



Regent St/Kenosha Culvert Replacement

Public Information Meeting
City of Madison Engineering Division
June 28th, 2023

Thank you for attending. We will begin shortly...



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 **“chat”** button for technical issues with meeting to troubleshoot with staff to assist.
- Use the **“Q and A”** button to type questions about presentation. Questions will be answered live after the presentation.
- Inappropriate questions may be dismissed.
- 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

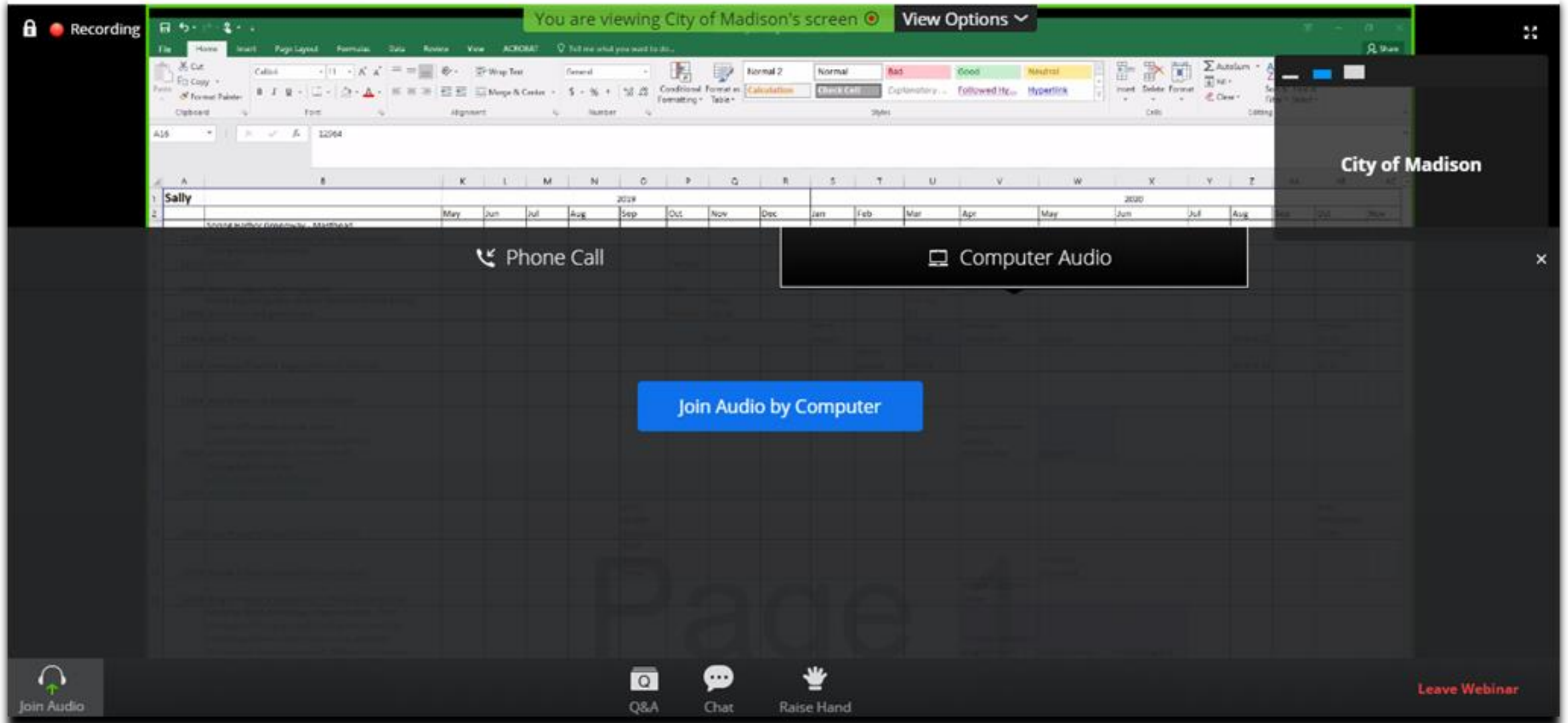
The screenshot displays a Zoom meeting interface. At the top, a green banner reads "You are viewing City of Madison's screen" with a "View Options" dropdown. Below this is a shared Excel spreadsheet with a ribbon menu and a grid of data. A "City of Madison" watermark is visible on the right side of the spreadsheet. In the center of the meeting area, there are two audio options: "Phone Call" and "Computer Audio". A blue button labeled "Join Audio by Computer" is positioned below these options, with a red arrow pointing to it. At the bottom of the meeting area, there is a toolbar with icons for "Join Audio", "Q&A", "Chat", and "Raise Hand". A red arrow points to the "Join Audio" icon. In the bottom right corner of the meeting area, there is a "Leave Webinar" button.



Make sure to join audio



How to Participate



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



How to Participate

The screenshot displays a Zoom meeting interface. At the top, a green banner reads "You are viewing City of Madison's screen" with a "View Options" dropdown. The main content is a shared Excel spreadsheet with a ribbon menu and a grid of data. A "City of Madison" watermark is visible in the top right. Below the spreadsheet, there are two buttons: "Phone Call" and "Computer Audio". A large blue button in the center says "Join Audio by Computer". At the bottom, there is a toolbar with icons for "Join Audio", "Q&A", "Chat", and "Raise Hand". A "Leave Webinar" button is in the bottom right corner.

Use chat if you have technical issues or a question for the panelists



CITY OF MADISON



How to Participate

The screenshot displays a Zoom meeting interface. At the top, a green banner reads "You are viewing City of Madison's screen" with a "View Options" dropdown. Below this is a shared Excel spreadsheet with a ribbon menu and a grid of data. A "City of Madison" watermark is visible on the right side of the spreadsheet. In the center, there are two buttons: "Phone Call" and "Computer Audio". A large blue button labeled "Join Audio by Computer" is positioned below these. At the bottom of the interface, there is a toolbar with icons for "Join Audio", "Q&A", "Chat", and "Raise Hand". A red arrow points to the "Q&A" icon. The text "Leave Webinar" is visible in the bottom right corner.

Use Q/A if you have questions.
We will answer after the presentation



How to Participate

The screenshot displays a Zoom meeting interface. At the top, a green banner reads "You are viewing City of Madison's screen" with a "View Options" dropdown. Below this is a shared Excel spreadsheet with a ribbon menu and a grid of data. A "City of Madison" watermark is visible on the right side of the spreadsheet. In the center, there are two buttons: "Phone Call" and "Computer Audio". A large blue button labeled "Join Audio by Computer" is positioned below these. At the bottom of the interface, there is a toolbar with icons for "Join Audio", "Q&A", "Chat", and "Raise Hand". A red "Leave Webinar" button is located in the bottom right corner of the meeting window.

To leave the meeting
click here

CITY OF MADISON

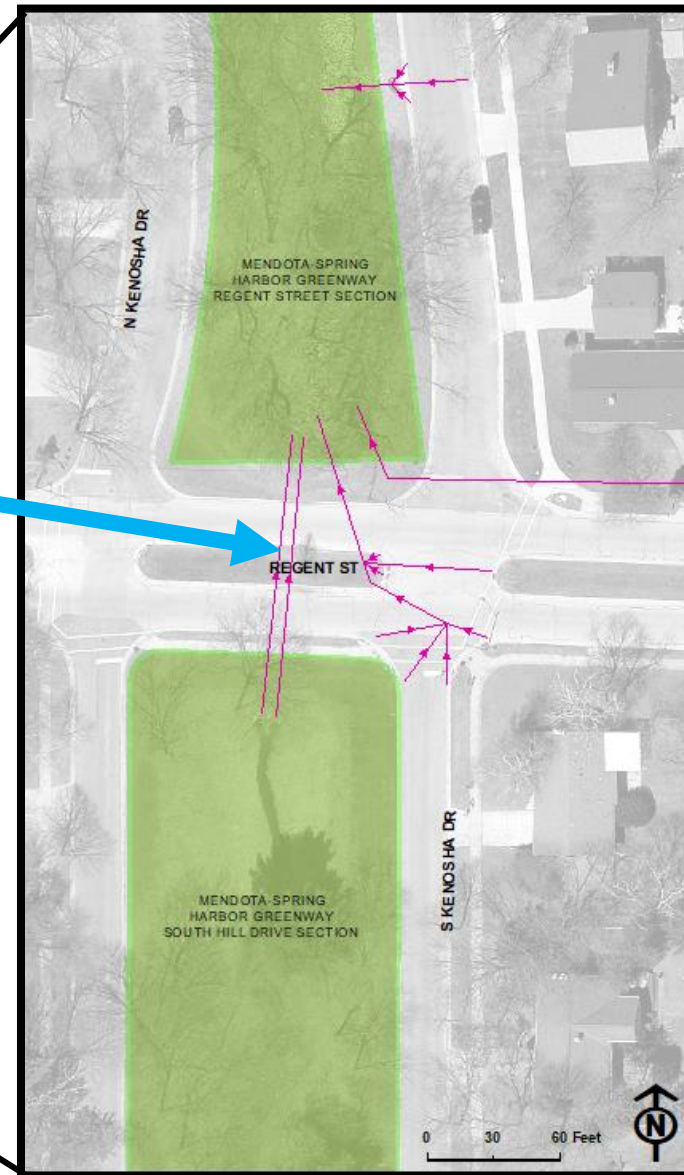
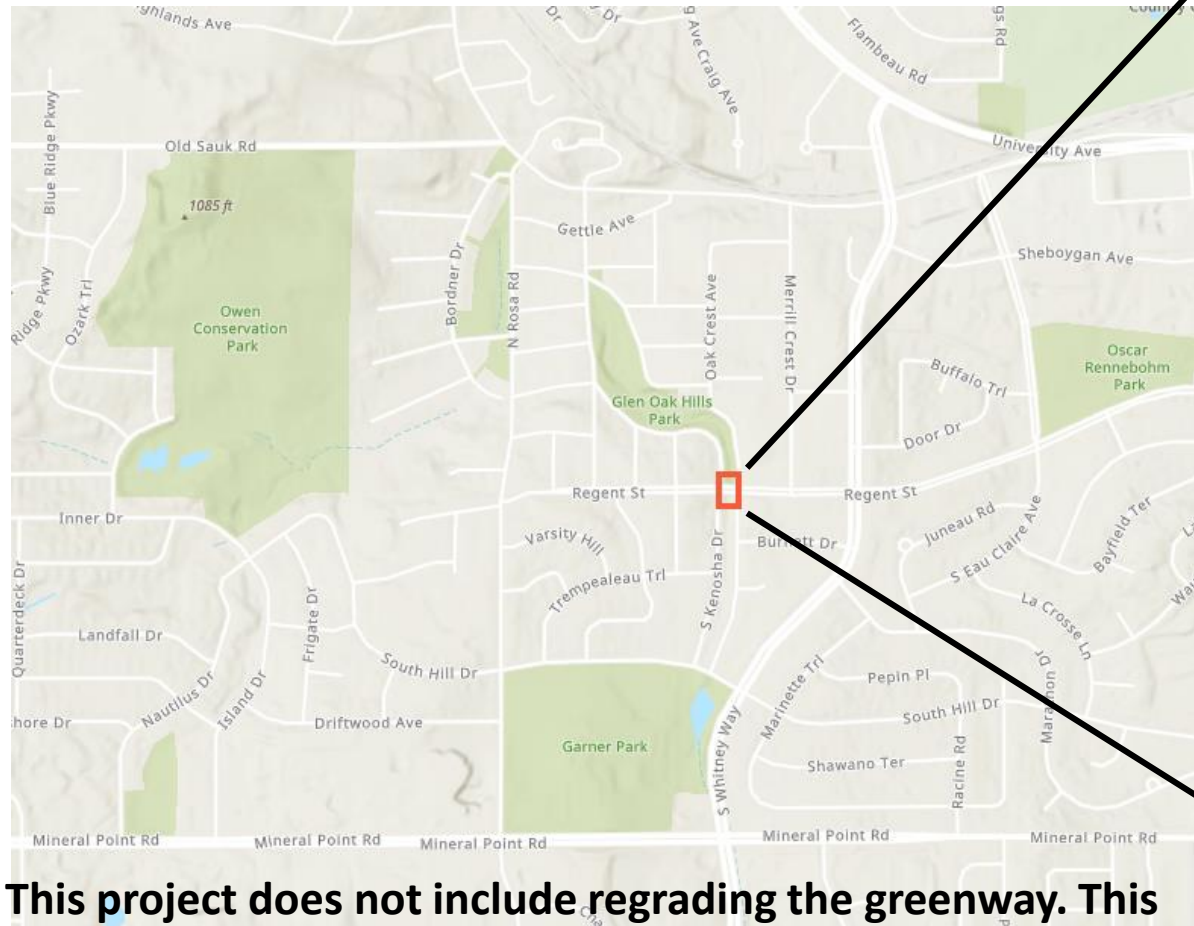


Outline

- Location
- Why now?
- Spring Harbor Modeling
 - Near term solution (this project)
 - Long term solution (after modeling)
 - Next Steps
- Culvert Project details
 - Replacement
 - Flood mapping
 - Construction impacts

Please note, this meeting will not cover the updated Spring Harbor Watershed Study conceptual solutions—that modeling is ongoing

Project Location



This project does not include regrading the greenway. This will only be a culvert replacement project.

Why do we need to replace the culverts now?

- Culverts are in bad condition
 - Holes in pipe
- Will damage road and could cause more flooding if they fail



Culverts following August 2018 flooding

- The road had to be repaired in 2018 following the August 20th flooding



Spring Harbor Modeling Update

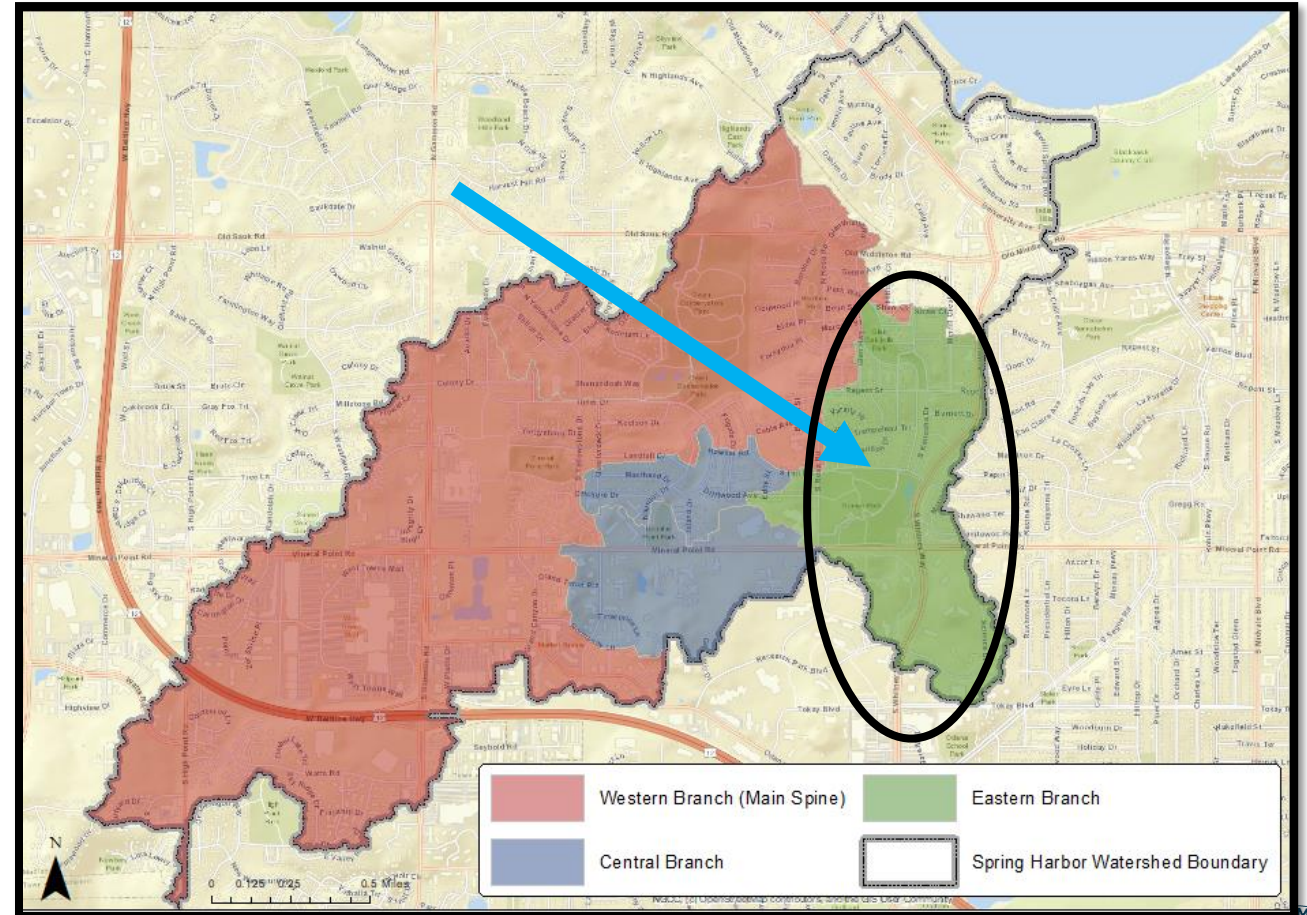
- How the model was used to come up with Regent culvert pipe sizing
- Long-term solutions in this area
- Modeling next steps

Spring Harbor Model has been updated to 2022 conditions

- Includes the Element
 - Element Collective Development results in general decreases in flows from the development. When looking at the downstream effects to the Kenosha Greenway, we see a slight decrease in flow through the greenway.
- Detail added where possible
- Included swale from Burnette into greenway
- Pipe and inlet upgrades north of Regent into Glen Oak Hills Greenway included
- Updated with 2022 topography

City focused on Eastern Branch of watershed

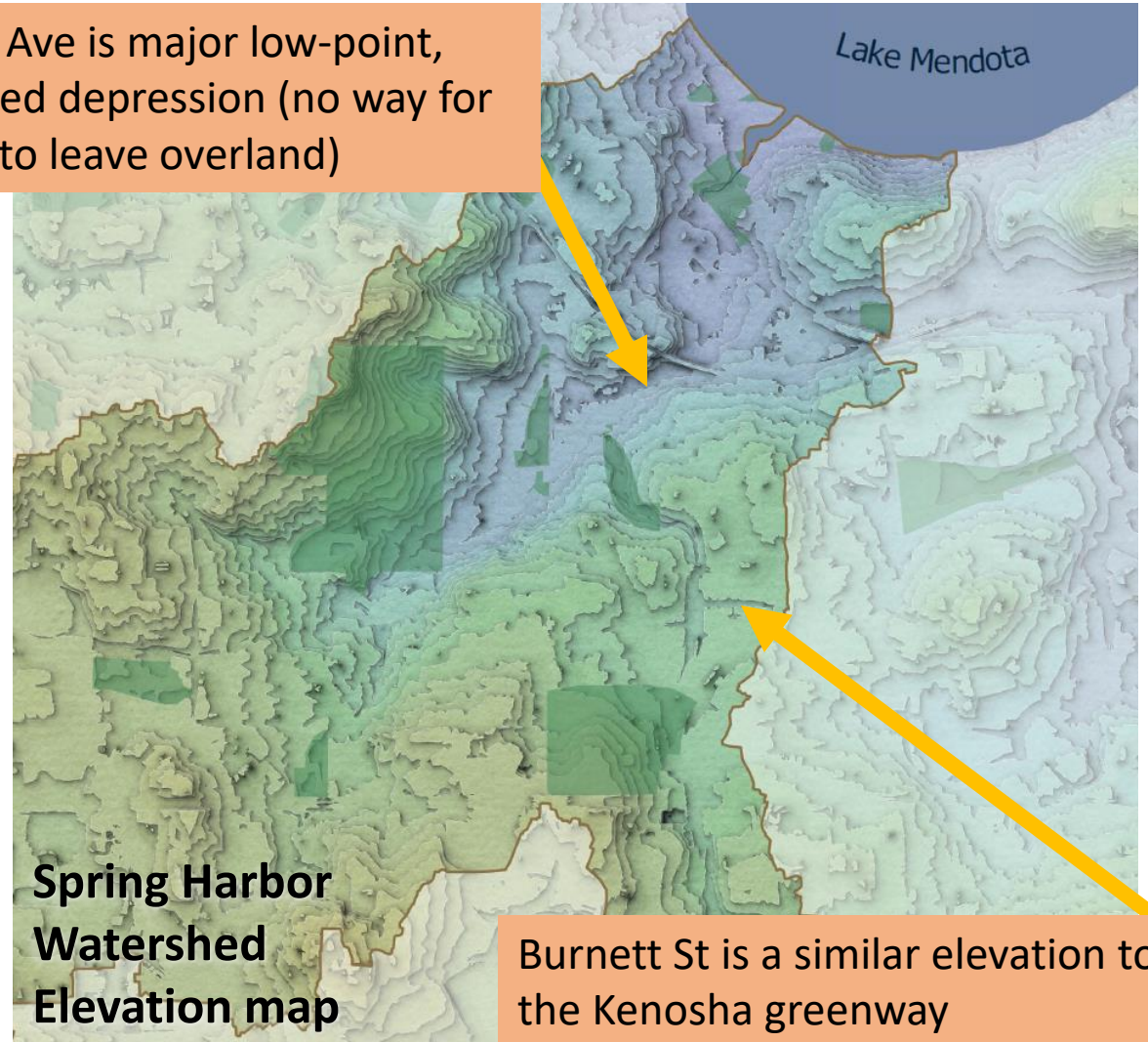
- Due to the culvert condition at Regent St, we focused modeling on the Eastern Branch
- Wanted to see if the culvert replacement could be near-term and long-term solution
- Goals:
 - Replace culverts before they fail
 - Do not move flooding downstream to Gettle
 - Mitigate flooding at Burnett Dr



Eastern Branch Challenges

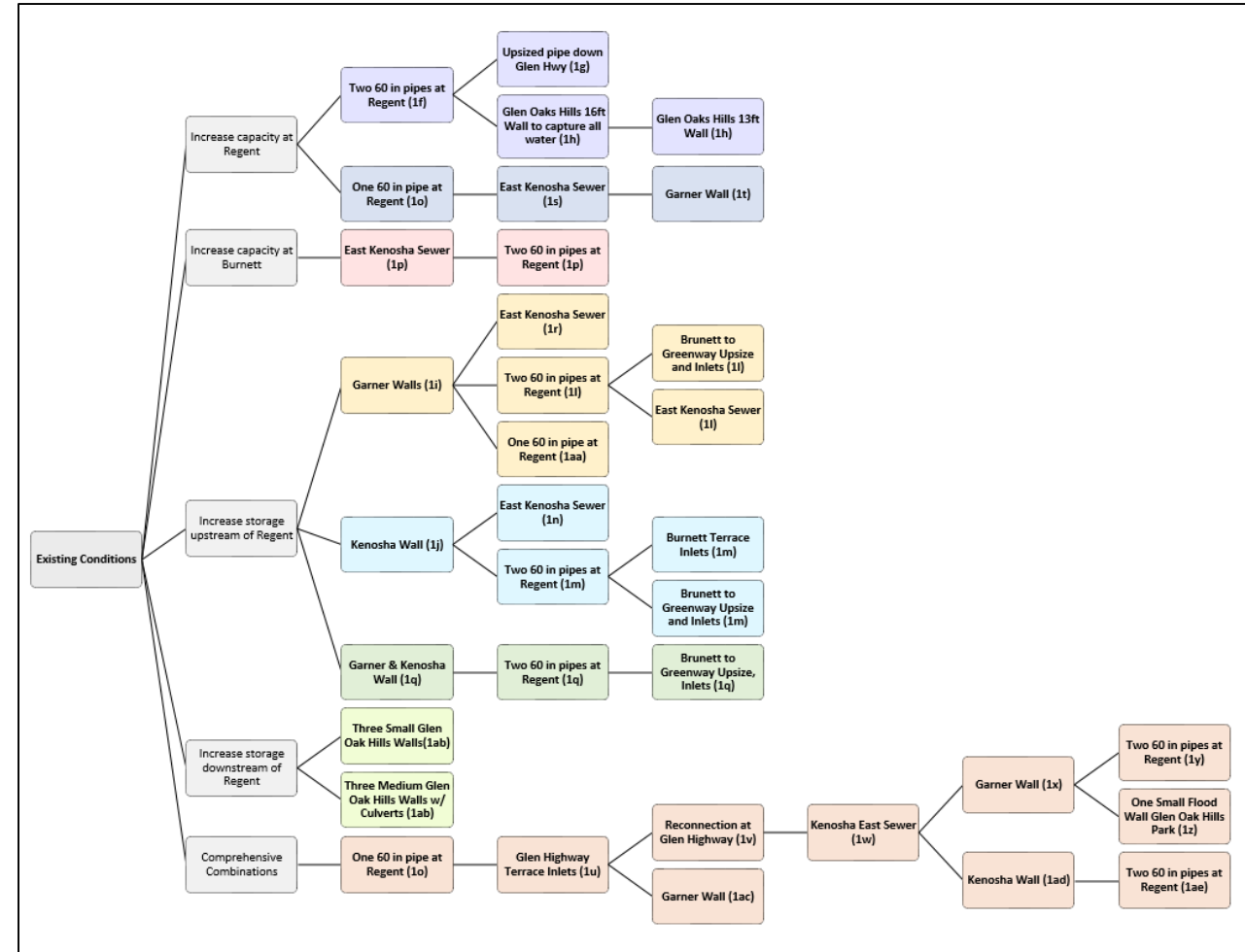
- Burnett Dr is at a similar elevation as the greenway
- Gettle Ave is a low point, and enclosed depression in the watershed
 - Everything upstream of the railroad drains to it
 - The only way for the water to flow out is through 1 box culvert (17'x6', square pipe) under the railroad

Gettle Ave is major low-point, enclosed depression (no way for water to leave overland)



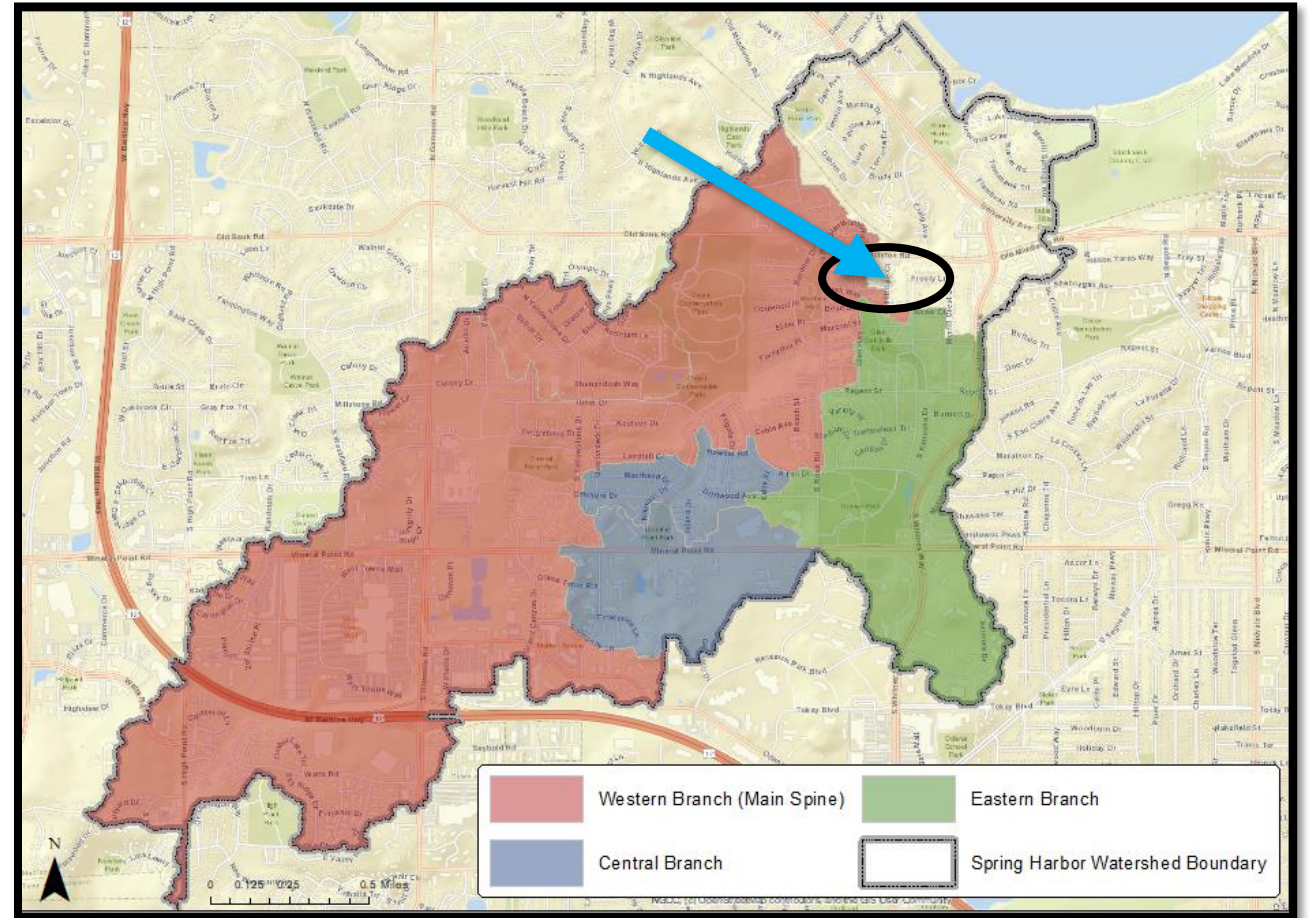
Background on selected replacement

- Modeled many combinations of solutions in the Eastern Branch to meet goals
- No near-term solutions had large flood improvements at Burnett without shifting flooding to Gettle
- Large projects needed to prevent shifting flooding to Gettle
- Constructing a larger culvert with temporary restrictor plates was considered
 - Large, expensive project
 - Need to relocate other utilities
 - No guarantee if and when restrictor plates would be able to be removed based on additional modeling



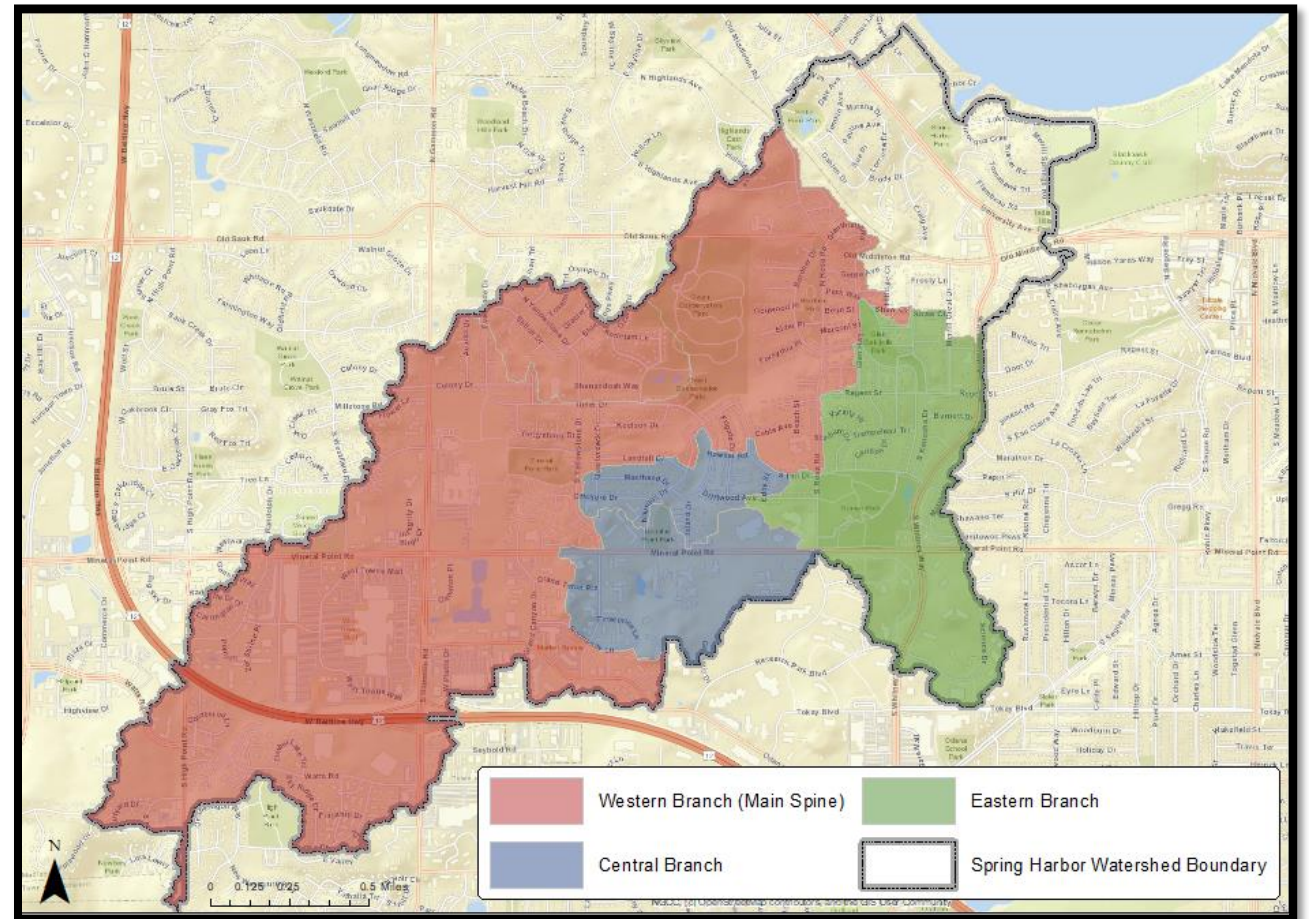
Long-Term Solutions for Burnett

- There are a variety of options to reduce flooding at Burnett
 - All options involve a variety of complicated infrastructure upstream and downstream
 - All options impact the “timing” of the peak flows reaching Gettle
- Gettle Ave is where all 3 branches of the watershed come together
- Need to complete watershed-wide modeling



Next Steps in Spring Harbor Modeling

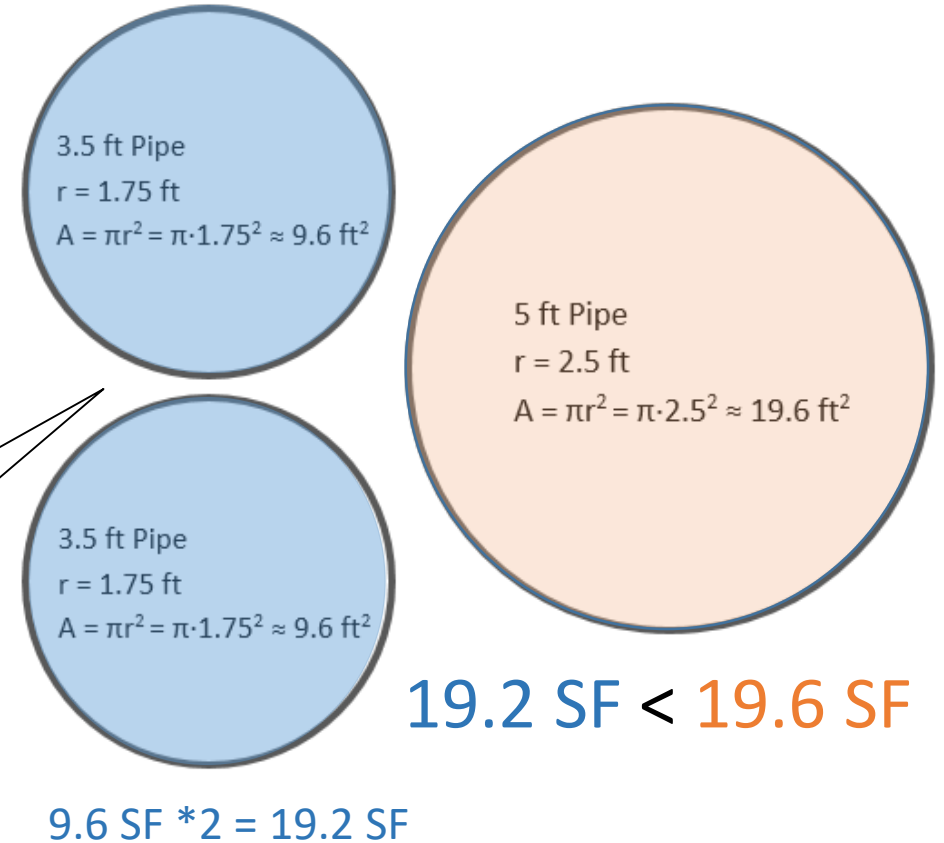
- We will look at solutions in the other branches, and then see how all the branches work together at Gettle Ave
 - This will inform which solutions are the best options long-term in the Kenosha/Burnett area
- When the City has completed this modeling, we will host another public meeting to discuss modified solutions



Regent St Culvert - Proposed Replacement

- Increase size of culvert from two 3.5 ft diameter corrugated metal pipes, to one – 5 ft diameter plastic pipe
 - Increases pipe capacity by 11% in 1% Annual Chance Storm (25 cfs additional capacity)
 - Note 1 cfs is ~150 garden hoses

One 5 ft diameter pipe has a larger cross-sectional area than two 3.5 ft diameter pipes!

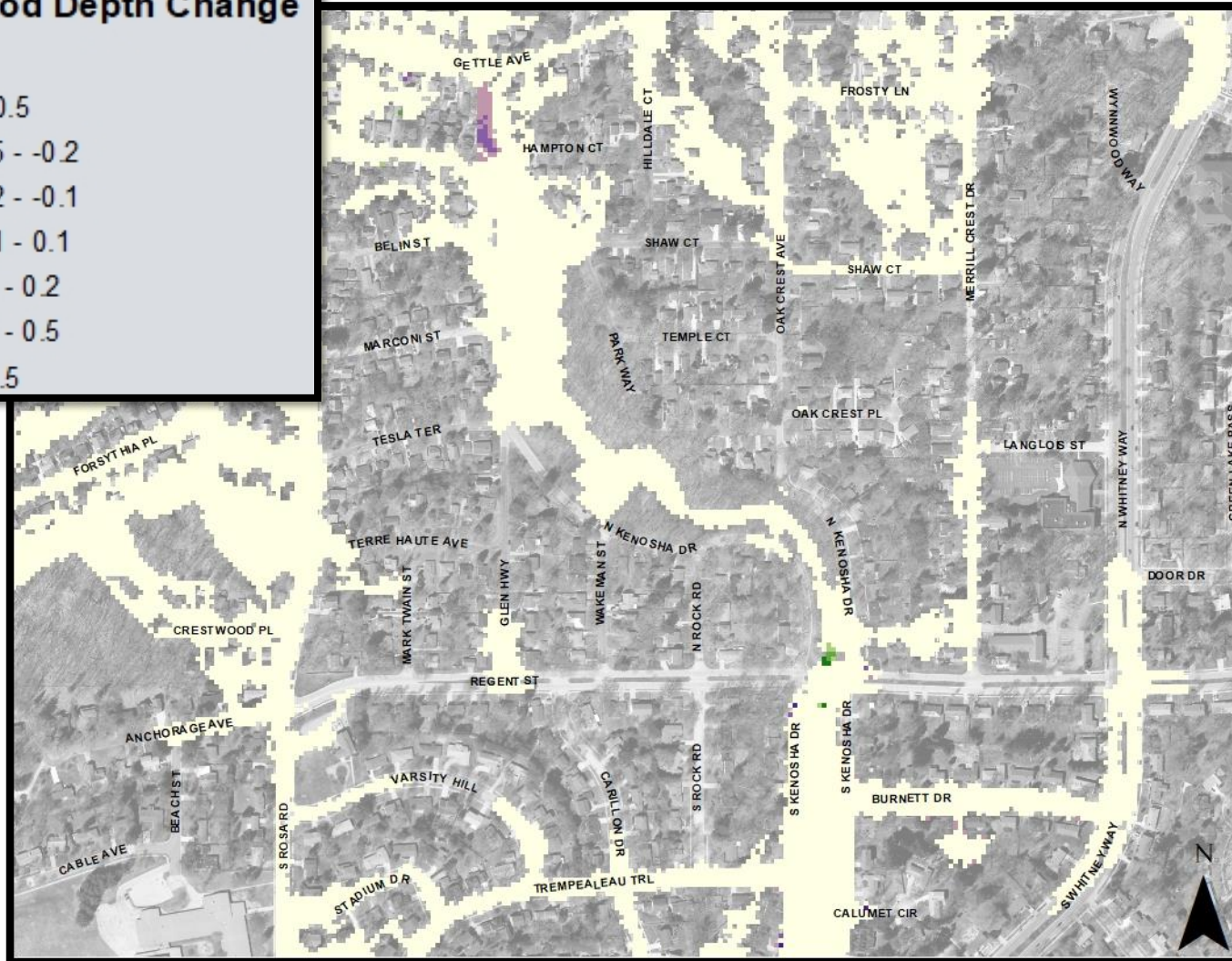
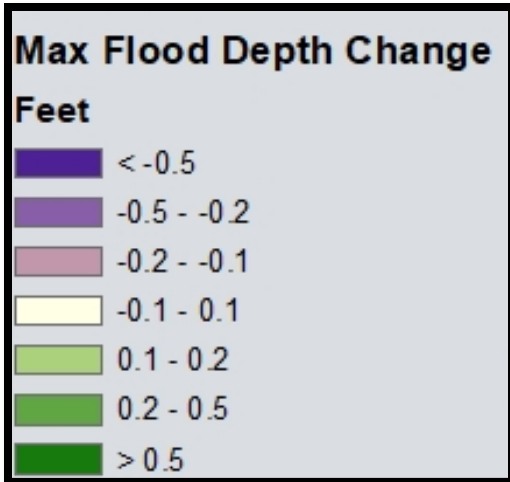


Regent St Culvert - Proposed Replacement

- Replacing the culvert will send slightly more water downstream
 - Additional downstream flows will be balanced by installing large inlets downstream of Glen Oak Hills Park
 - The model shows this mitigates additional flooding at Gettle



Flood mapping – 1% Annual Chance Storm



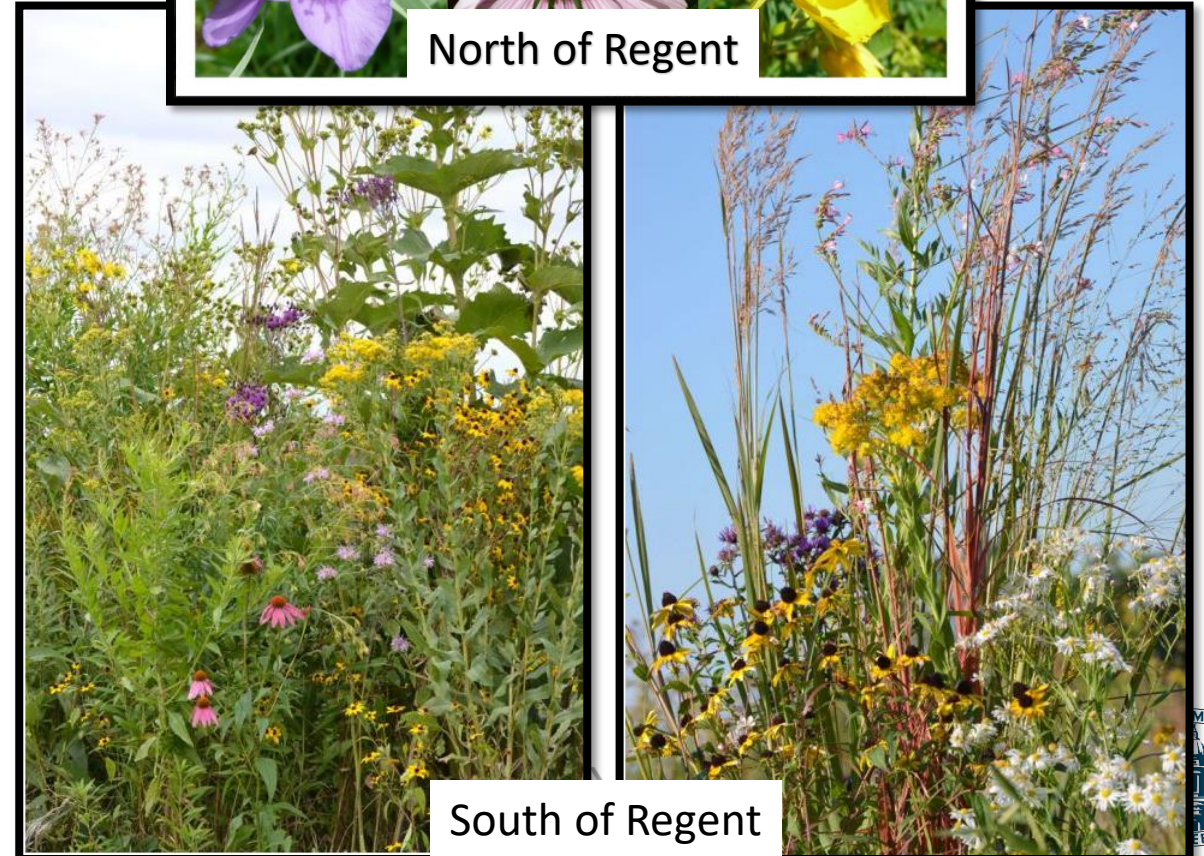
The map shows increases and decreases in flood depth that result from the proposed project.

- Green colors show increases in max flood depths
- Purple colors show decreases in max flood depths
- The light yellow color is where there is no change in max depth

As an example, the lightest purple color areas would see a 0.1-0.2 foot decrease in max depth as a result of this project.

Restoration

- Will use native seed mixes to revegetate disturbed areas
 - South of Regent: Sun tolerant
 - North of Regent: Partial shade tolerant
 - Terrace: standard terrace seed mix
- Diverse array of native species tolerate fluctuating moisture levels
- Aggressive native species are best suited to outcompete the existing monoculture of reed canary grass south of Regent St
- Native plants will complement volunteer restoration efforts in this area



Construction Impacts

- Expect street closures during construction
 - Likely only closing 1 side of Regent at a time
 - Will maintain access to Kenosha
- Will maintain existing flow through culvert while construction is occurring

Assessment Policy & Costs

- There will be no assessments or costs to adjacent residents for the project
- Project is paid for with stormwater utility funding



Project Schedule

- Construction will take place in the late summer of 2023
- Construction will be done by City of Madison crews
- Construction is expected to last 3-5 weeks



Contact Information & Resources

- Engineering
 - Janet Schmidt, Principal Engineer, jschmidt@cityofmadison.com
 - Jojo O'Brien, Spring Harbor Watershed Project Manager, jobrien@cityofmadison.com
- Project Website: www.cityofmadison.com/RegentStreetCulvert
 - Sign-up for project email updates on the website
 - Updates on work progress will be posted to the project website
 - Recording for this meeting will be posted on project webpage
- Facebook – City of Madison Engineering
- Twitter – @MadisonEngr
- Engineering Podcast: Everyday Engineering on iTunes, GooglePlay

