

Fitchrona Road Flood Study

PUBLIC INFORMATION MEETING #1

July 2, 2020

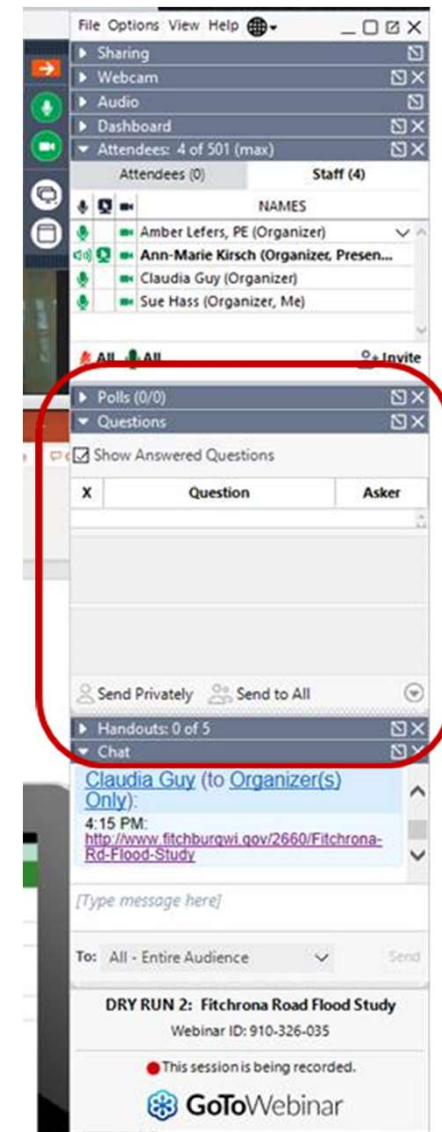


TEAM INTRODUCTIONS

- Ann-Marie Kirsch, PE | AE2S Project Manager
- Claudia Guy, PE | City of Fitchburg Environmental Engineer
- Chris Barnes, PE | Town of Verona Public Works Project Manager
- **Amber Lefers, PE | AE2S Water Resources Practice Leader**

MEETING FORMAT AND Q&A

- GoToWebinar for access
- Questions can be asked
 - Electronically during or after the presentation using the **Question function**



MEETING FORMAT AND Q&A

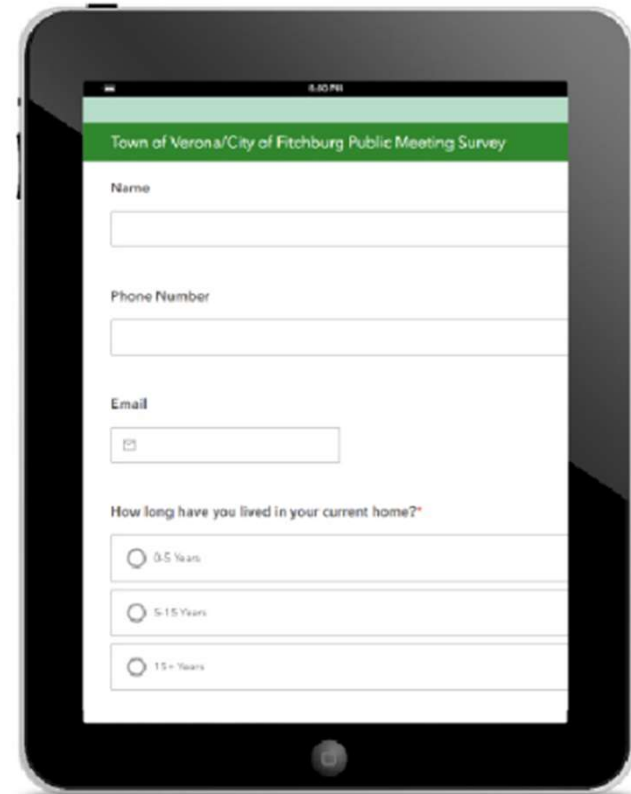
- GoToWebinar for access
- Questions can be asked
 - Electronically during or after the presentation using the **Question function**
- After the public meeting through **email** to
Claudia Guy: Claudia.Guy@Fitchburgwi.gov
Chris Barnes: Cbarnes@town.Verona.wi.us



SURVEY 123

Don't forget to fill out Survey 123 regarding local flooding at <https://www.veronawisconsin.com>

The screenshot shows a web-based survey interface. At the top, there is a green header with the title "Town of Verona/City of Fitchburg Public Meeting Survey" and navigation buttons for "Overview", "Analyze", and "Data". Below the header, there is a map showing the survey area with several red location markers. Below the map is a table with columns for "Name", "Phone Number", "Email", "How long have you lived in your current home?", "In which municipality do you reside?", "Other - In which municipality do you reside?", "What is your address?", and "When do you expect to move?". To the right of the table, there is a list of survey questions, including "How long have you lived in your current home?", "In which municipality do you reside?", "What is your address?", "When do you expect to move?", "How often does flooding occur on your property?", "Floods Occur After Heavy Rain", "How often does flooding occur on your property?", "Sometimes (1-3 Times per Year)", "Describe the type of flooding you experience your property? Check all that apply.", "Water in my yard that recedes within two days.", "Standing water in my yard that persists for three or more days.", and "Do you feel that drainage issues have gotten better, worse, or stayed the same in this area in the last year?"



REAL-TIME WATERLEVEL DATA



PURPOSE OF REGIONAL STORMWATER PLAN

- Flooding closed Fitchrona Road to traffic in 2001, 2007, 2008, 2009, 2010, 2013, 2017, 2018, and 2019.
- Subsequent plans call for increased pipe capacity under Fitchrona Road.
- Suspected downstream “roadblocks” to adequate drainage.



Fitchrona Road, looking south to 18/151, photo taken June 26, 2013

STORMWATER FLOODING IS LIKE AN INTERSTATE TRAFFIC JAM



Traffic (or water) backs up when too many cars (or water) tries to get through



Beltline, looking west from Park Street, WisDOT

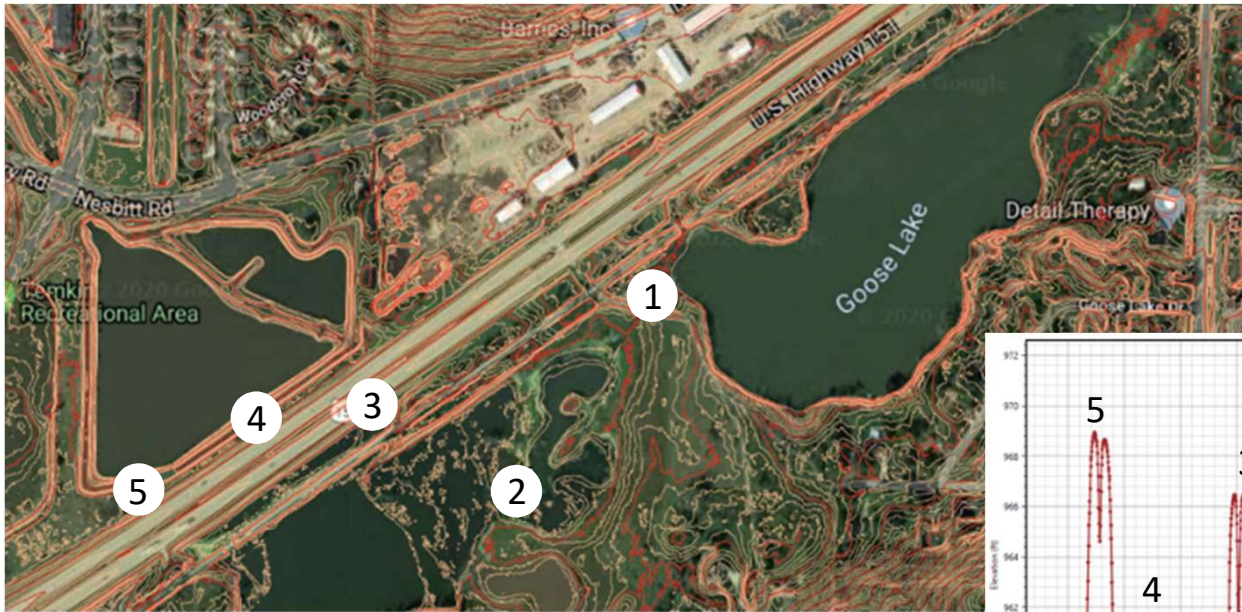


Traffic (or water) flows fine when capacity is adequate

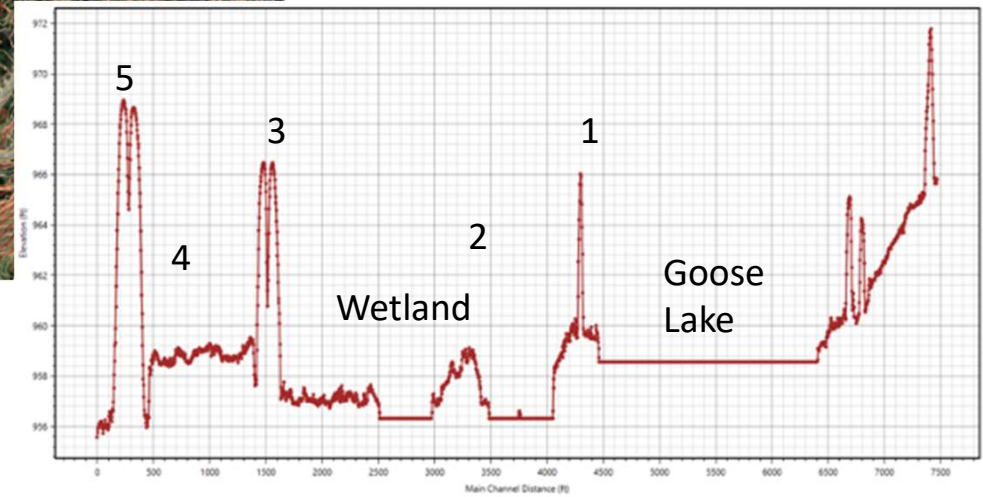
Slide 8

AK1 remove construction in pipe on the right. [@Jen Simmons]
Ann-Marie Kirsch, 6/30/2020

ROADBLOCKS DOWNSTREAM OF FITCHRONA ROAD



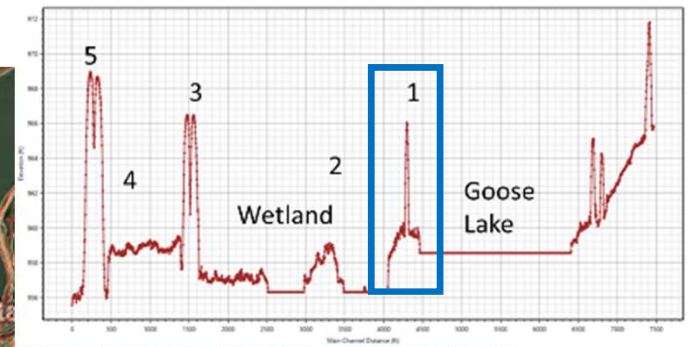
Flow Profile



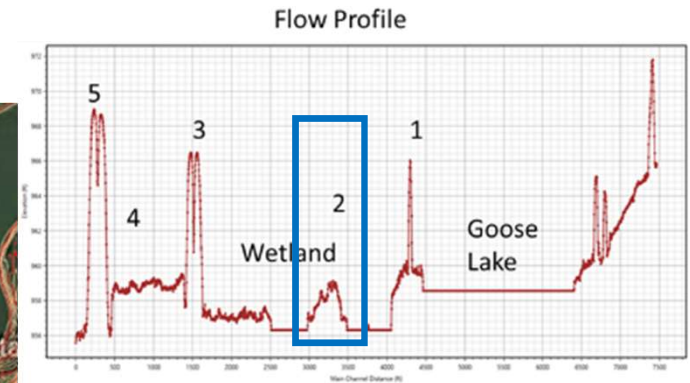
ROADBLOCKS DOWNSTREAM OF FITCHRONA ROAD



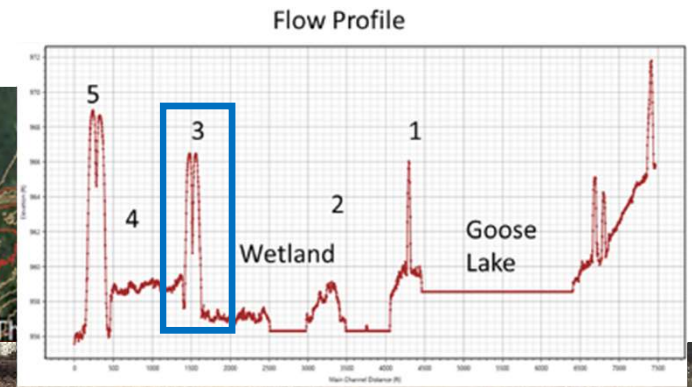
Flow Profile



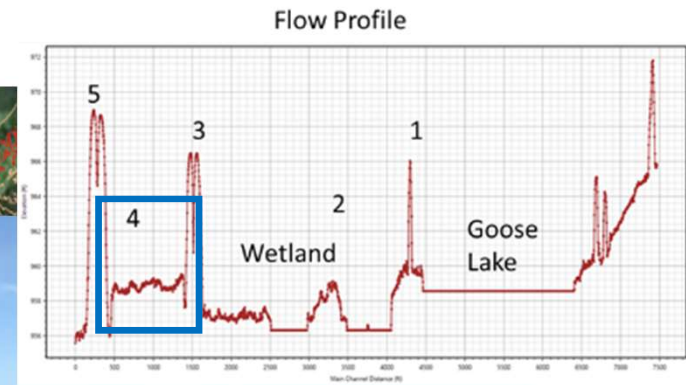
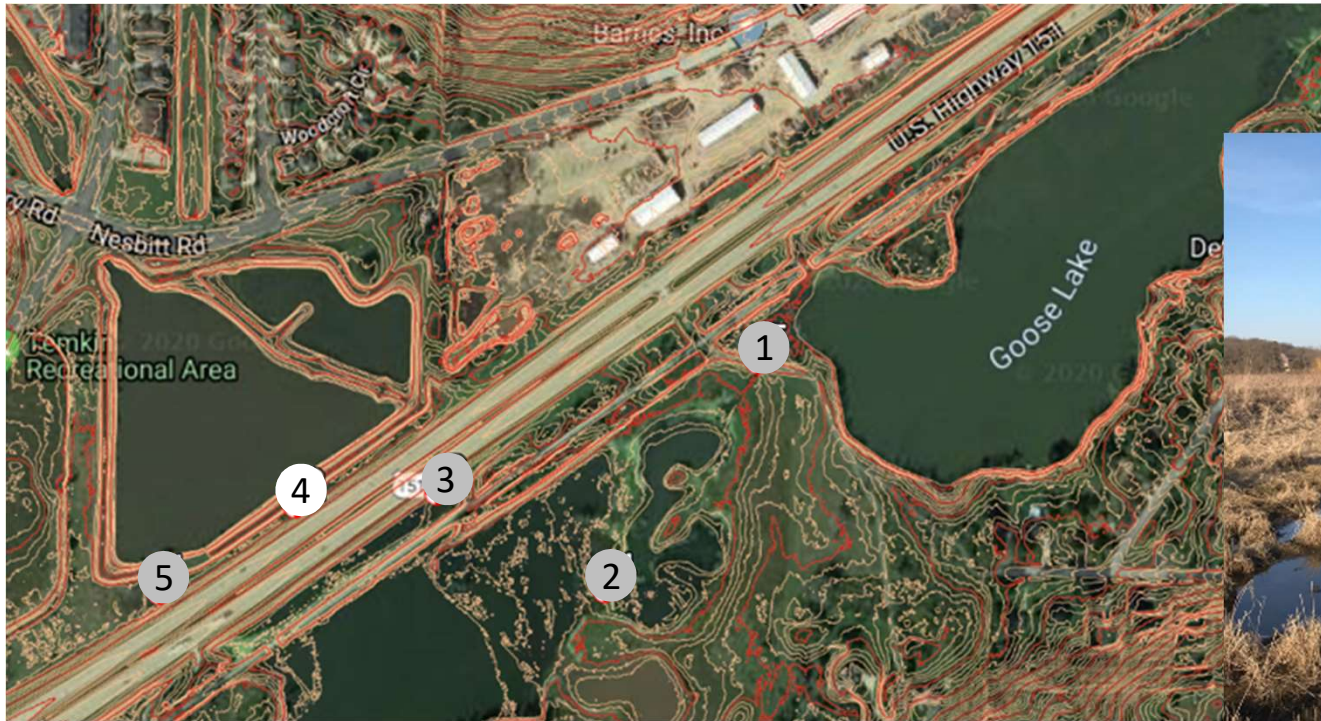
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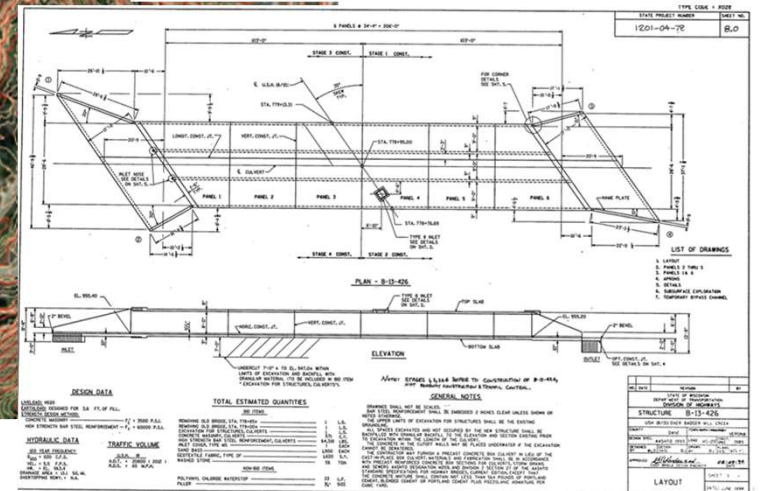
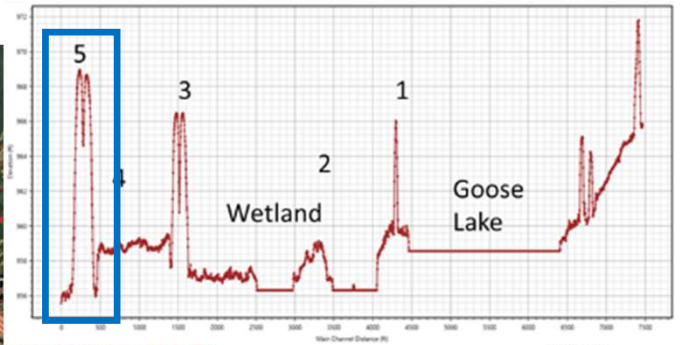
ROADBLOCKS DOWNSTREAM OF FITCHRONA ROAD



ROADBLOCKS DOWNSTREAM OF FITCHRONA ROAD



Flow Profile

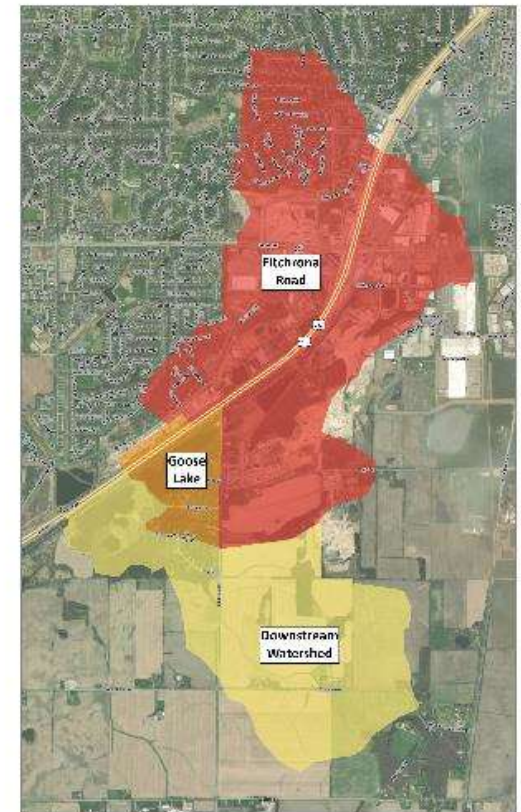


DESIGN DATA		TOTAL ESTIMATED QUANTITIES		GENERAL NOTES	
PROJECT NO.	1201-09-78	NO. OF BRIDGE	1	1. ALL WORK SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS FOR BRIDGE CONSTRUCTION, 1995 EDITION, AS AMENDED.	1
SECTION NO.	B-13-026	NO. OF SPANS	1	2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.	2
DATE	09/78	NO. OF PIERS	1	3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.	3
SCALE	AS SHOWN	NO. OF ABUTMENTS	1	4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.	4
DESIGNER		NO. OF APPROACHES	1	5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.	5
CHECKER		NO. OF GUARDS	1	6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.	6
APPROVER		NO. OF CURBS	1	7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.	7
DATE		NO. OF SIDEWALKS	1	8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.	8
		NO. OF RAMPWAYS	1	9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.	9
		NO. OF OTHER STRUCTURES	1	10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.	10

How much water flows through the system?

HURDLES TO SOLUTIONS

- Factors affecting runoff:
 - Drainage area size
 - Rainfall depth, duration, and distribution
 - Soil types
 - Land use/level of imperviousness
 - Open channel or storm sewer
 - Slope of watershed/travel time



Bridge clearance

HURDLES TO SOLUTIONS

- Why not just raise the road?
Easiest solution, right?
 - Not enough clearance below bridges on USH 18/151
 - Bridges still have over 20 years of service life yet.
 - Even if bridges were replaced, it would require significant changes to USH 18/151 roadway profile, fill, and possibly land acquisition.



Truck stuck under railroad bridge in Madison, 2019

**Avoiding
downstream
impacts**

HURDLES TO SOLUTIONS



Regulatory

HURDLES TO SOLUTIONS

- Changes to Floodplain/Floodway require Letter of Map Change (LOMC) from FEMA
- Land disturbance of 1 or more acres requires WDNR permit
- May require wetland/shoreland permitting for wetland impacts from WDNR and/or Dane County
- Work in Right-of-way permit required from WisDOT
- Coordination with Dane County Parks





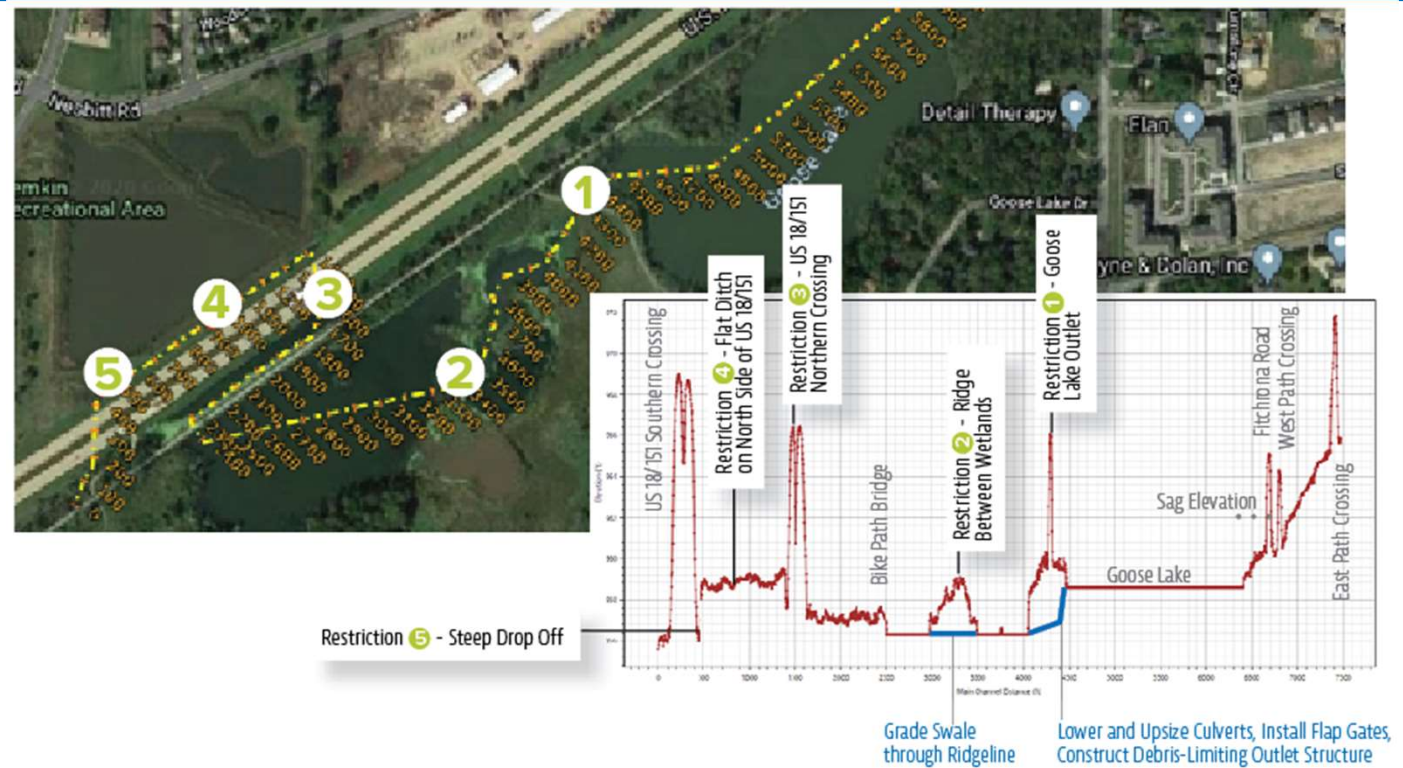
POTENTIAL SOLUTIONS

- Increase downstream conveyance

OPTION 1

Increase downstream conveyance

- Increase downstream conveyance
 - Larger culverts at locations 1 and 3
 - Grading at locations 2 and 4



AK2

Slide 20

AK2

[@Jen Simmons] can you please remove the reference to the "shortcut" and the orange arrow at number 5

Ann-Marie Kirsch, 6/30/2020

OPTION 1

Potential feasibility concerns

- Avoiding increase in peak flows to downstream properties
- Cost of culvert under USH 18/151
- Need sufficient room for grading on northwest side of USH 18/151



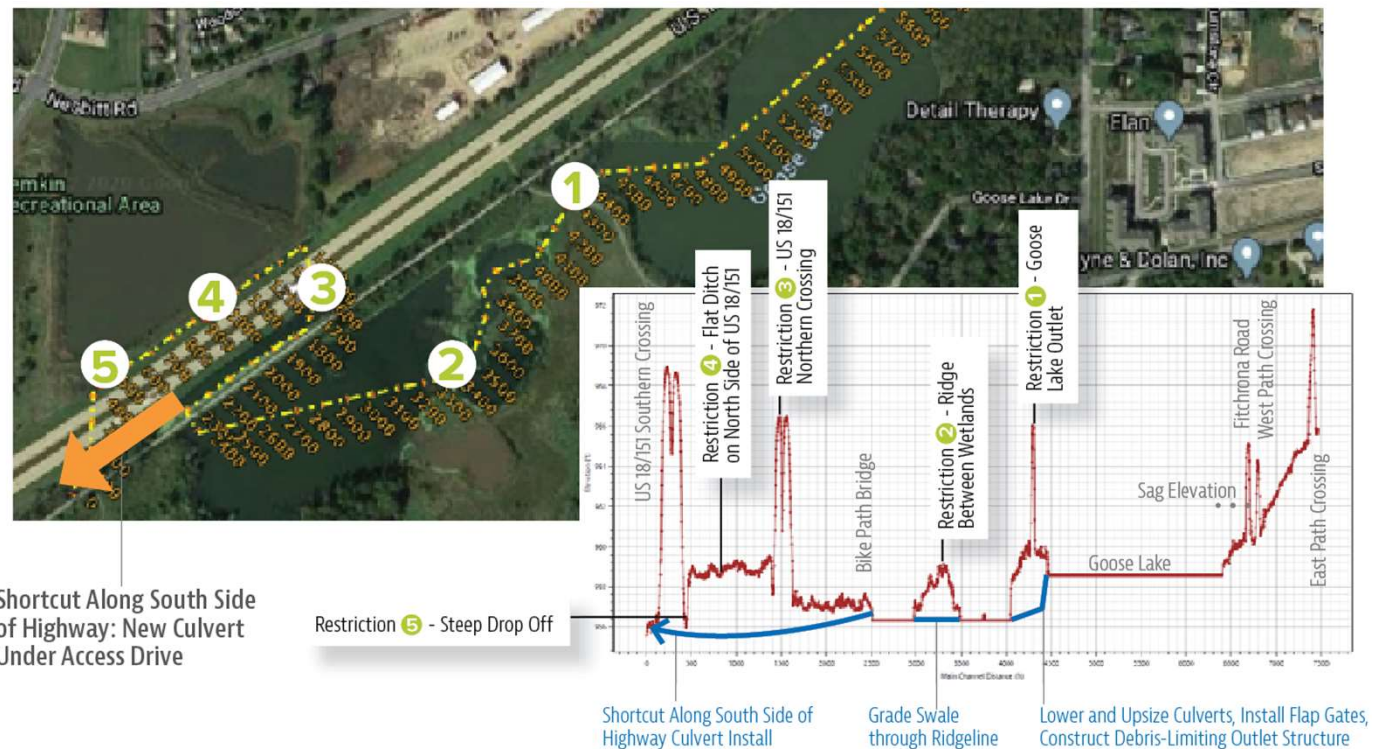
POTENTIAL SOLUTIONS

- Increase downstream capacity
- Similar to Option 1 but with a shortcut

OPTION 2

Increase downstream conveyance with shortcut

- “Shortcuts” the system through new culvert under driveway between highway and trail.
- Still requires larger culverts at location 1 and grading at location 2.



OPTION 2

Benefits and feasibility concerns

Benefits

Compared to Option 1

- No new culvert under USH 18/151
- No major grading required through ditch

Potential Feasibility Concerns

- Avoiding increase in peak flows to downstream properties



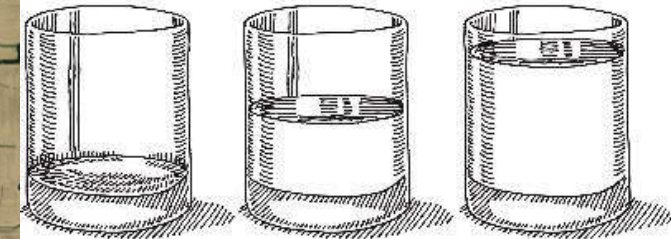
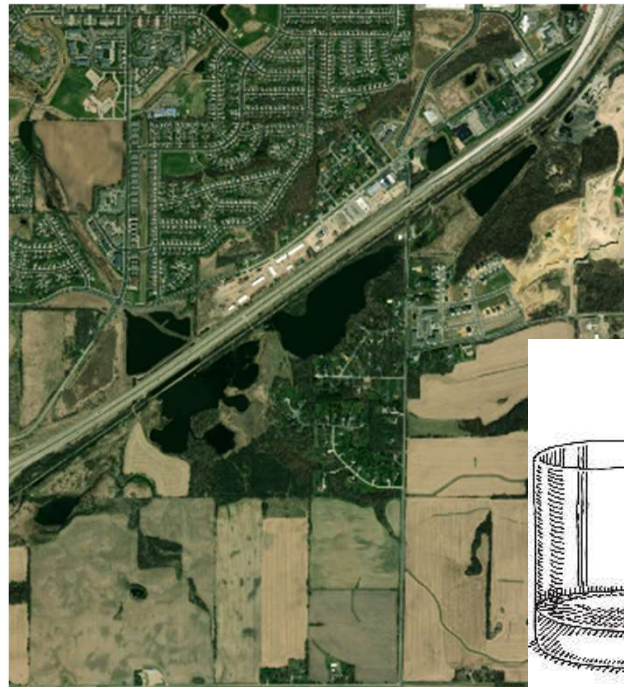
POTENTIAL SOLUTIONS

- Increase downstream capacity
- Similar to Option 1 but with a shortcut
- **Increase storage in the system at Goose Lake and/or park**

OPTION 3

Increase storage in the system

- Significant online storage already in the system
 - Increase downstream detention by lowering permanent water surface elevation, or
- Requires backflow preventers on outlet pipes at location 1



OPTION 3

Benefits and feasibility concerns

Benefits

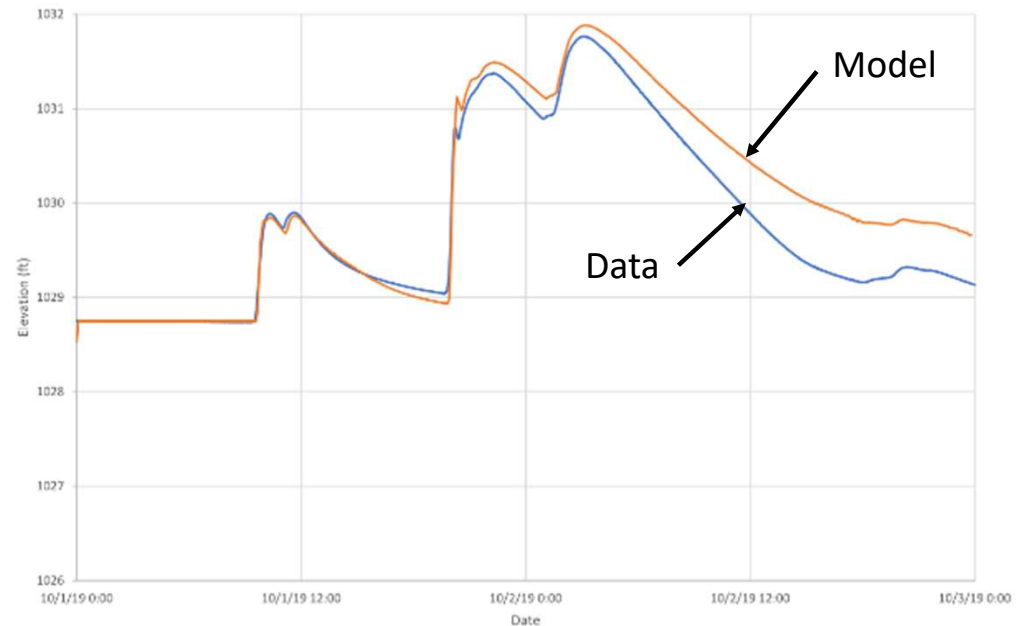
- Could be designed to provide additional water quality treatment

Potential Feasibility Concerns

- Regulatory and stakeholder challenges associated with lower water surface elevations on Goose Lake
- Amount of additional storage needed in Dane County Park

NEXT STEPS

- Complete existing watershed modeling to Badger Mill Creek
- Confirm model is reasonable based on available data
- Compare existing Goose Lake overflow to Badger Mill Creek flood flows



NEXT STEPS



Analyze three options described previously



Hold Public Informational Meeting #2 as alternative analysis nears completion

SCHEDULE



● Internal kick-off meeting



Public Information Meeting (PIM) #1



Existing Conditions Analysis (complete July 10)



Draft Alternatives Analysis
(complete August 15)



Late August - PIM #2



Final Report/Recommendations
(complete September 30)

Questions?

Don't forget to fill out Survey 123 regarding local flooding at <https://arcg.is/1zime50>

<http://www.fitchburgwi.gov/2660/Fitchrona-Rd-Flood-Study>



Contact

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