



FEMA



WDNR

# Douglas County Flood Risk Review Meeting

**January 25, 2023**

**RiskMAP**

Increasing Resilience Together



# Zoom Meeting Housekeeping

- **Please enter the organization you belong to in the group chat so that we have a record of all stakeholders who attended**
- **If you were not on the original invite and would like to keep updated, please also include your e-mail with your organization in the chat**
- **You are muted and video turned off upon entry**
- **If you wish to ask a question, Raise your hand or type it in chat**

# Introductions

- **Risk MAP Project Team, Wisconsin Department of Natural Resources (WDNR)**
  - Emily Szajna - Project Lead
  - Brian Cunningham- NFIP Coordinator
  - Chris Olds – State Floodplain Engineer
  - Jacob Druffner– Regional Engineer
  - Tanya Lourigan – Dam Safety/Floodplain Mapping Section Manager
  - Jesse Papez – GIS Section Supervisor
  - Vacant – State CTP Coordinator
- **Wisconsin Emergency Management (WEM)**
  - Robyn Fennig – Mitigation Section Supervisor
  - Heather Thole – Lead Hazard Mitigation Project Specialist

# Introductions

## ■ Federal Emergency Management Agency (FEMA)

- Munib Ahmad – Region V Engineer
- Ken Hinterlong – Region V Engineer
- Frank Shockey – Region V Senior NFIP Specialist
- Cadence Peterson – Region V Planner

# Agenda

- **Hazard Mitigation grants and project types**
- **Risk MAP and engineering overview**
- **Mapping Schedule**
- **Breakout Group Sessions**
- **Answer questions**

# Meeting Goals

Community input throughout the FEMA map revision process is essential to flood risk management. You are getting the first possible look at the analyses and DRAFT results so that you can provide your feedback early on.

- Provide an overview of the hydrologic and hydraulic analysis
- Provide mitigation resources and information
- Present the DRAFT results
- Answer questions about the analysis
- Collect your concerns/feedback/technical data

# WEM Presentation

- **Mitigation grants**
- **Project types**

# Risk MAP

## ■ What is Risk MAP?

- Risk **M**apping, **A**ssessment, and **P**lanning
- Supports community resilience by providing data, building partnerships, and supporting long-term hazard mitigation planning.
- Offers a way to understand the hard realities of hazards before they happen and how to take actions now that help keep your community safe.
- Builds off previous FEMA map revision projects

The mapping process is designed to help individuals and communities understand their flood risk and make smart decisions.

- Your community is working with FEMA to help design a map that can protect your community and the families, homes, and business within it.
- The mapping process has many phases so it may be many years before you see the updated flood map.
- The MAP acronym encompasses Mapping, Assessment, and Planning. In other words, helping identify and assess the risks in your area and then working together to support the kind of long-term planning that makes your community stronger and safer.

# Risk MAP Project Status

- **Initial countywide mapping**

- Current effective countywide map products: 02/02/2012

- **Where have we been?**

- Kickoff Meeting 03/20/2020 – via Skype
  - Covered the goals of RiskMAP, project timeline, basic NFIP information, and types of data to be gathered
  - Discussed your flooding history and other concerns that impact flood risk and hazard mitigation
  - Discussed potential impacts resulting from the new digital data and community engagement workshop options

# Engineering Methods

- The methods used in flood risk studies are scientifically and technically appropriate and meet professional standards. They were explained in the '620' letter sent to communities on 03/16/2020.
- Hydrologic and hydraulic studies determine the potential depth of floodwaters, width of floodplains, and amount of water that will be carried during flood events. They also take into consideration certain obstructions to water flow.

# Redelineated and Detailed Study Reaches

## Redelineated streams

- Minnesuing Creek
- Nebagamon Creek
- Park Creek
- Unnamed Creek
- Bond Lake
- Eau Claire Flowage
- Lake Minnesuing
- Lake Nebagamon
- Leader Lake
- Lower Eau Claire Lake
- St. Croix Flowage

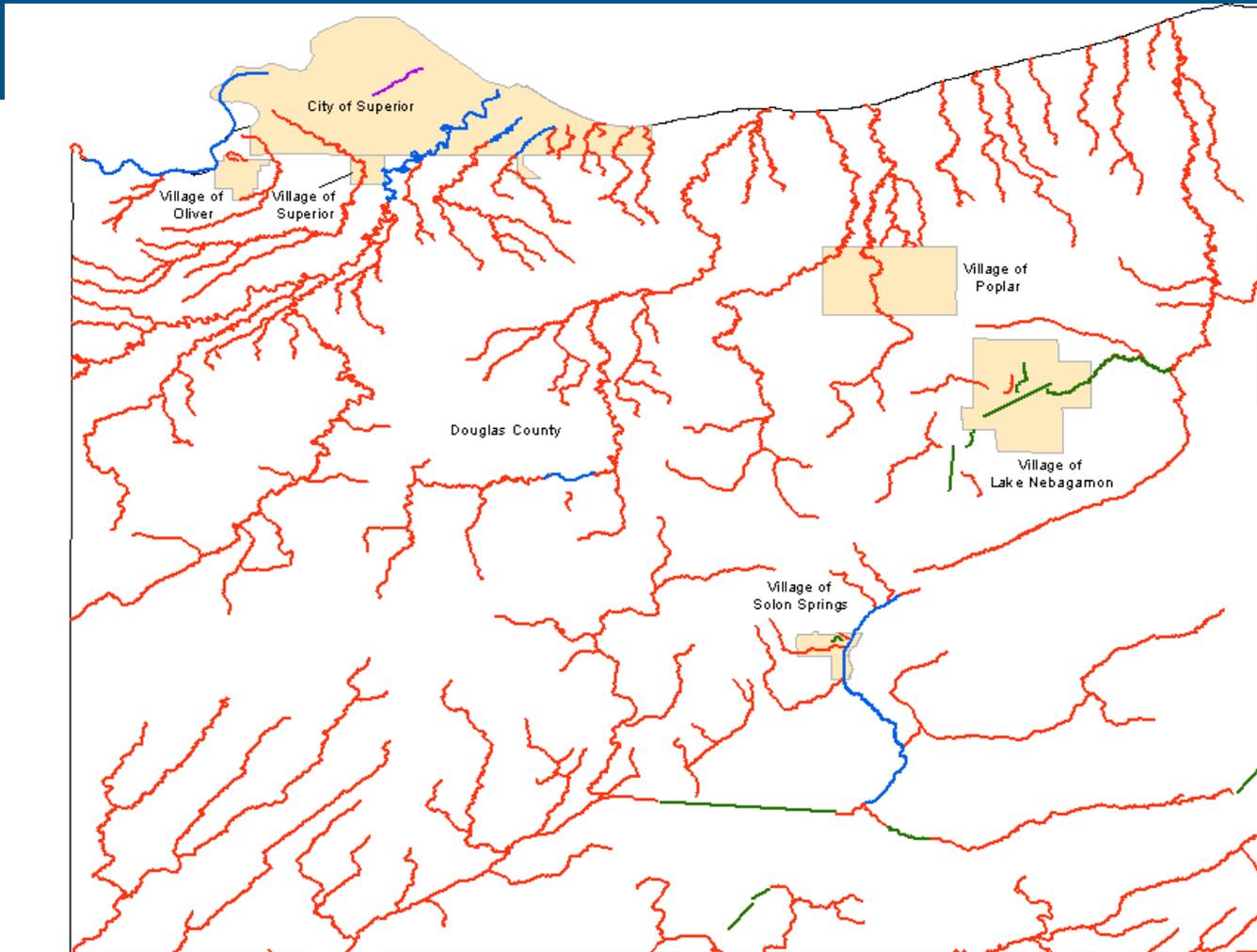
## Updated Detailed streams

- Bear Creek
- Bluff Creek
- Nemadji River
- Lyman Lake
- St. Croix River

## Further discussion needed

- Unnamed Tributary/Faxon Creek

# Revised Study Reaches

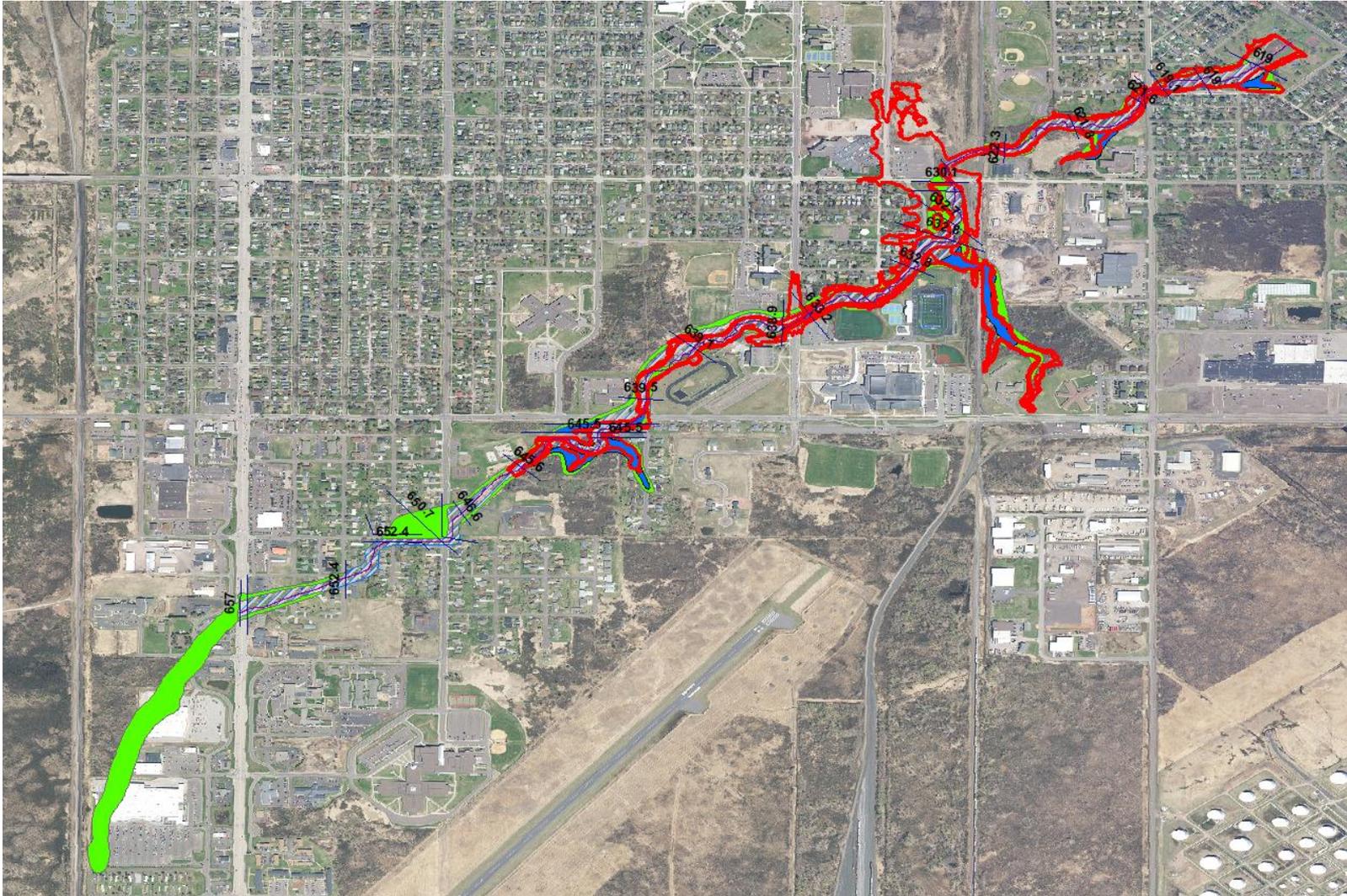


- Unnamed Tributary/Faxon Creek
- Redelineated streams
- Detailed streams
- Approximate streams

0 4 8 16 24 32 Miles



# Unnamed Tributary/Faxon Creek



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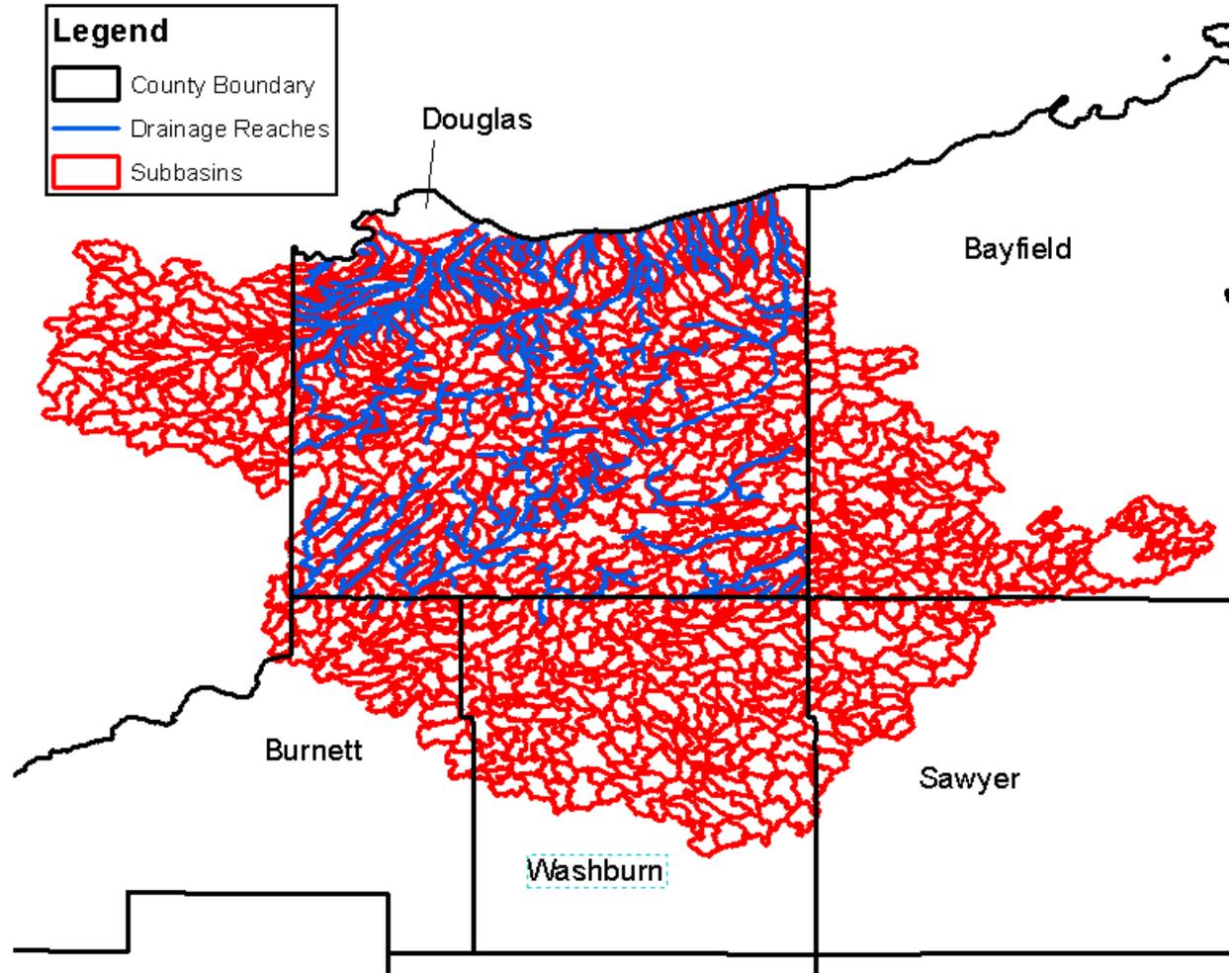
WDNR

# Redelineation

- Remapped effective study elevations on 2019 City of Superior and 2016 Douglas County LiDAR based terrain data (5-foot DEM)

# Approximate Study Hydrology

- HEC-HMS v. 4.3



# Approximate Study Hydraulics

- **HEC-RAS v. 5.0.7**
- **Structures:**
  - Entered as bridges/culverts where DOT plans available
  - Entered as inline structures with a notch width estimated from aerial photos
- **All geometry extracted using HEC-GeoRAS and 2016 Douglas County LiDAR**
- **NAVD88 vertical datum**
- **Interpolated cross sections where necessary for model stabilization**
- **Ineffective flow used to model floodways in non-conveyance areas**
- **Manning's N values estimated from aerial photography**
- **Boundary conditions:**
  - Receiving stream corresponding event elevation when peaks coincide
  - Receiving stream 10-year event when receiving stream peaks after studied stream
  - Normal depth when stream downstream of last cross section is unstudied

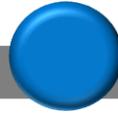
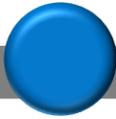
# Timeline for Douglas County

Preliminary Products Released

Post-Release of Preliminary FIS/FIRM

Post-Appeals Appeals Resolved

Post-LFD



Flood Risk Review Meeting

Preliminary FIRM Released

CCO Meeting

Open House Meetings/ Resilience

Regulatory 90-day appeal and comment period

Letter of Final Determination *six-month adoption period*

Effective FIRMs

# What Next?

- **Work towards preliminary map products and incorporating Great Lakes coastal studies into the project**

# Questions & Discussion

- **Maps, Scheduling:** Emily Szajna
- **NFIP, Ordinance:** Brian Cunningham
- **Engineering:** Chris Olds
- **Mitigation, Emergency Management:** Robyn Fennig

*Thanks for participating! We'll be communicating again soon.*