Michigan Clean Water Corps

# Norton Creek Road Stream Crossing Inventory Project

Huron River Watershed Council

Larry Scheer: Lead Volunteer

**Summer 2015**

# Presenter Introduction: Larry Scheer

- HRWC Volunteer for 2 years
- Lake and Stream Leader Institute Graduate; 2015
- Norton Creek Road Stream Crossing Inventory Team Leader

- 33 years experience in analytical chemistry QC, filter validation, technical support, research and development, marketing, and training
- Contributing author for publications in HPLC, Filter Life, Integrity Testing, Filter Drug Binding, and Filter System Sizing

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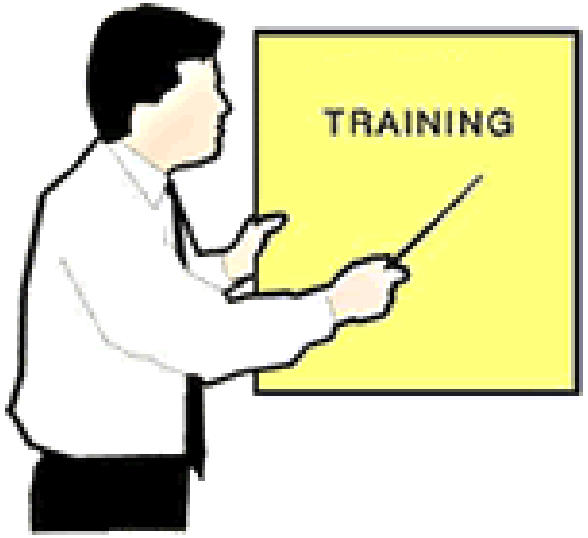
# Agenda

- NCRSCI Program Development, Execution, and Completion
  - Obtain training (Patrick Ertel, DNR)
  - Define need as part of Norton Creek Watershed Plan
  - Planning steps
    - Sites to inventory
    - Methodology & Tools
    - Team(s)
  - Team training and practice
  - Complete inventories
  - Input data into spreadsheet and Roadsoft

# Training

- I (we) received Road Stream Crossing Inventory training from Patrick Ertel (DNR) at the MiCorps session last year in the Ralph MacMullen Conference Center on Higgins Lake.

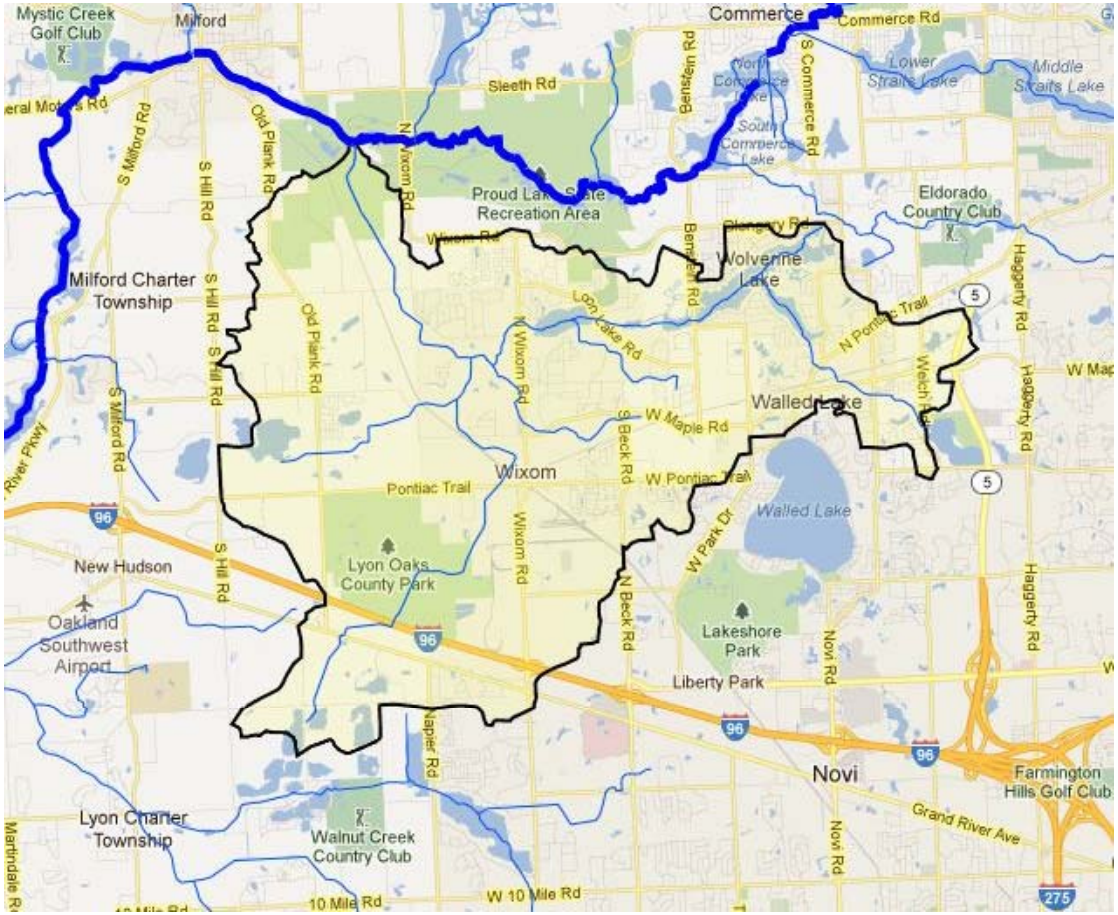


# Need as part of Norton Creek Watershed Plan

- Huron River Watershed Council starting Norton Creek watershed planning process
  - DNR reported that Norton Creek is Impaired due to High Sediment and Low DO levels.
- Norton Creek Watershed Plan to include:
  - Adopt-a-Stream program (bugs)
  - Bioreserve assessment
  - Neighborhood surveys
  - Water quality testing
  - Creek walking
  - **Road stream crossing inventories**

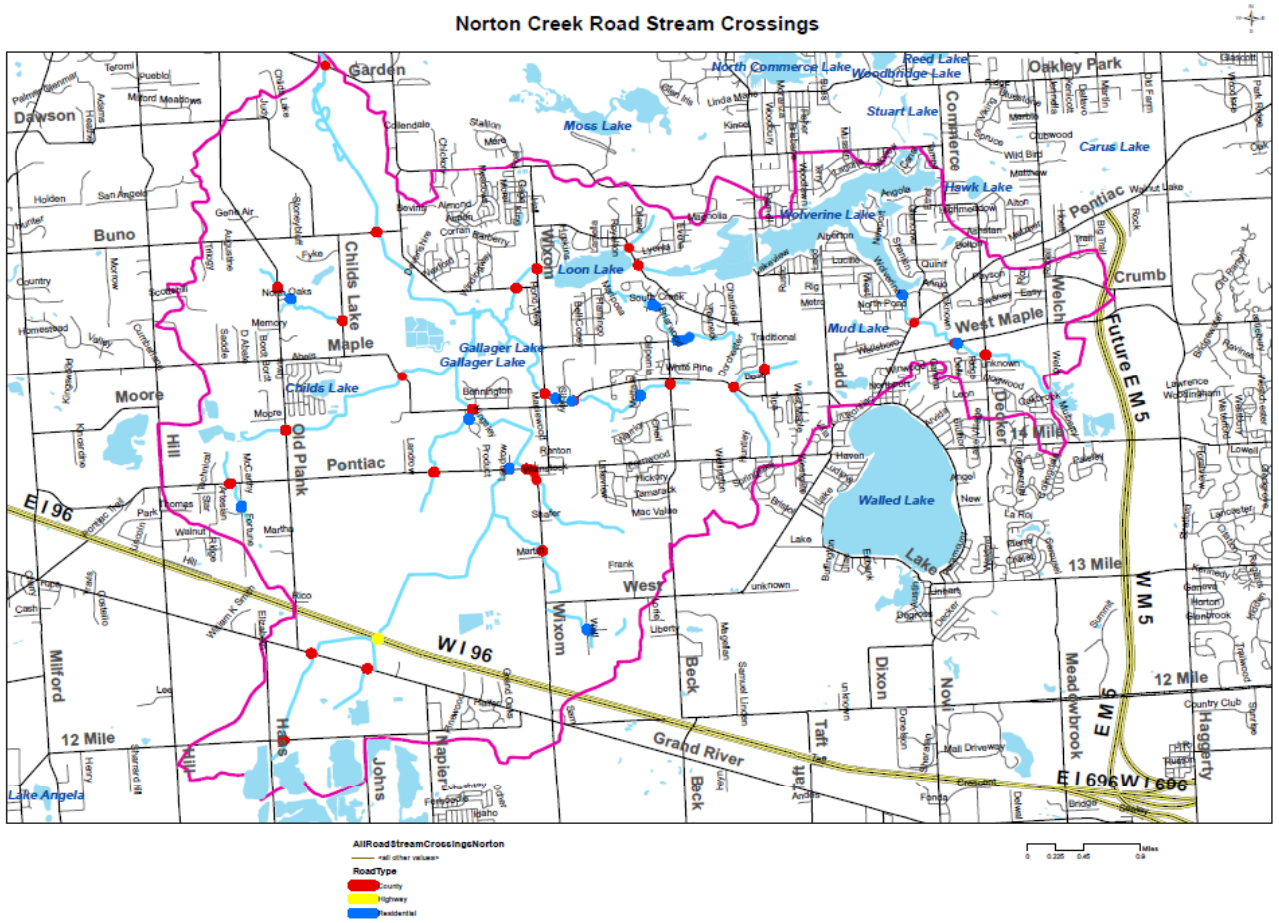
# Need as part of Norton Creek Watershed Plan

- Norton Creek watershed
- SW Oakland County
- 110 miles of branching stream channels
- Drains 24 square miles
- Eight lakes in watershed including Wolverine Lake



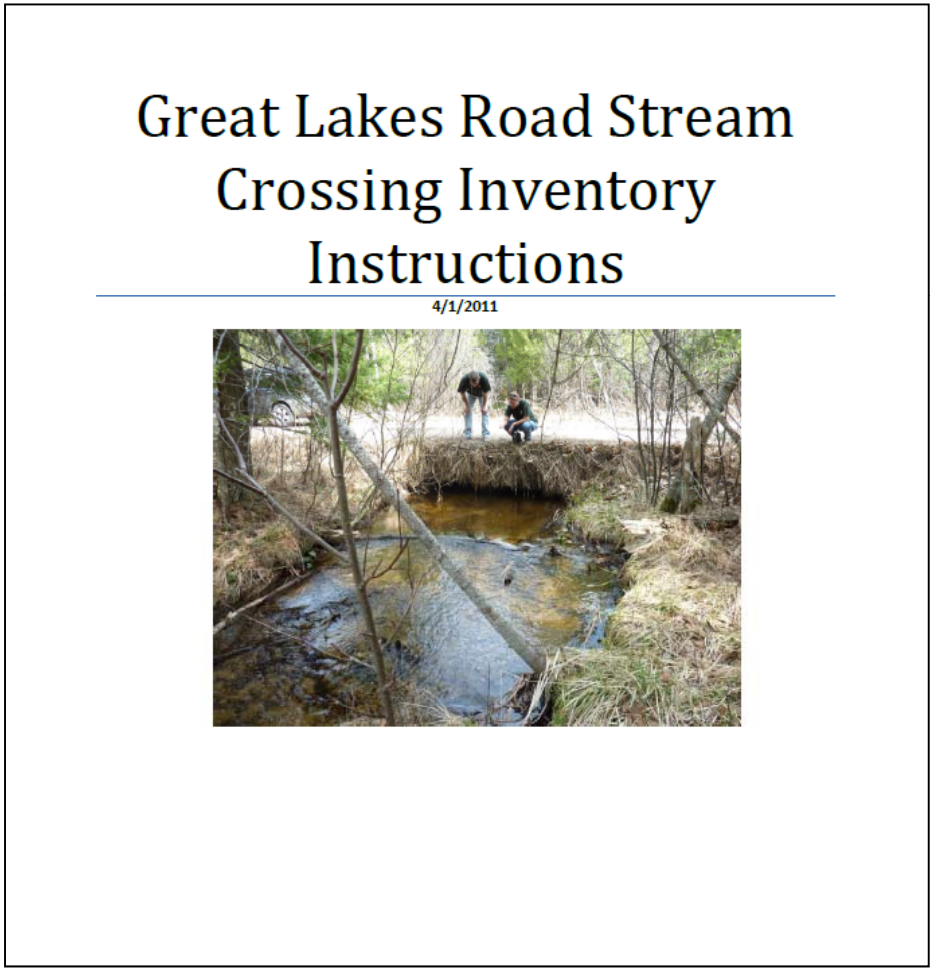
# Planning - Sites

- Sites to inventory
  - Used GIS and overlaid stream with roads to get (52) crossings



# Planning - Methodology

- Methodology
- Developed and reviewed by:
  - U.S. Forest Service
  - U.S. Fish and Wildlife Service
  - Michigan DNR
  - Wisconsin DNR
  - Huron Pines
  - Conservation Resource Alliance
  - Michigan Technological University
  - road commissions




https://www.michigan.gov/documents/dnr/Great_Lakes_Road_Stream_Crossing_Inventory_Instructions_419327_7.pdf

# Planning - Tools

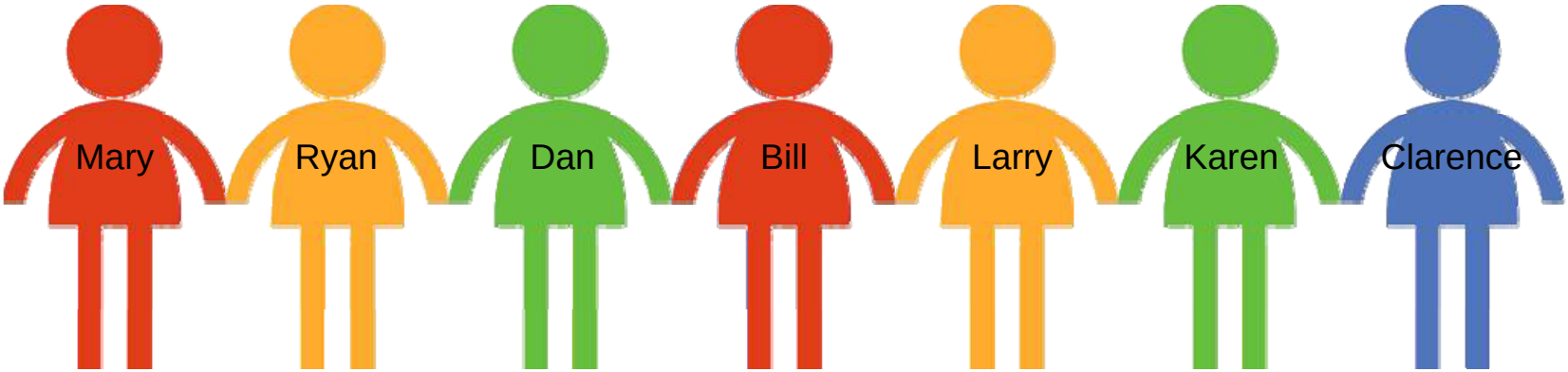
- Equipment
  - Maps with crossing locations
  - Stream crossing data sheets (or electronic data recorder)
  - Clipboard
  - Pens/pencils
  - GPS Unit
  - Tape measure (100 ft)
  - Folding rule (6 ft)
  - Survey rod (16 ft telescoping)
  - Hand level (3 or 4 feet)
  - Camera with extra batteries
  - Flow meter (for floating object such as an orange and a stopwatch)
  - Waders, hip boots, wading shoes
- Safety
  - Safety vests
  - Traffic cones
  - Brush clearing tools
  - Hardhat
  - Safety glasses
  - Flashlight or headlamp
  - First aid kit
- Miscellaneous
  - (Probing Stick)
  - (Hypsometer)

# Planning – Team(s)

- Reviewed objectives
  - 52 crossings done by end of summer
- Assume a couple of hours each

  ⇒1-2 teams of a few people will work

- We ended up with 7 volunteers



# Team Training and Practice

- Team met in Wixom for introductions, planning, and first training

- After that, the Team met weekly (at Dunkin Doughnuts) to plan sites for the day and then go out to inventory

# Complete the Inventories

- Actually, only 39 sites, due to construction and changes in roads.

- Important points:
  - Safety first
  - Have fun
  - Complete each data sheet, leave no blanks

# Results

- Team spent approximately 200 person-hours to complete approximately ~4400 data points in the final spreadsheet.

  (~115 data points per site)

- Ten sites had issues including:
  - Rusting or collapsing culverts
  - Completely submerged culverts
  - Buried (underground) culverts
  - Minor erosion

# Input Data into Spreadsheet and Roadsoft

# Questions