Fitchrona Road Flood Study

PUBLIC INFORMATION MEETING #1

July 2, 2020

THE CITY OF Fitchburg

TOWN OF VERONA

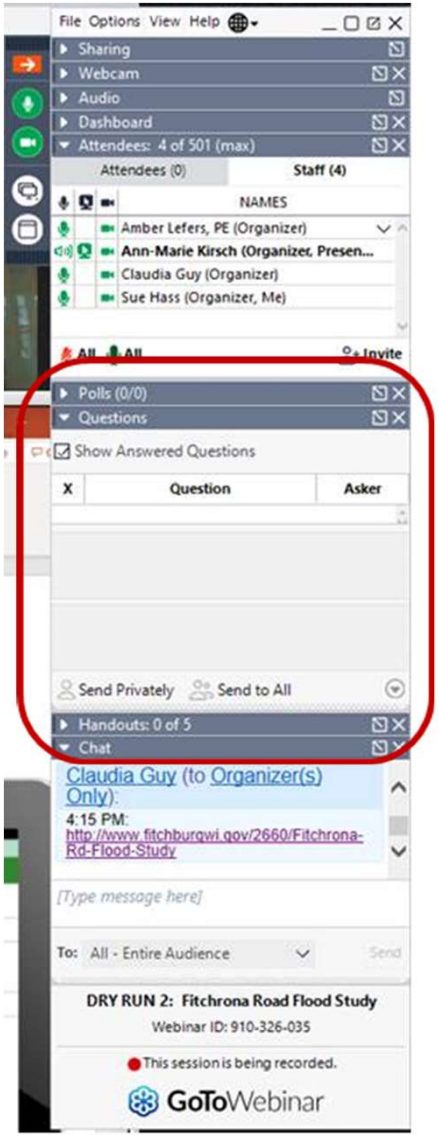
AE2S

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
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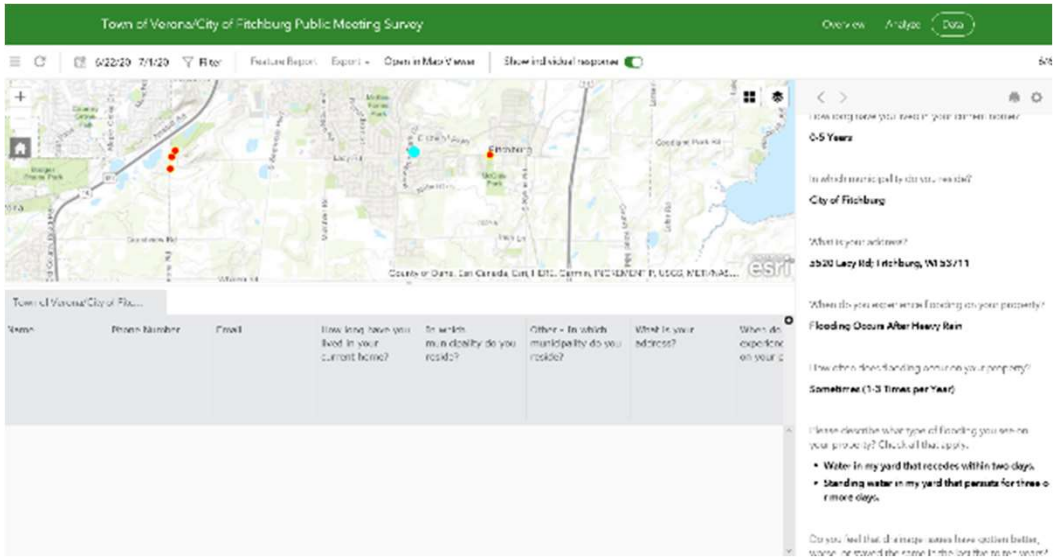
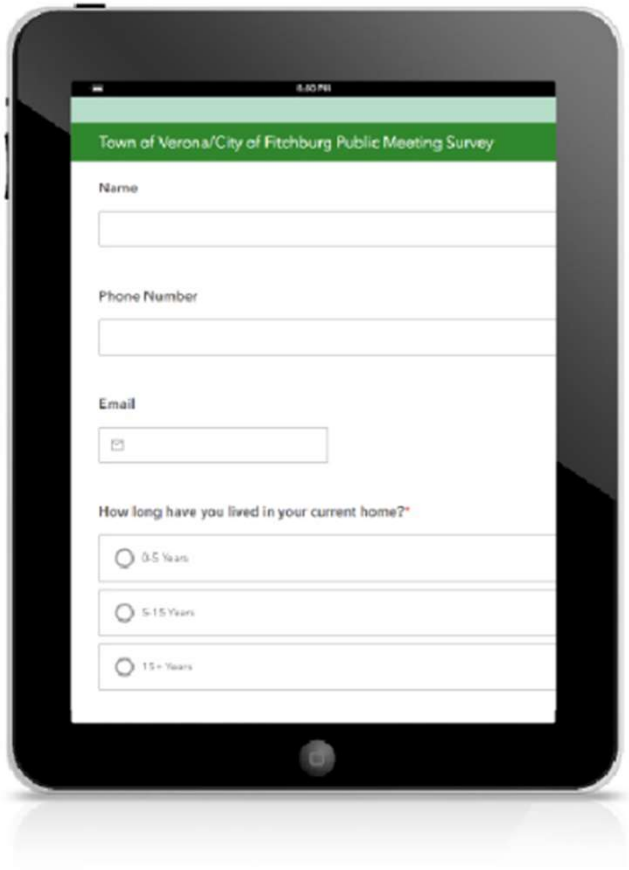
  - After the public meeting through **email** to
    Claudia Guy: Claudia.Guy@Fitchburgwi.gov
    Chris Barnes: Cbarnes@town.Verona.wi.us

SURVEY 123

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





REAL-TIME WATERLEVEL DATA

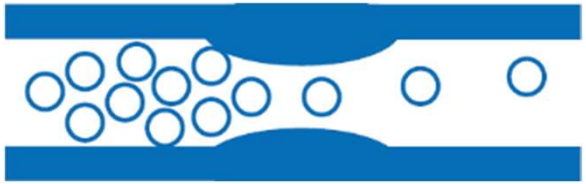
PURPOSE OF REGIONAL STORMWATER PLAN

- 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

AK1

STORMWATER FLOODING IS LIKE AN INTERSTATE TRAFFIC JAM



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

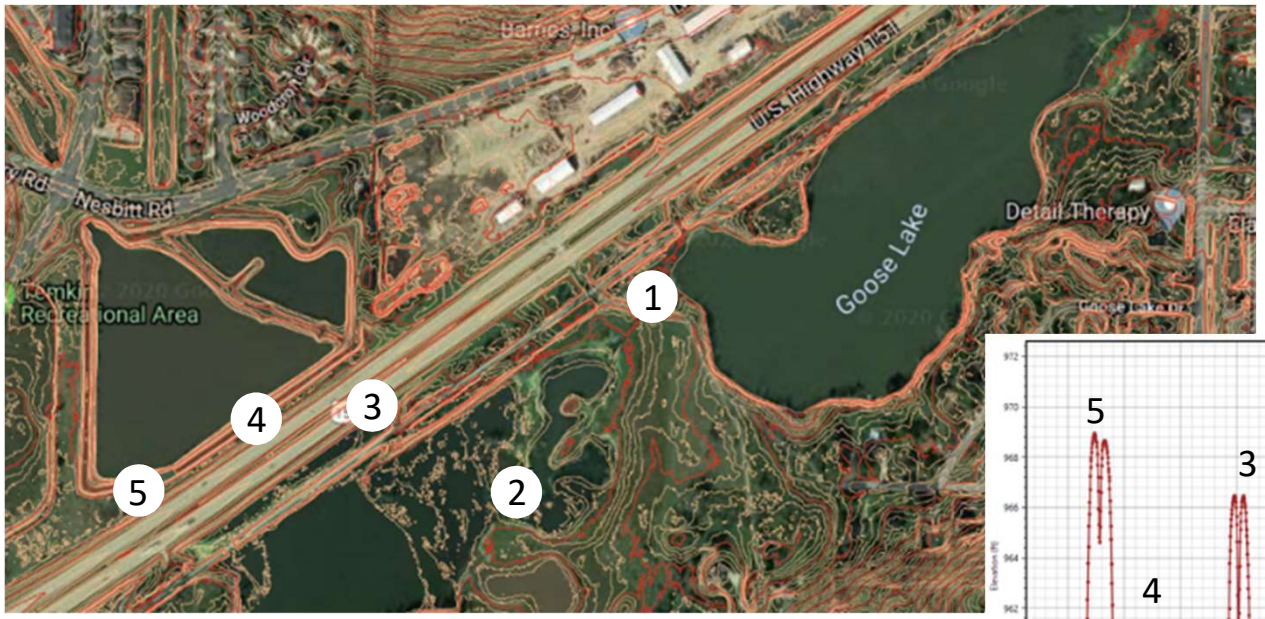
Beltline, looking west from Park Street, WisDOT

Traffic (or water) flows fine when capacity is adequate

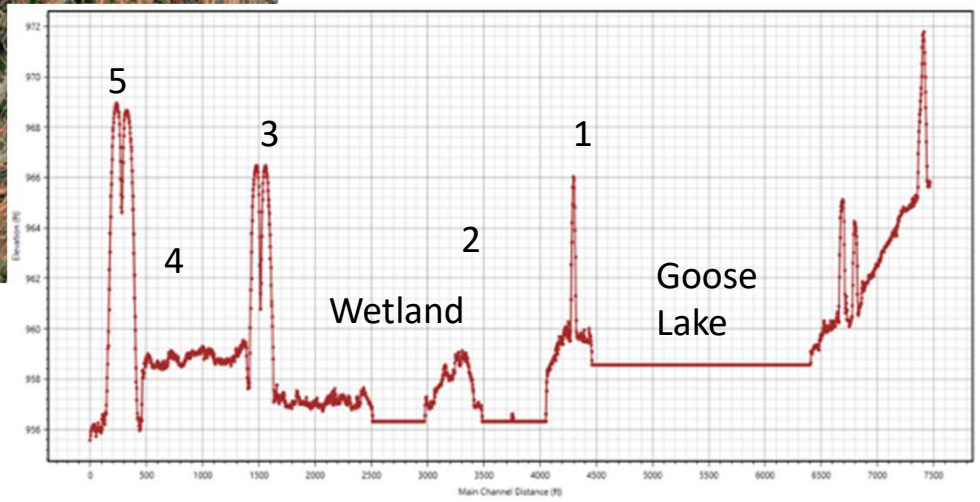
Slide 8

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

ROADBLOCKS DOWNSTREAM OF FITCHRONA ROAD



Flow Profile



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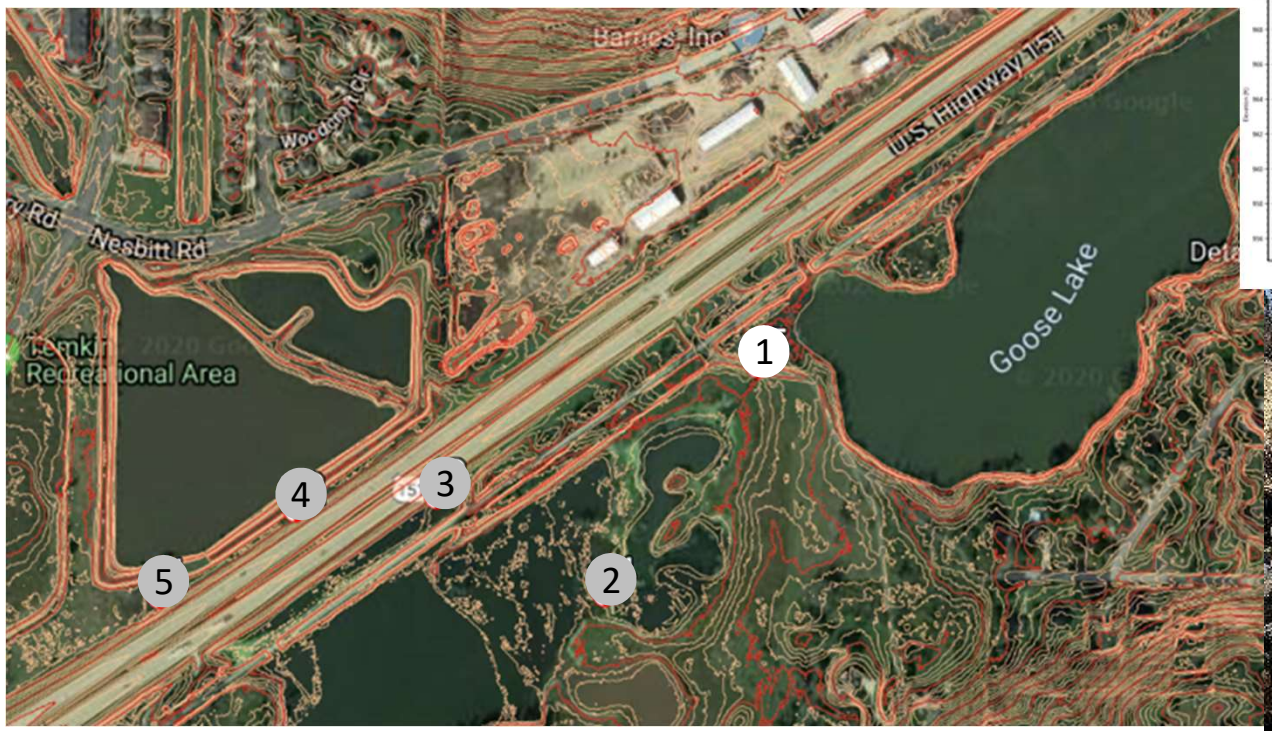

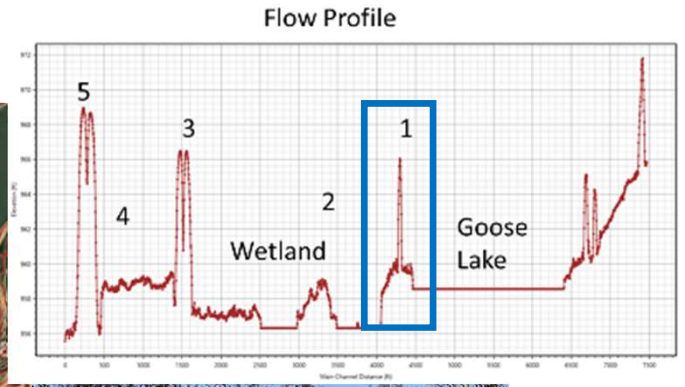

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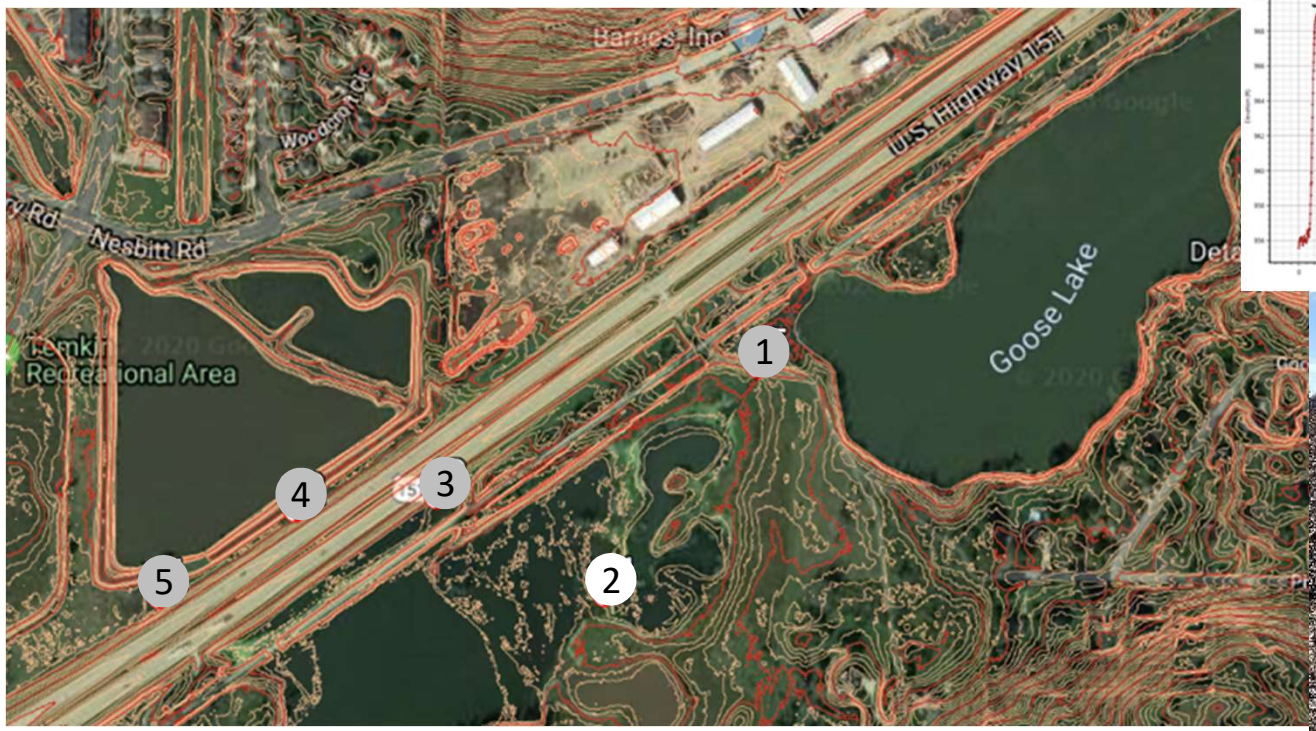

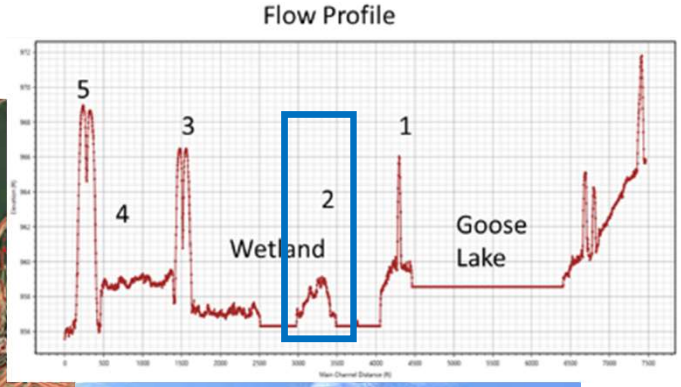

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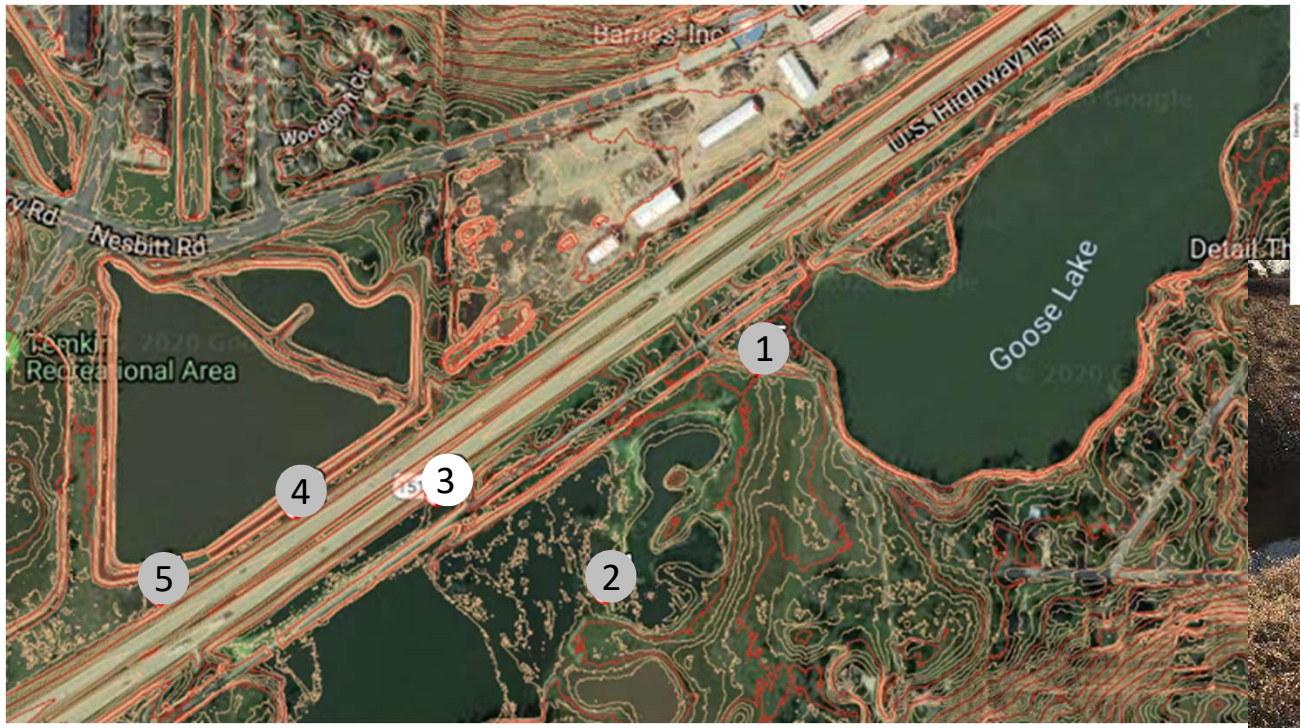

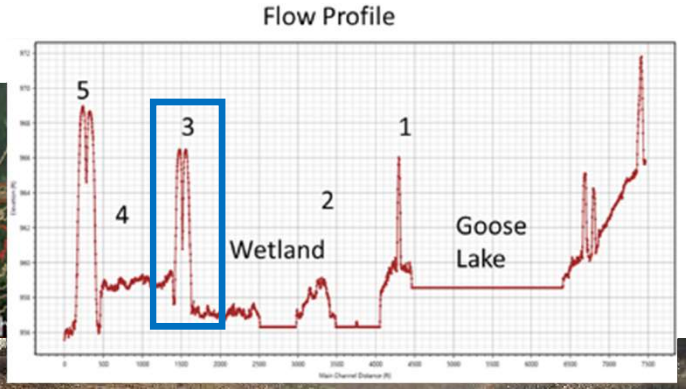

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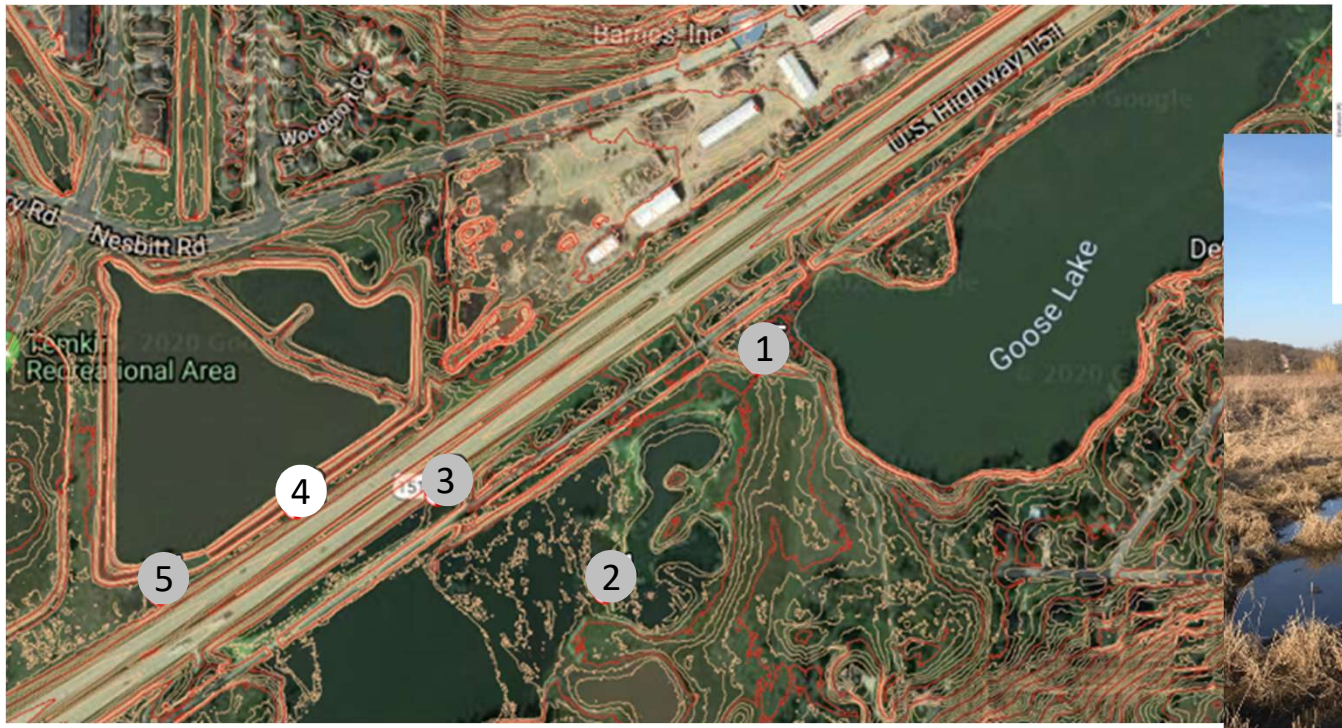

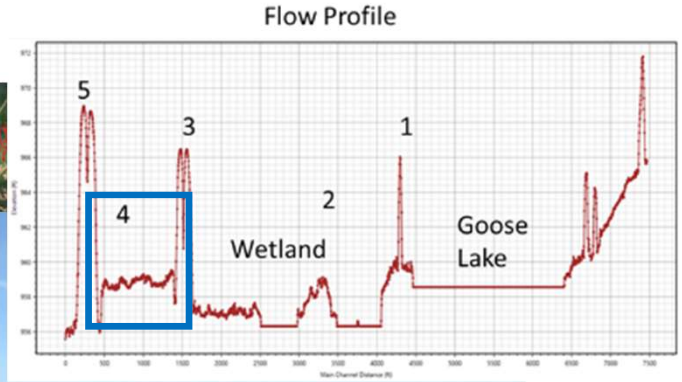

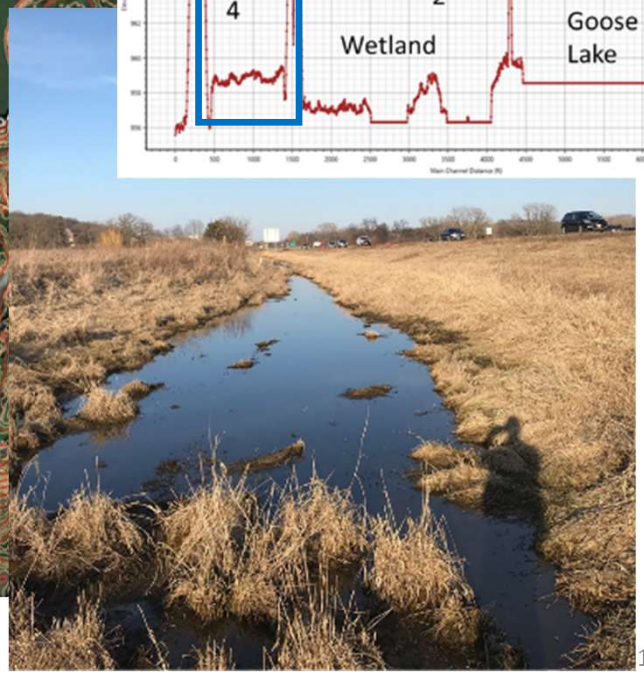

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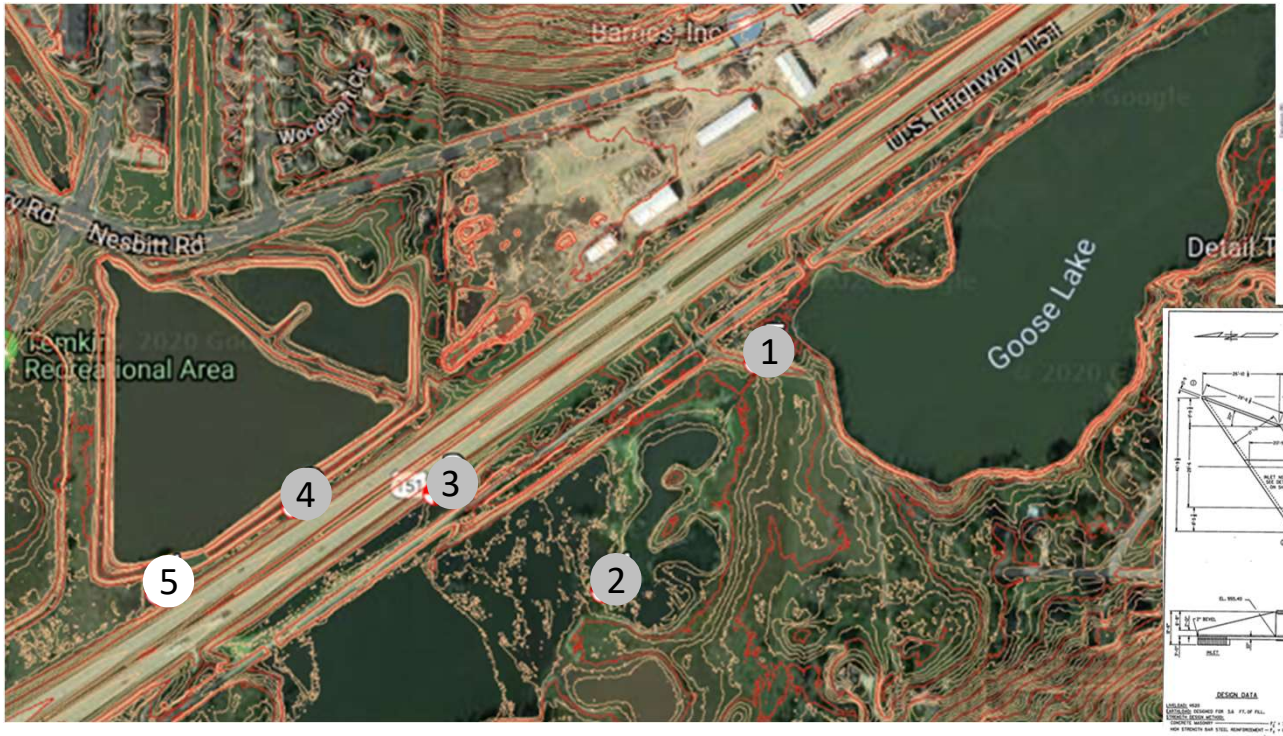
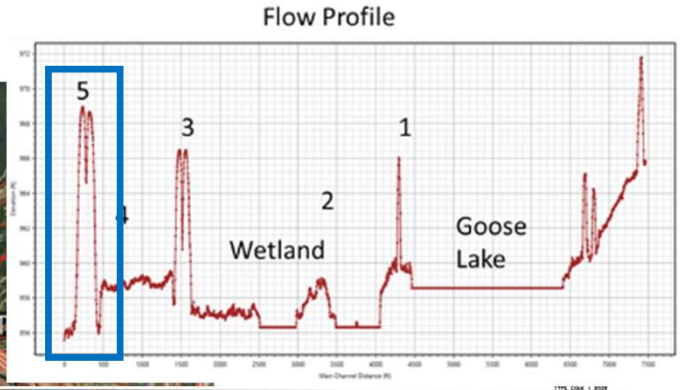
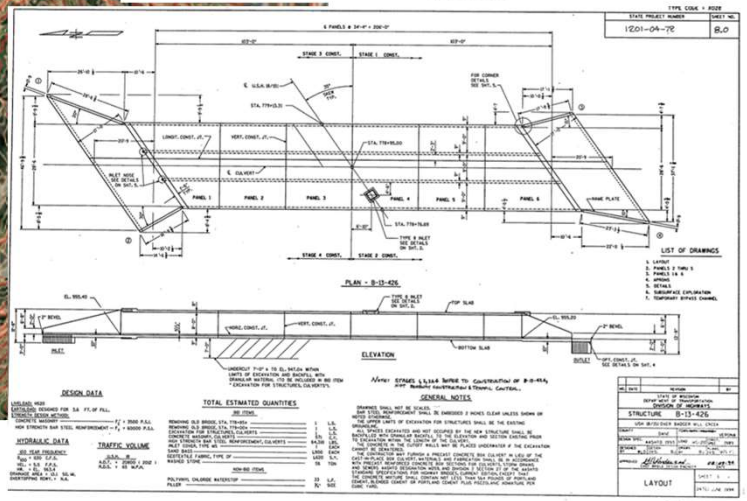


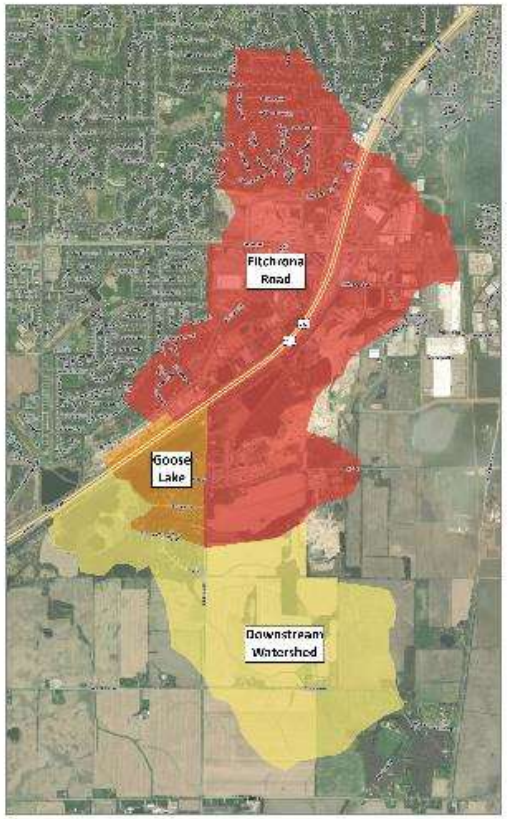




HURDLES TO SOLUTIONS

How much water flows through the system?

- 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



HURDLES TO SOLUTIONS

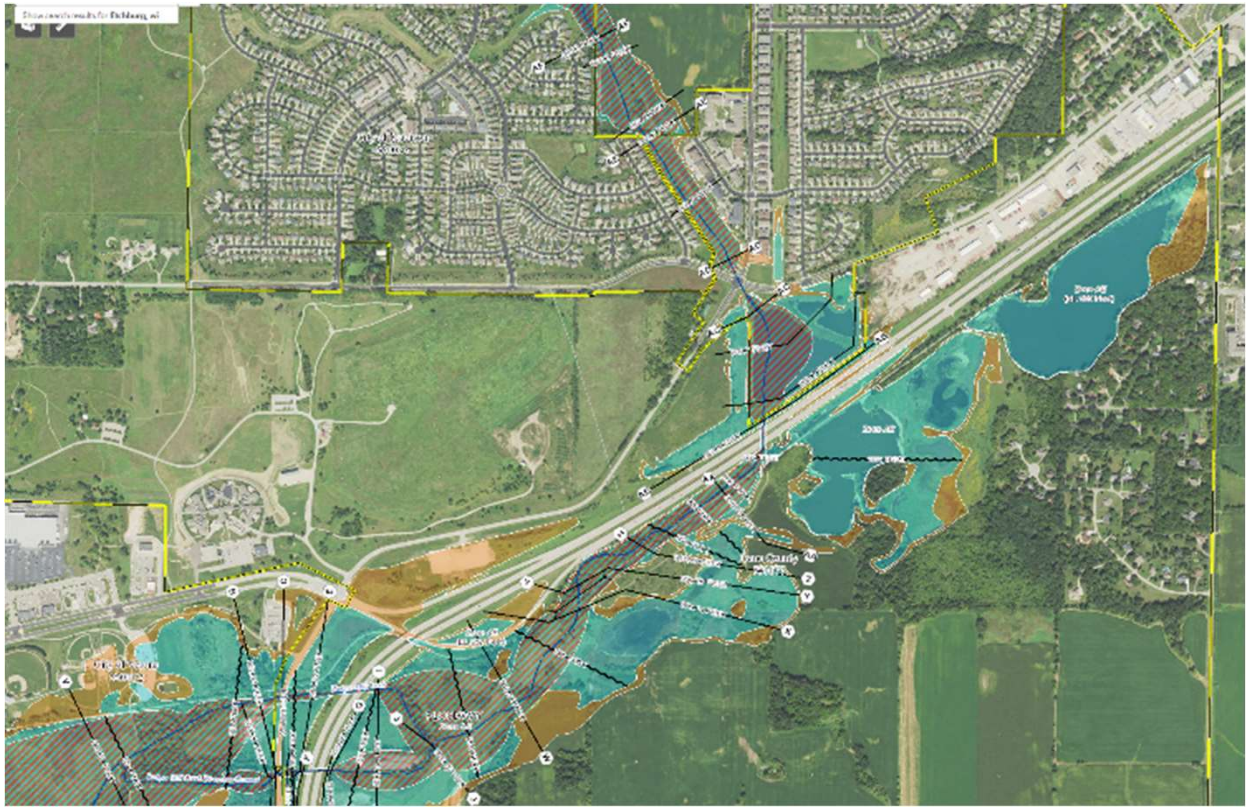
Bridge clearance

- 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

HURDLES TO SOLUTIONS

Avoiding downstream impacts



HURDLES TO SOLUTIONS

Regulatory

- 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

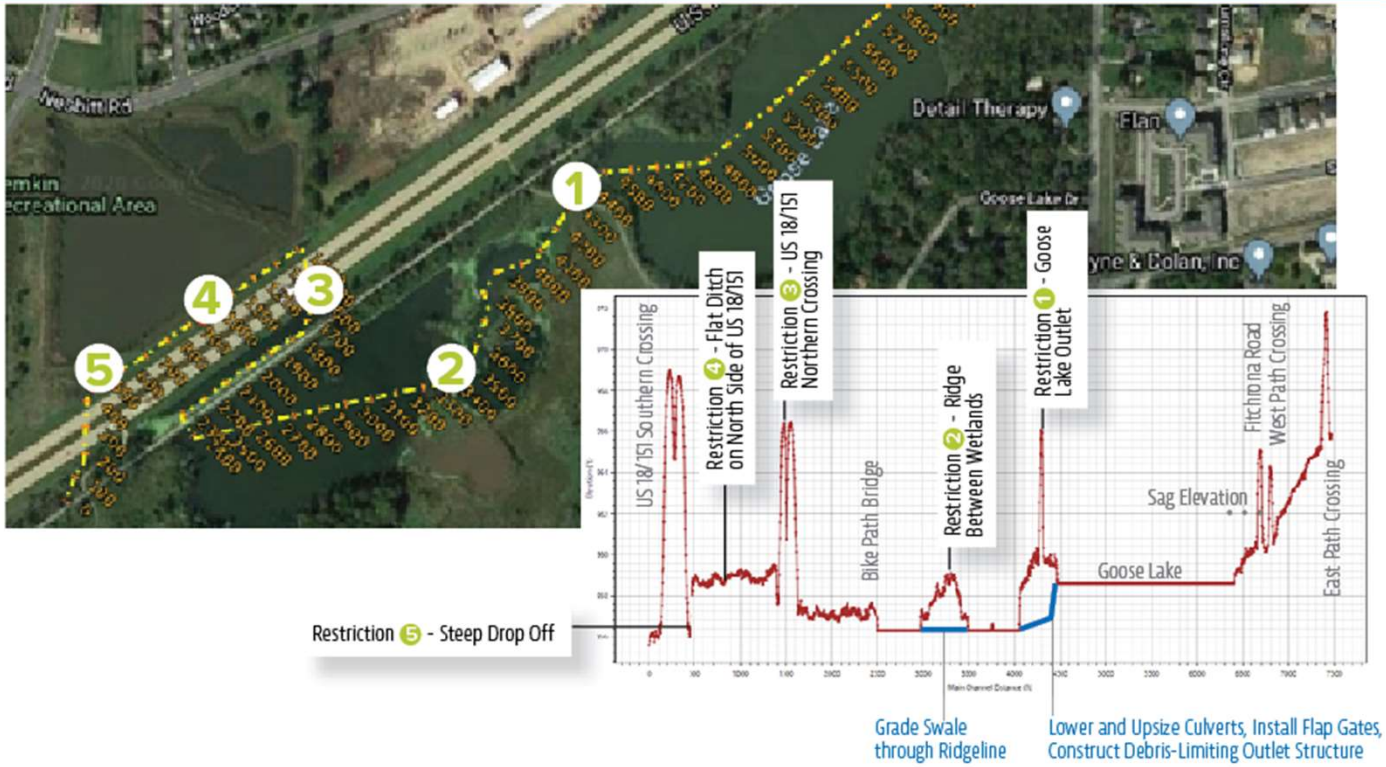
POTENTIAL SOLUTIONS

- Increase downstream conveyance

OPTION 1

Increase downstream conveyance

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



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

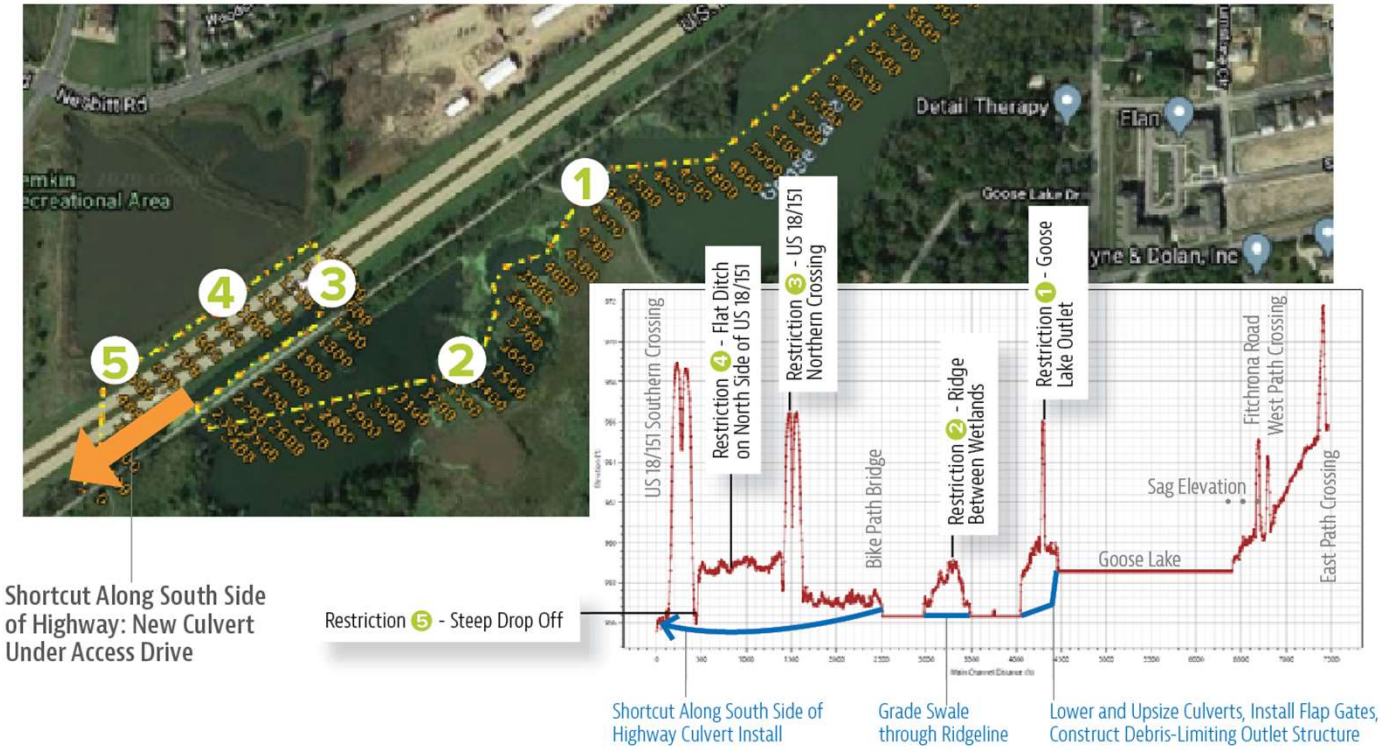
POTENTIAL SOLUTIONS

- 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

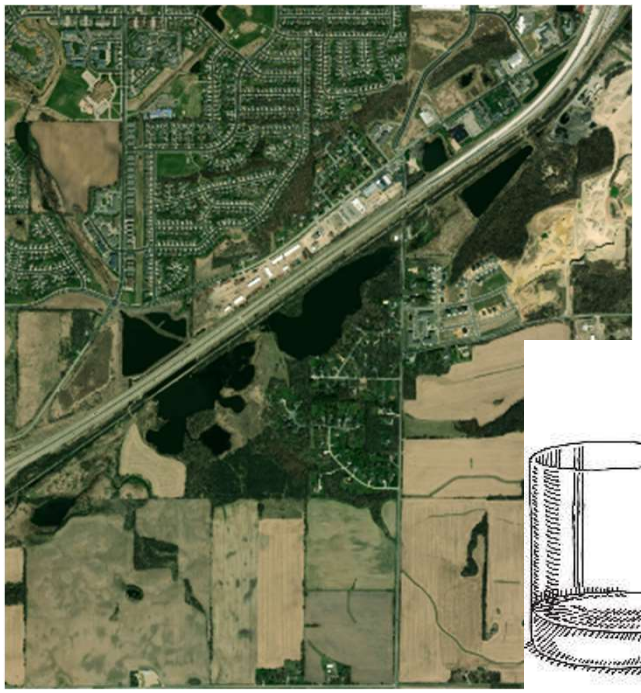
POTENTIAL SOLUTIONS

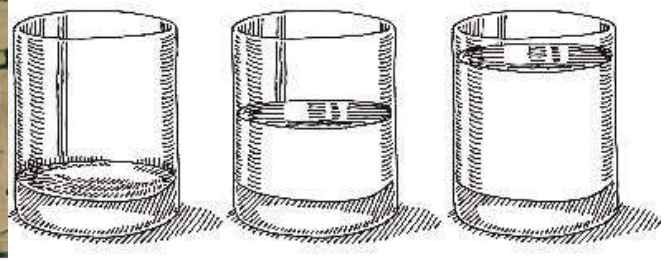
- Increase downstream capacity
- Similar to Option 1 but with a shortcut
- Increase storage in the system at Goose Lake and/or park

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

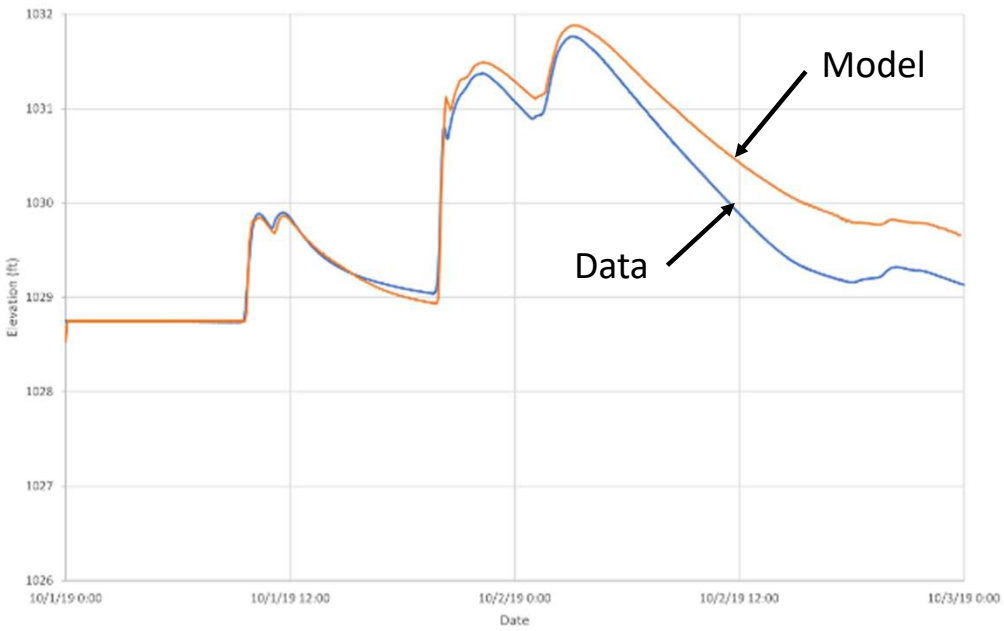
- Could be designed to provide additional water quality treatment

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

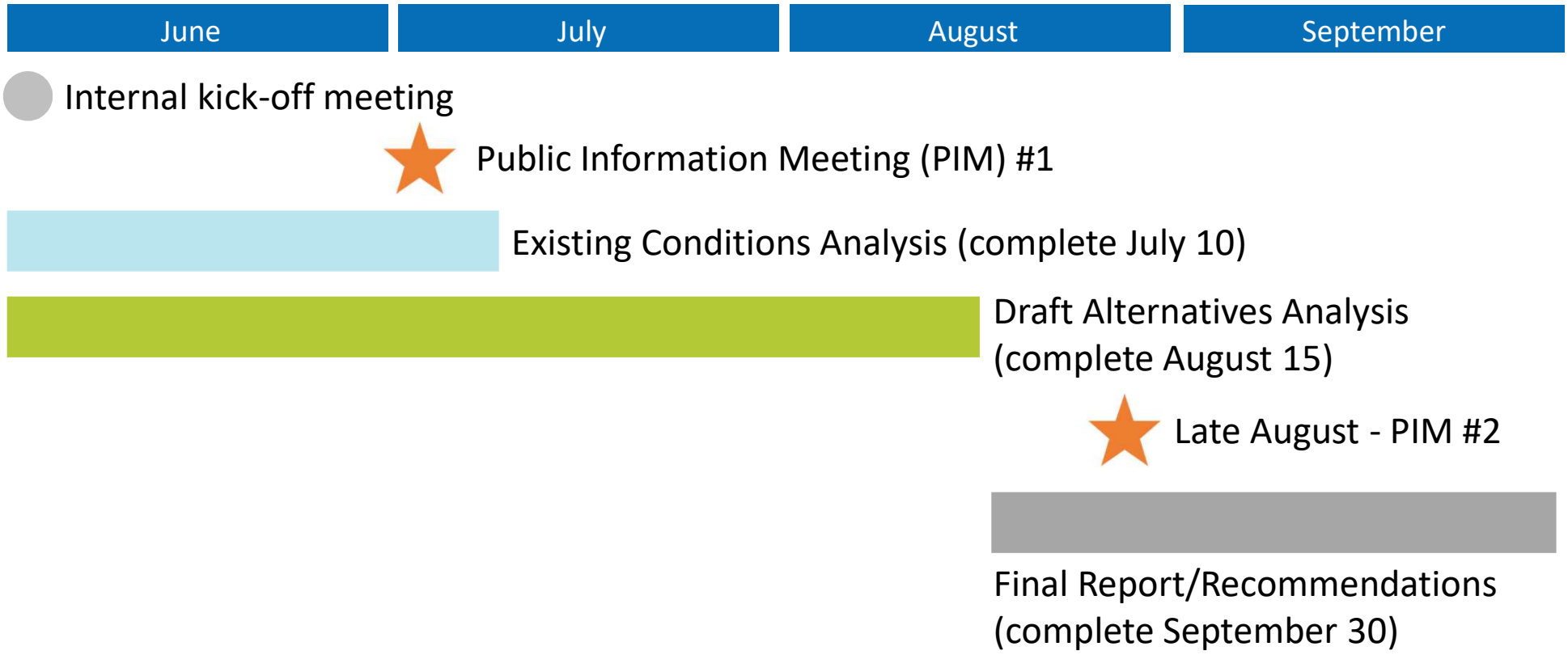


NEXT STEPS

Analyze three options described previously

Hold Public Informational Meeting #2 as alternative analysis nears completion

SCHEDULE


June
July
August
September
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

THE CITY OF Fitchburg

TOWN OF VERONA

AES2

Contact

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