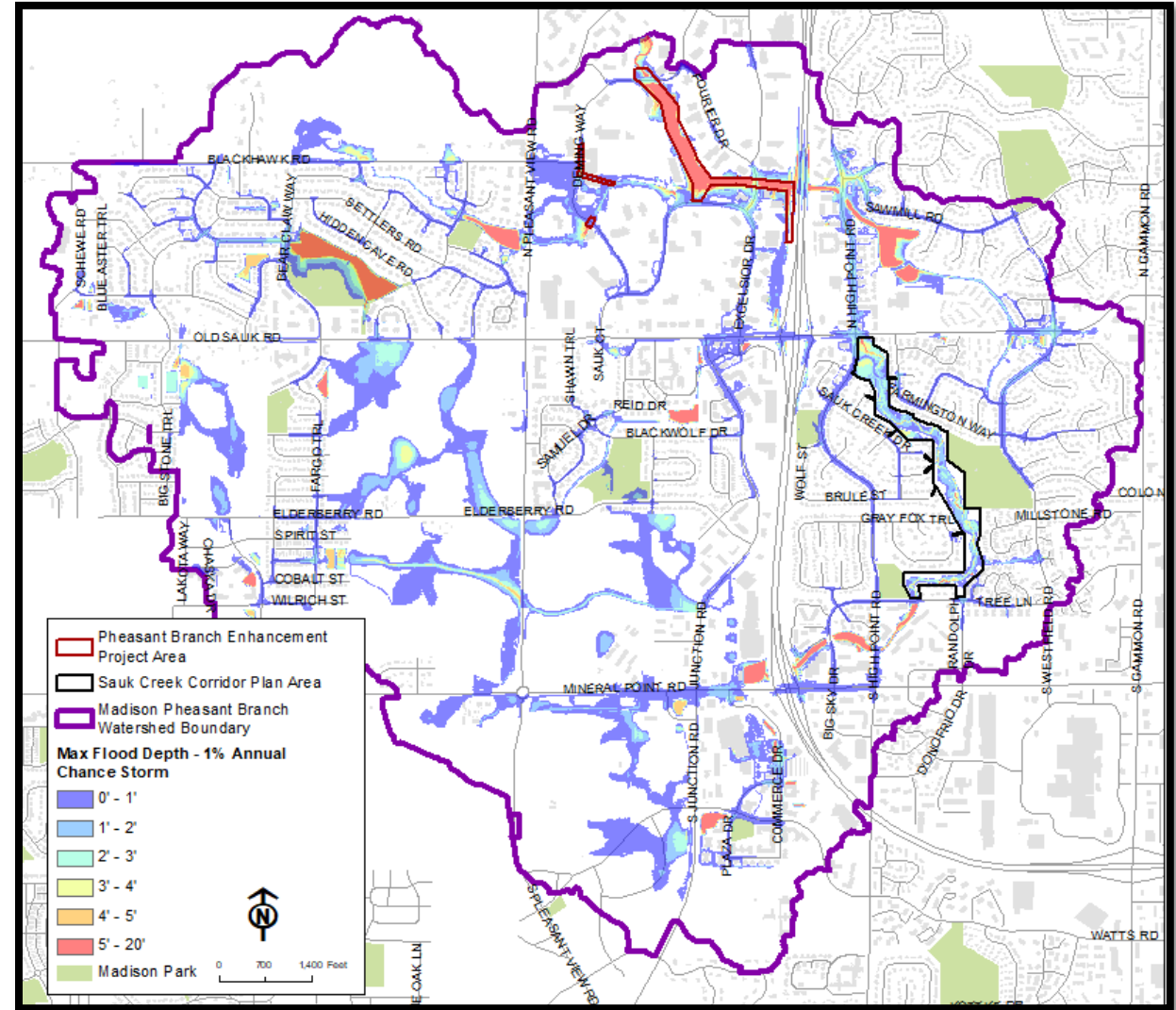


Pheasant Branch Watershed Study



Project Differences

- Project Approach
- Flood Risk & Adjacent Flooding Impacts
- Stormwater Flows & Location in Watershed
- Historical Use
- Topographic Constraints



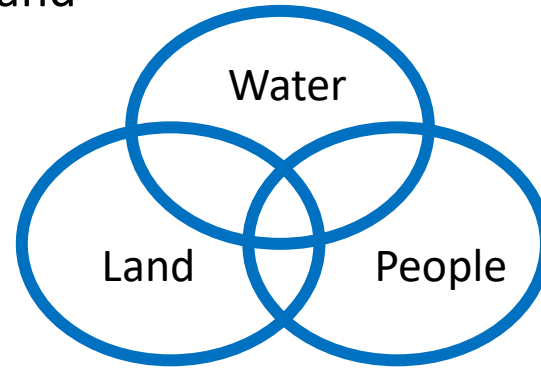
Pheasant Branch Enhancement

- In Design phase
 - Includes: Ponds and greenways in Old Sauk Trails Business Park near Deming Way, Fourier Dr, Excelsior Dr
- Primary goal: Flood mitigation
- Project requested by adjacent businesses to mitigate flooding
- Building Resilient Infrastructure and Communities (BRIC) Grant Funding
 - Received \$6.25M for this project
 - Supports states and local communities to reducing the risks on projects that are impacted disasters and natural hazards
- Standard design & public engagement
- Strict timeline to design/build per grant
 - Construction late 2024-2025

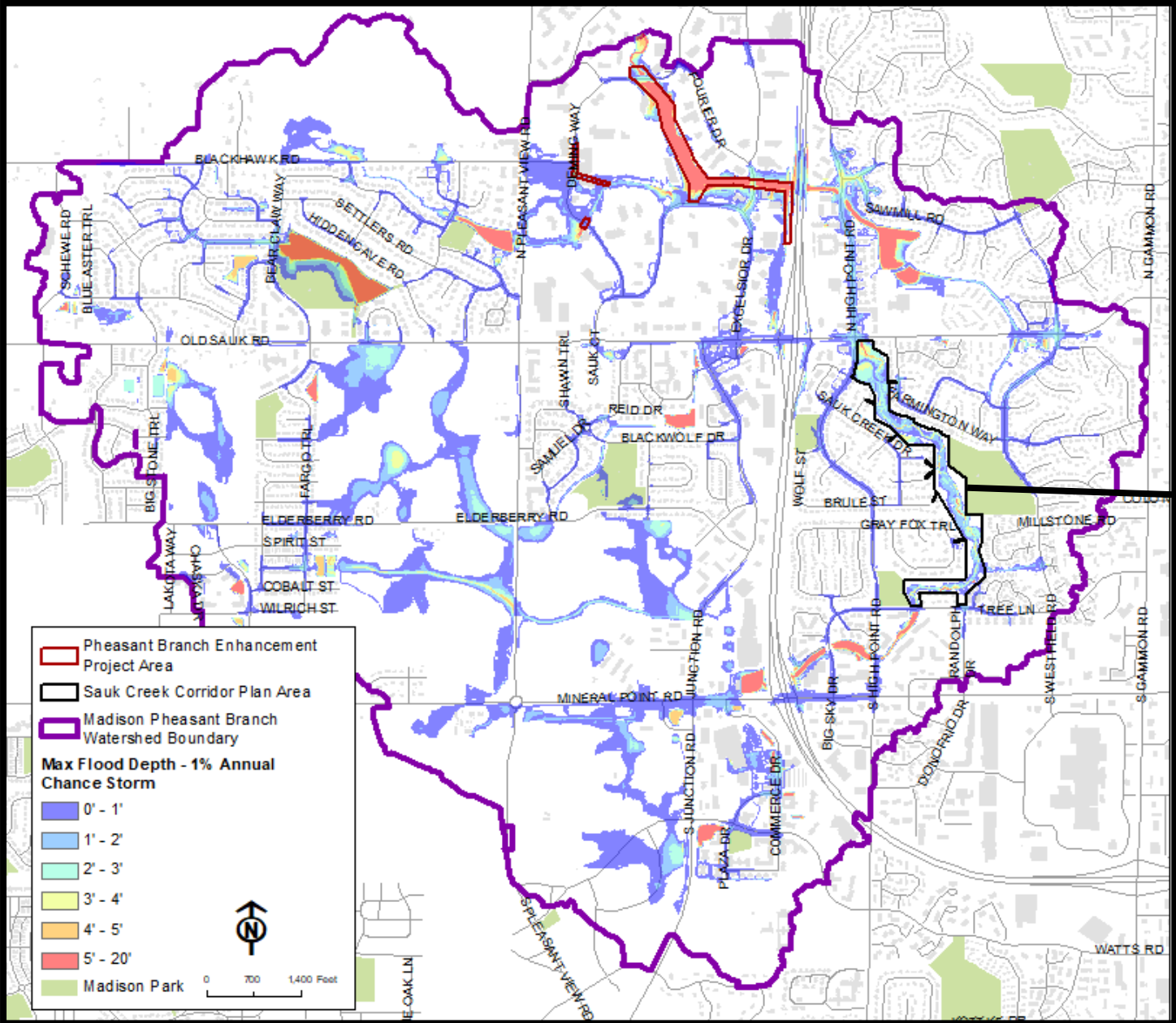


Sauk Creek Greenway Corridor Plan

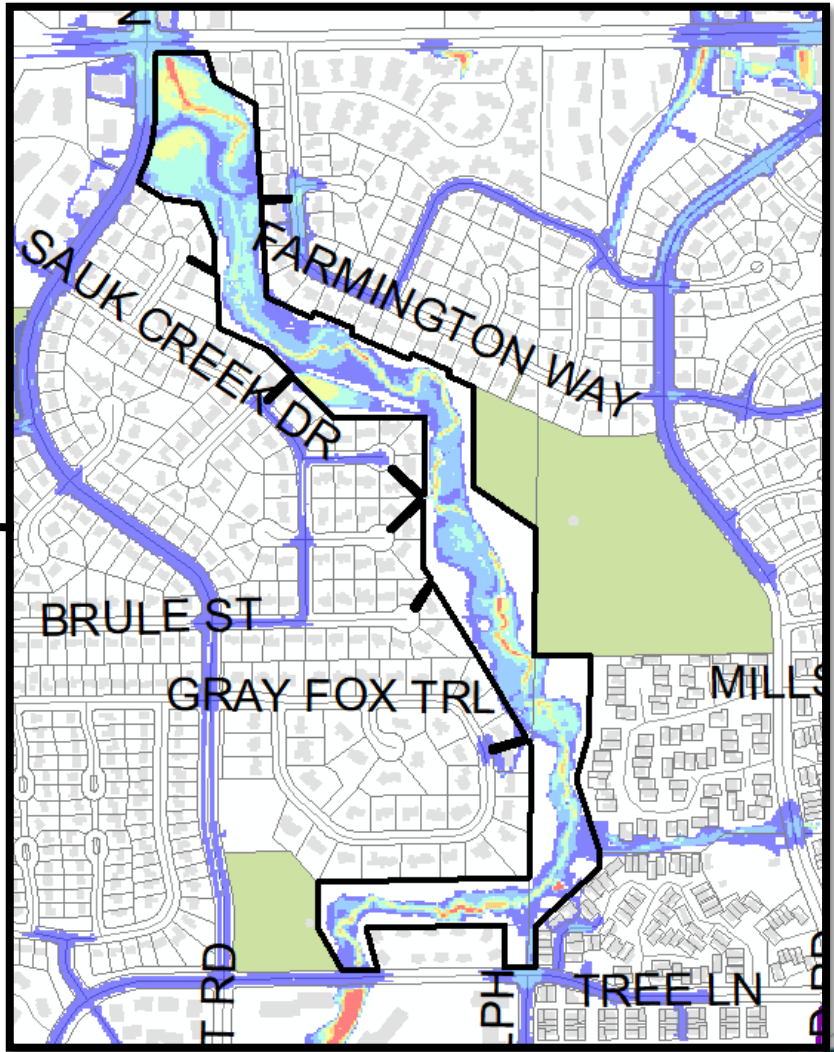
- In Planning stage
 - Includes: Greenway between Tree Lane and Old Sauk Road and two adjacent ponds
- Primary goal: channel stabilization
- Neighborhood request to slow down design process and provide input
- Developed a special engagement process to develop Corridor Plan throughout 2024
- Corridor Plan will serve as conceptual plan for phased construction of sections
- First phase of construction will not occur until 2025 at the earliest



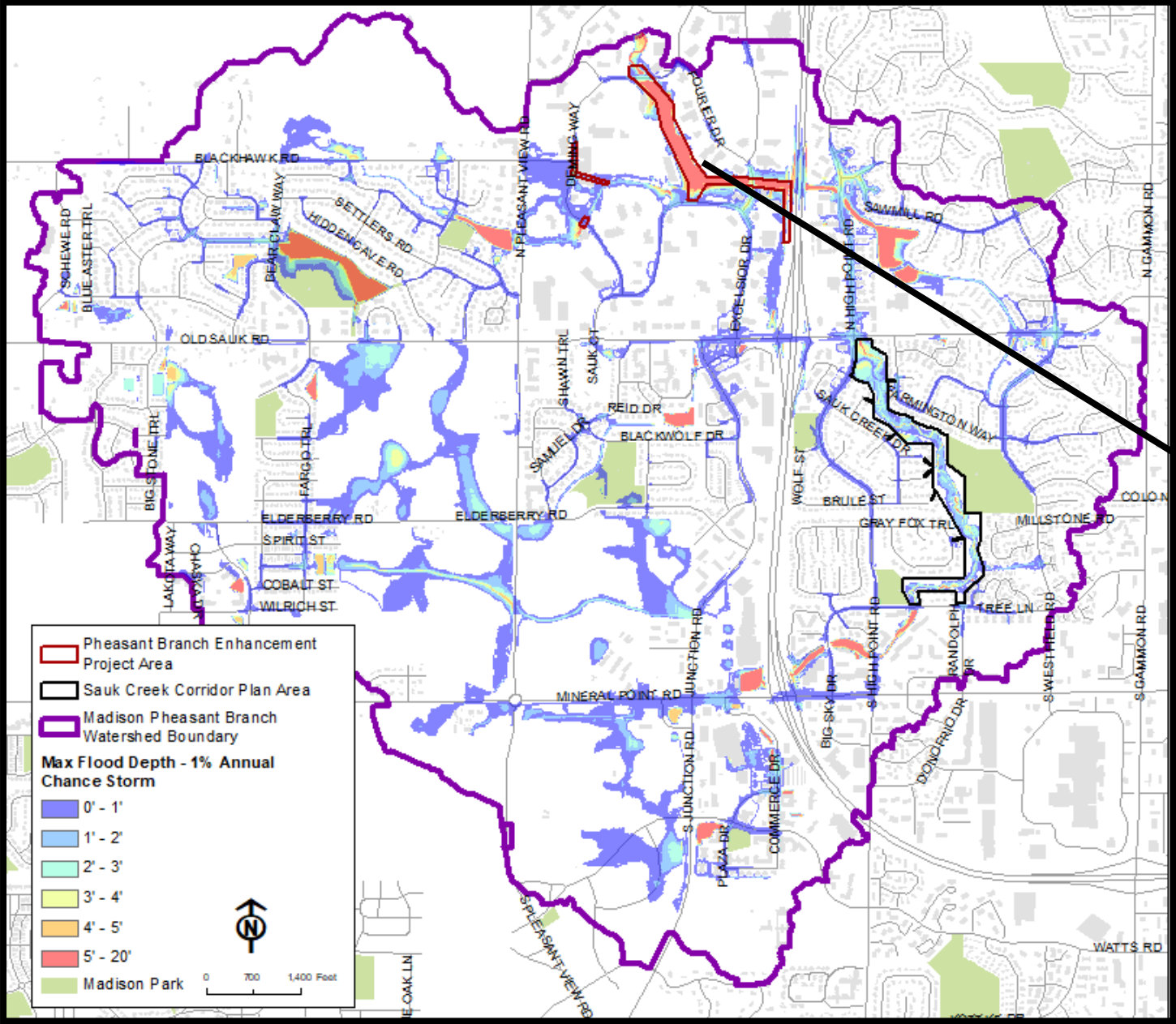
Pheasant Branch Watershed Study – Flood Risk



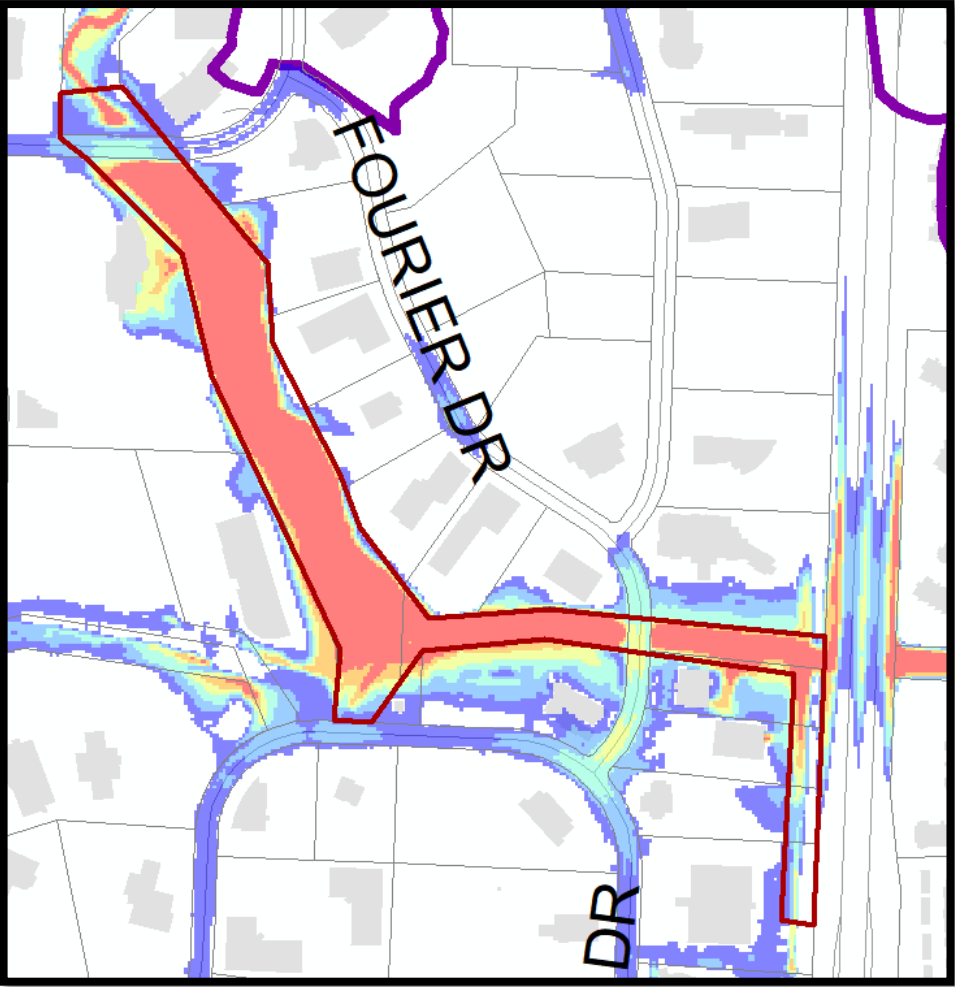
Sauk Creek Greenway



Pheasant Branch Watershed Study – Flood Risk



Pheasant Branch Enhancement



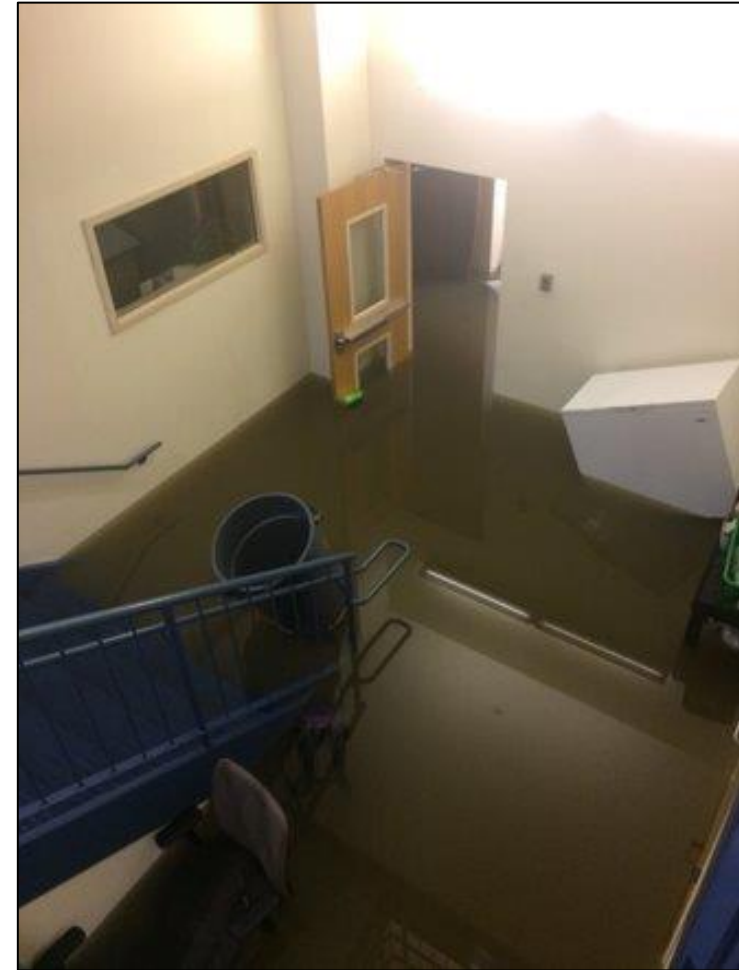
Pheasant Branch Enhancement

Old Sauk Trails Business Park



Pheasant Branch Enhancement

Old Sauk Trails Business Park



Pheasant Branch Enhancement

Deming Way



Pheasant Branch Enhancement

Old Sauk Trails Business Park



Pheasant Branch Enhancement

Ponds



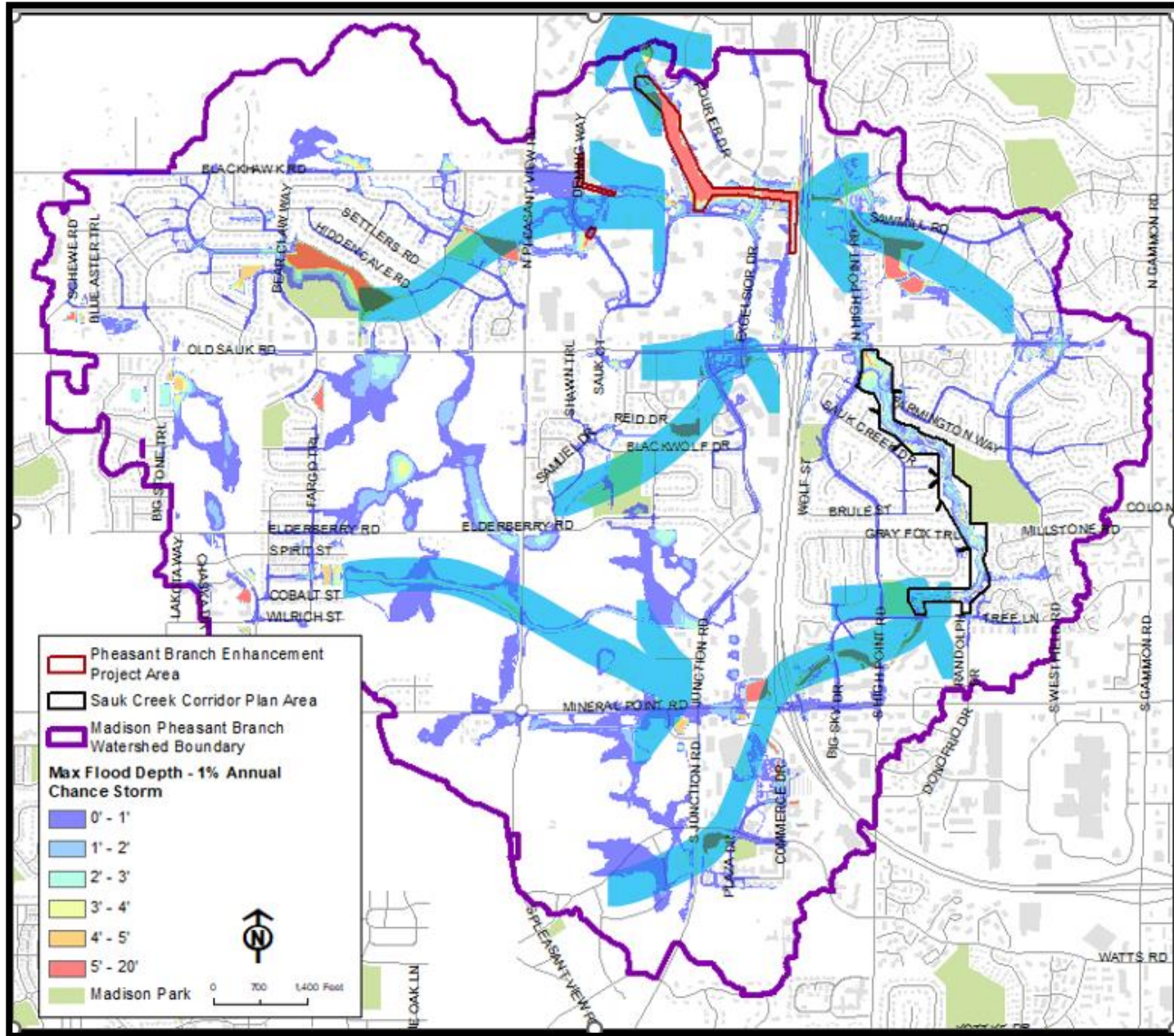
Sauk Creek Greenway



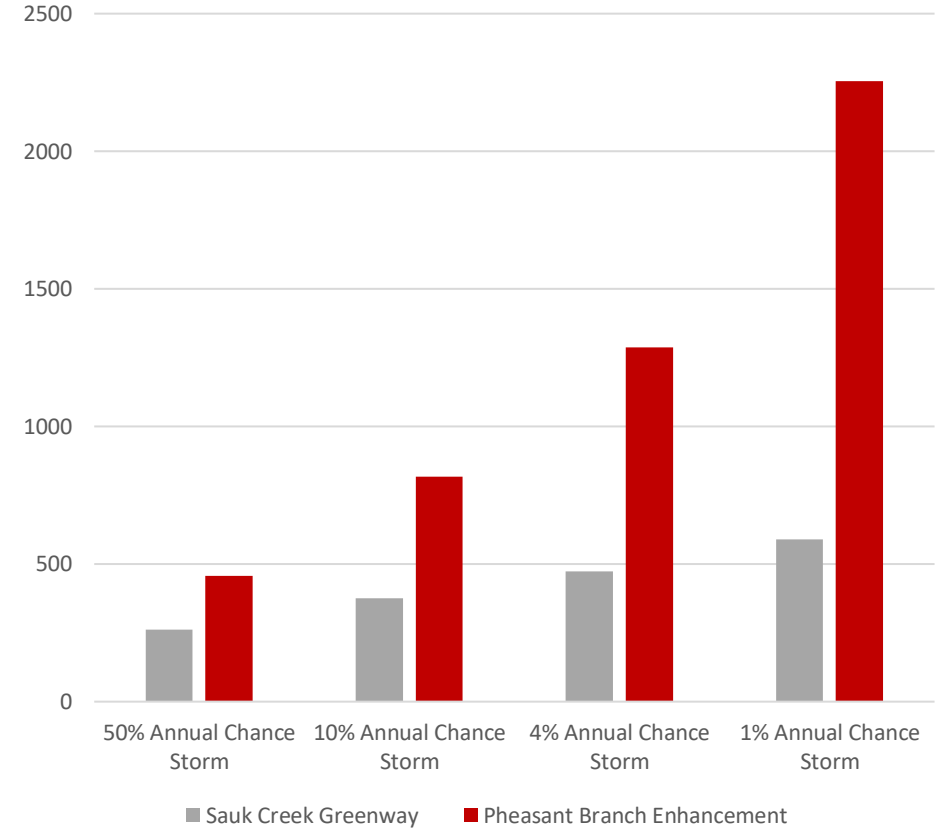
Sauk Creek Greenway



Pheasant Branch Watershed Study – Flows



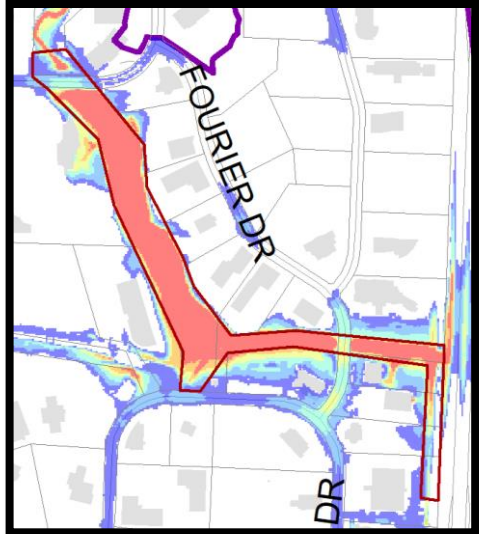
Flow Comparisons in Cubic Feet per Second (cfs)



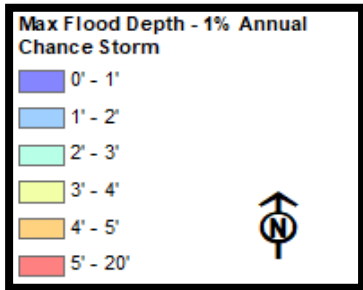
~4x the amount of flow through Pheasant Branch Enhancement in 1% annual chance storm

Pheasant Branch Watershed Study – Topographical Constraints

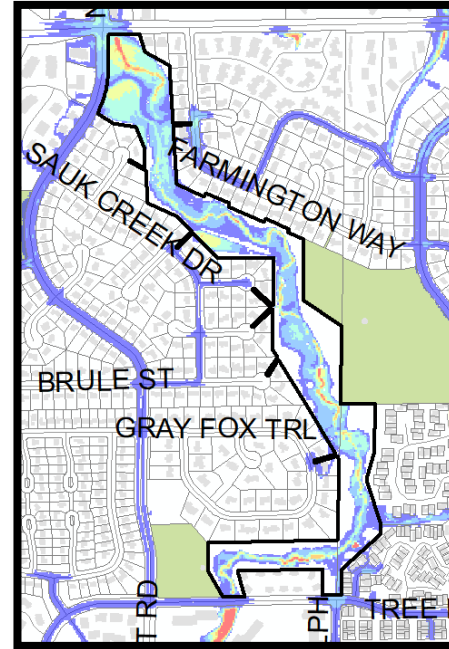
Pheasant Branch Enhancement



- Primary function: stormwater storage (pond)
- Average vertical difference between project centerline to property line: <math><5'</math>
- Longitudinal slope*: $\sim <2\%$



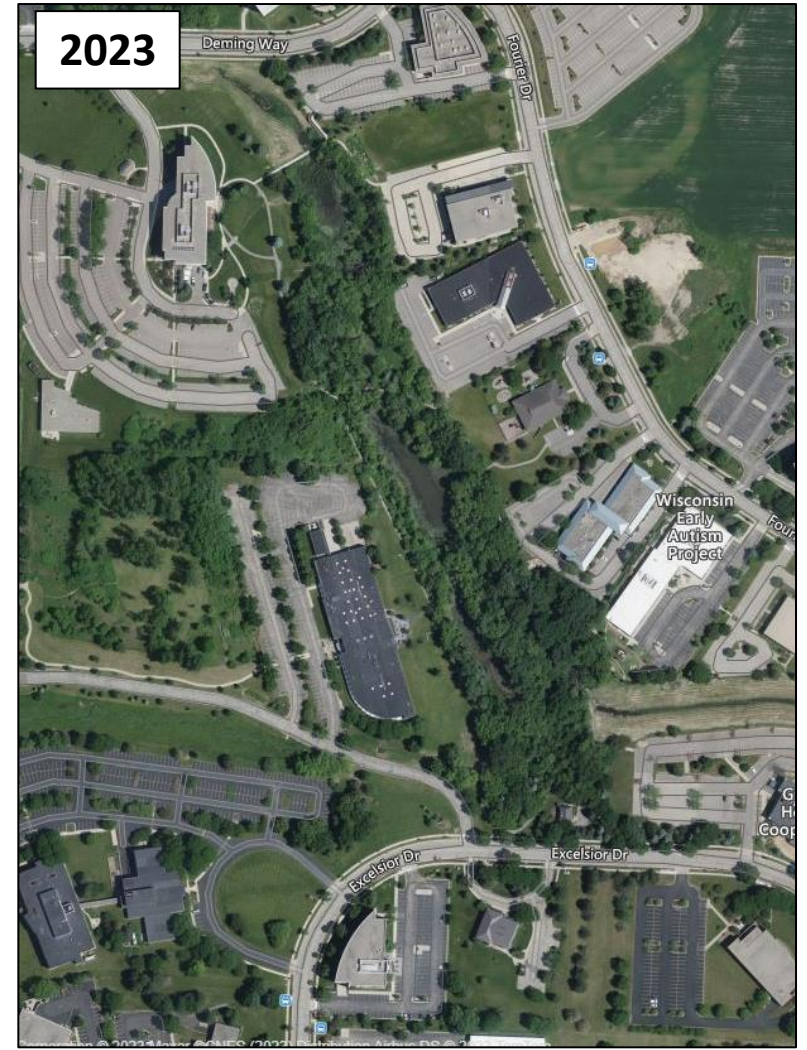
Sauk Creek Greenway



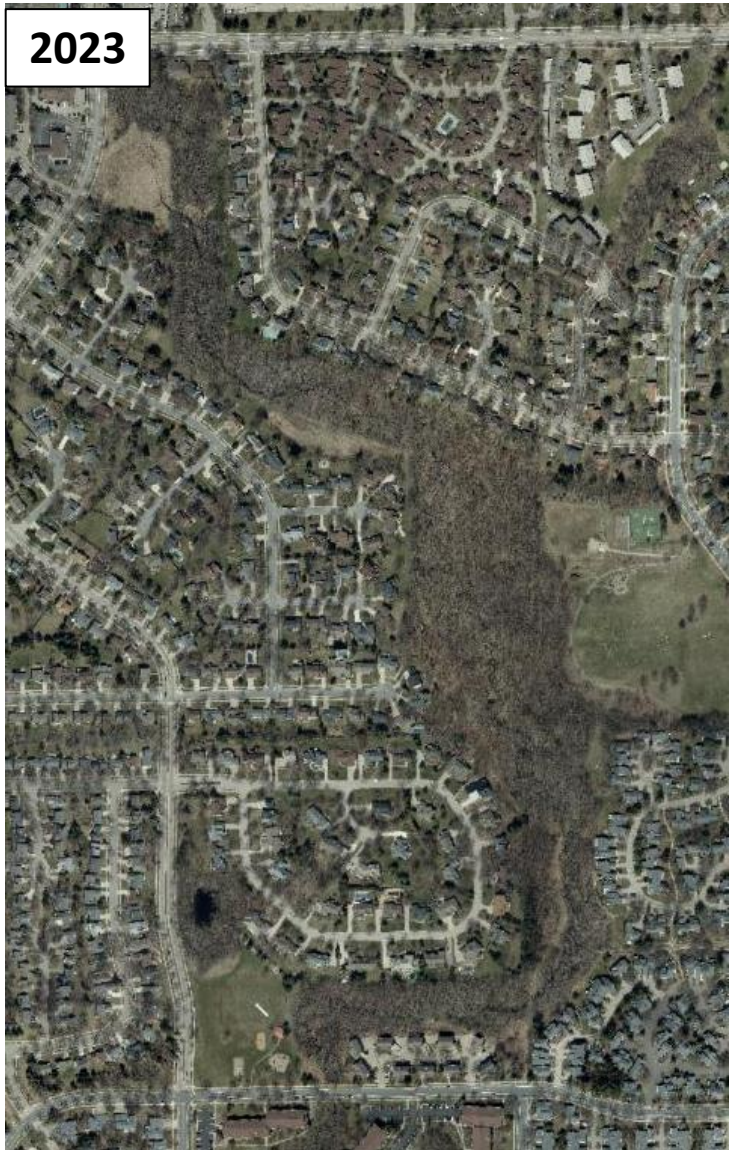
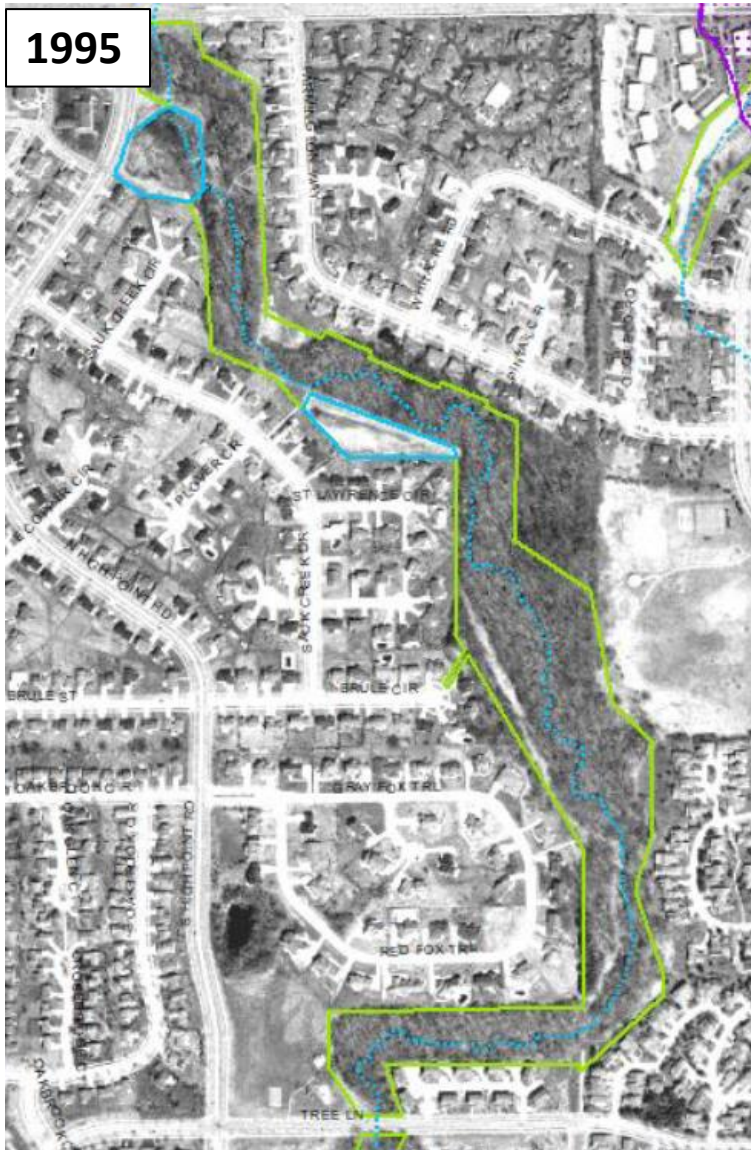
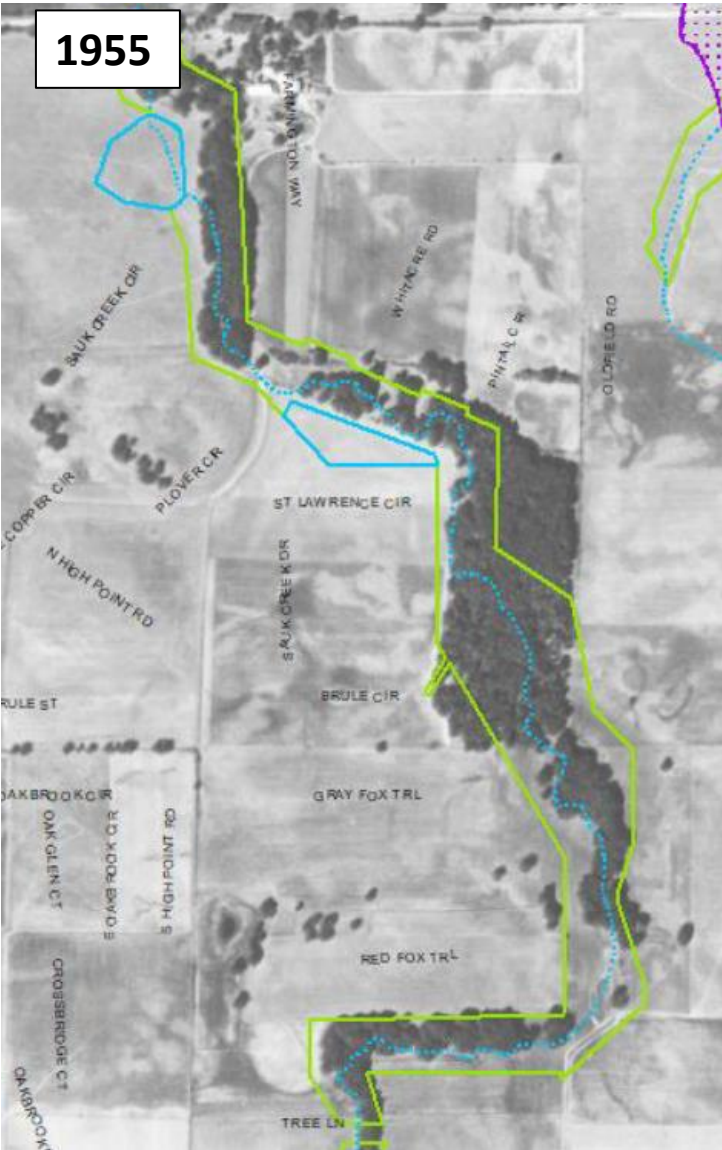
- Primary function: stormwater conveyance (greenway)
- Average vertical difference between project centerline to property line: 10'
- Longitudinal slope*: $\sim 7\%$
 - Water moves through faster → Less ponding

*Longitudinal slope: slope of main flow route from upstream to downstream end of the project

Historical Conditions – Pheasant Branch Enhancement



Historical Conditions – Sauk Creek



What's Next for BPW

- Sauk Creek Greenway
 - Public engagement throughout 2024, and corridor plan will be brought to BPW for approval (late 2024)
 - Individual projects details will be brought to BPW with each section that gets constructed to approve plans/specs (timing TBD)
 - Webpage: www.cityofmadison.com/SaukCreekGwy
- Pheasant Branch Enhancement
 - Approving plans/specs for construction (fall 2024)
 - Webpage: www.cityofmadison.com/engineering/projects/pheasant-branch-enhancement

