

# Little Plover River Watershed Enhancement Project



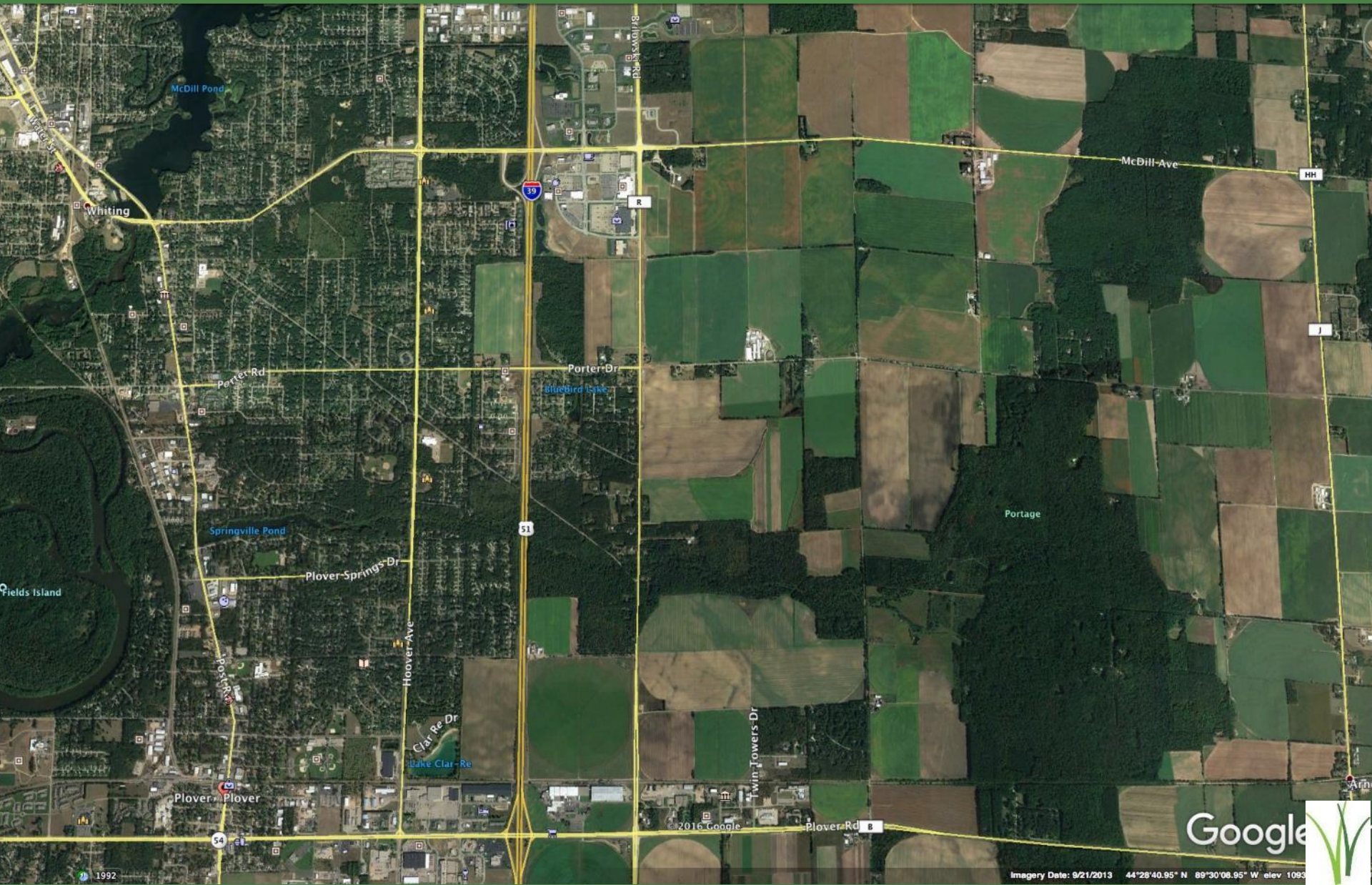
**Dan Mahoney - Administrator, Village of Plover**

**Tracy Hames - Executive Director, Wisconsin Wetlands Association**

**April 2019**



# Little Plover River Watershed





# Long History of Study & Controversy





# Vision

Improve the health of the LPR and the quality of life of the surrounding community.

Use best available data and voluntary conservation actions.





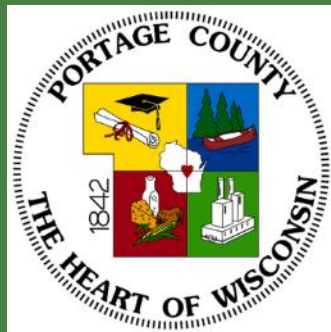
# Goals

- **Improve LPR flow & aquatic health.**
- **Improve surface-groundwater connections & water retention.**
- **Alleviate flooding.**
- **Improve & expand habitat & recreation opportunities.**



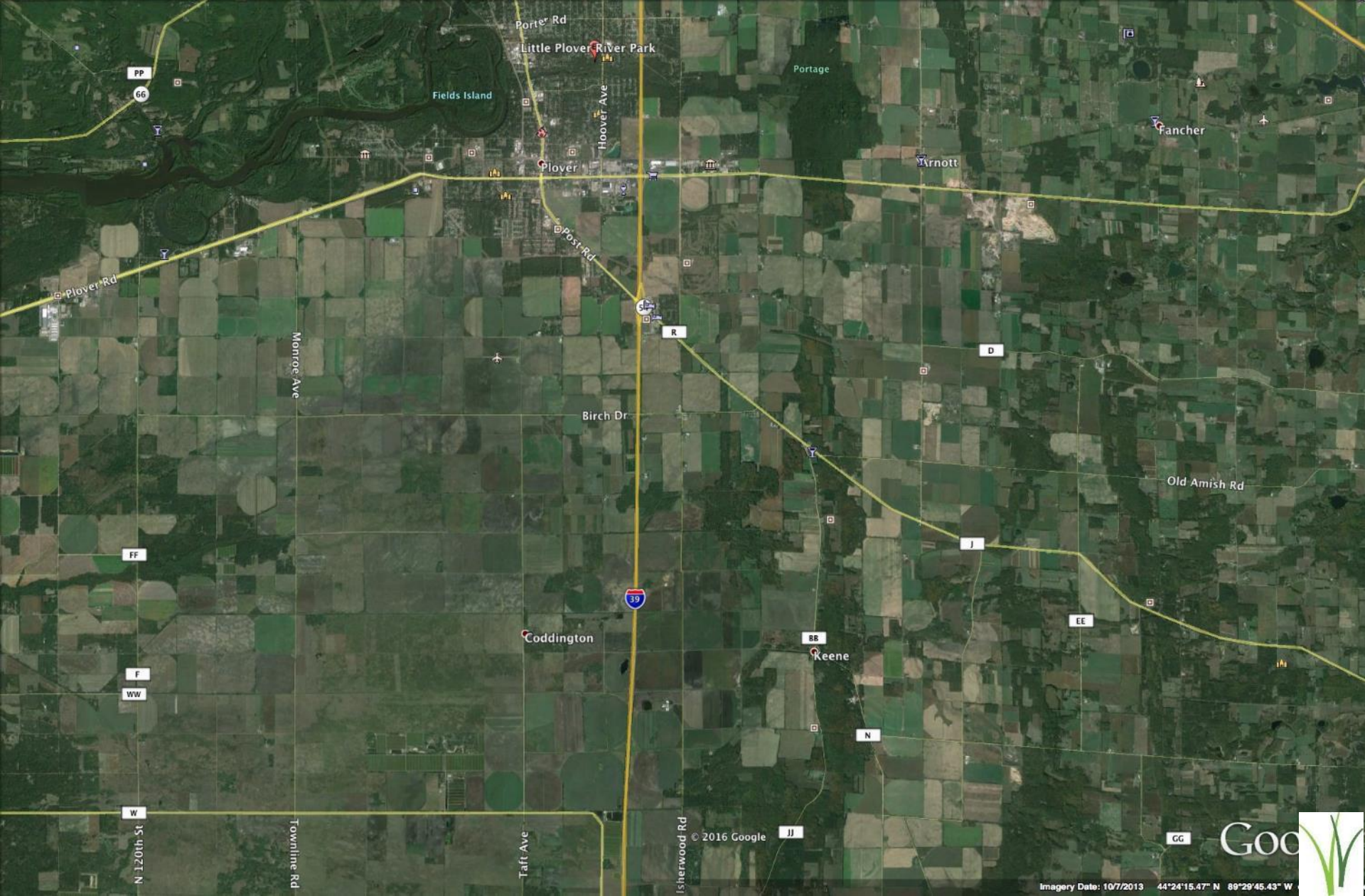


# LPRWEP Partners



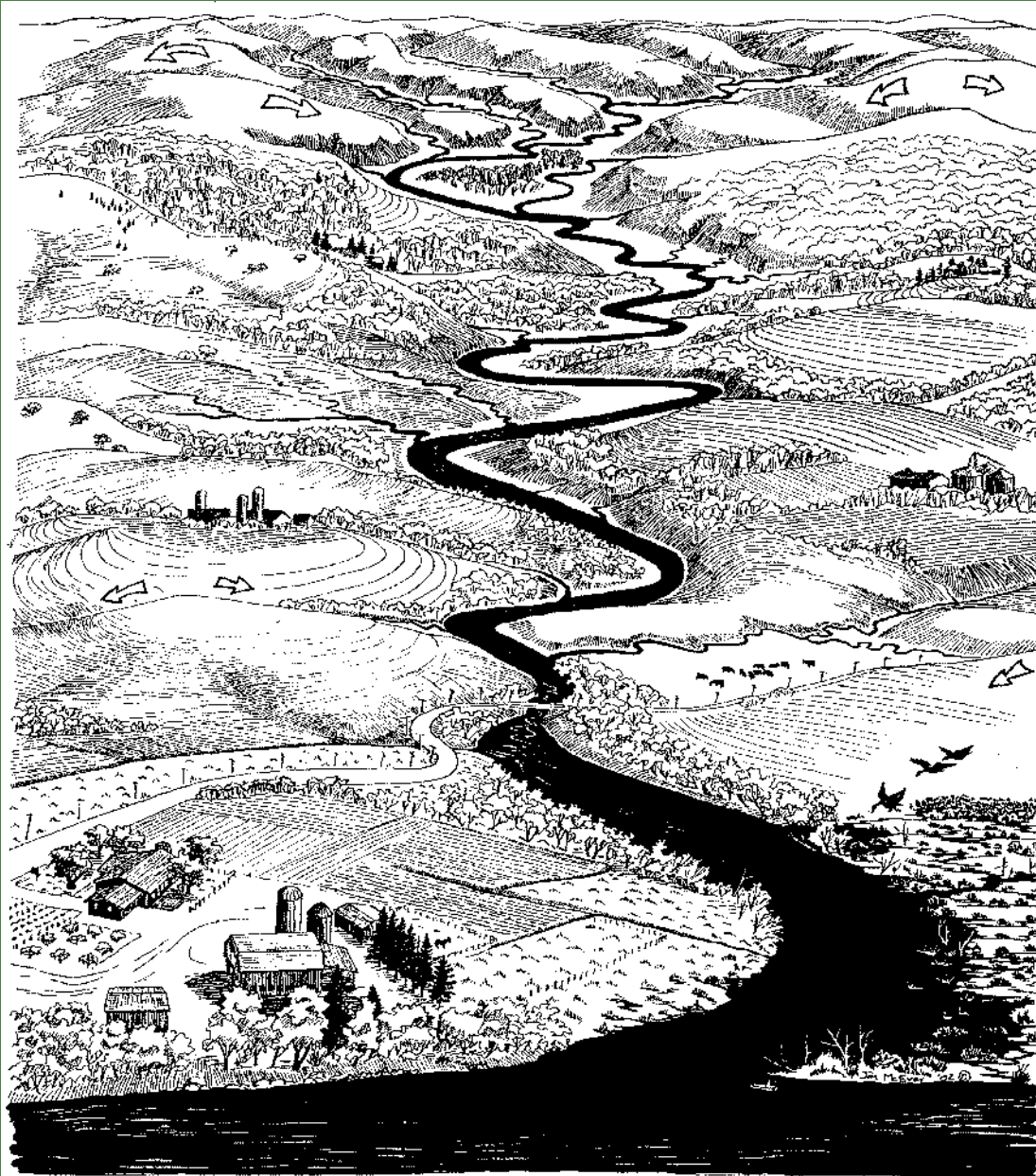


# Community Leadership





# Watershed Perspective



Upper  
80% of Water

Ephemeral  
Riparian/Riverine  
Wet Meadows

Middle  
Floodplain  
Sediment transport

Riparian/Riverine  
Alder/Shrub Carr

Lower  
Depositional

Estuaries  
Marshes  
Shoreline Wetlands





# Groundwater Model

A Groundwater Flow Model  
for the Little Plover River Basin  
in Wisconsin's Central Sands



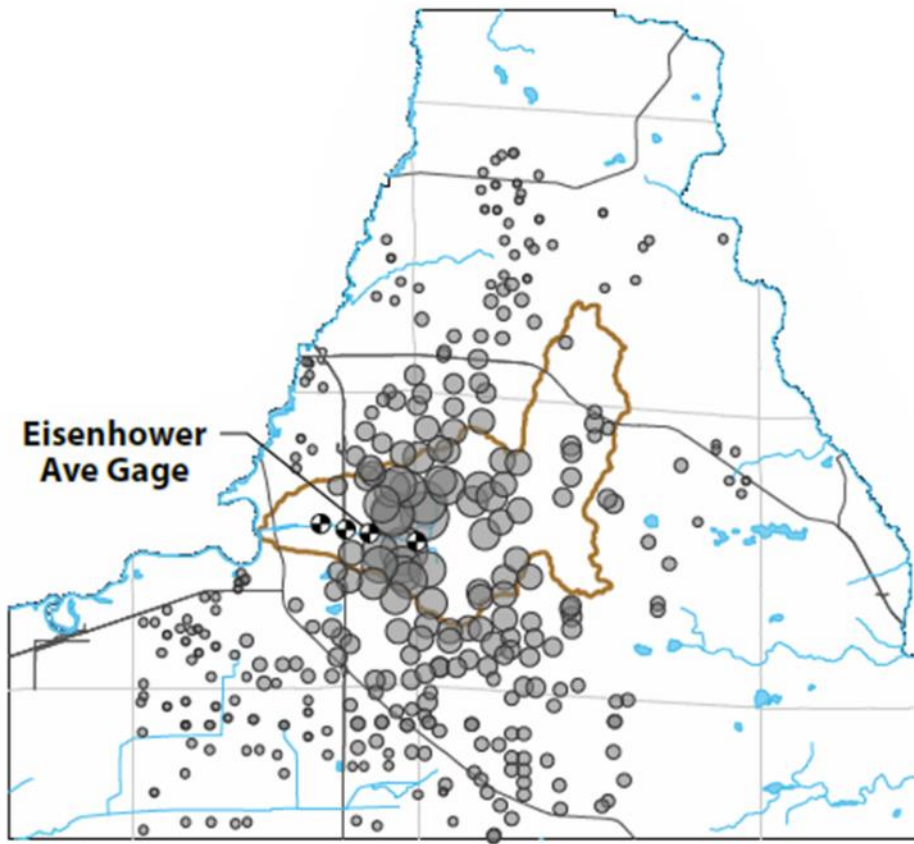
Bulletin 111 • 2017

Kenneth R. Bradbury  
Michael N. Fienen  
Maribeth L. Kniffin  
Jacob J. Krause  
Stephen M. Westenbroek  
Andrew T. Leaf  
Paul M. Barlow





# Flow Restoration Plan

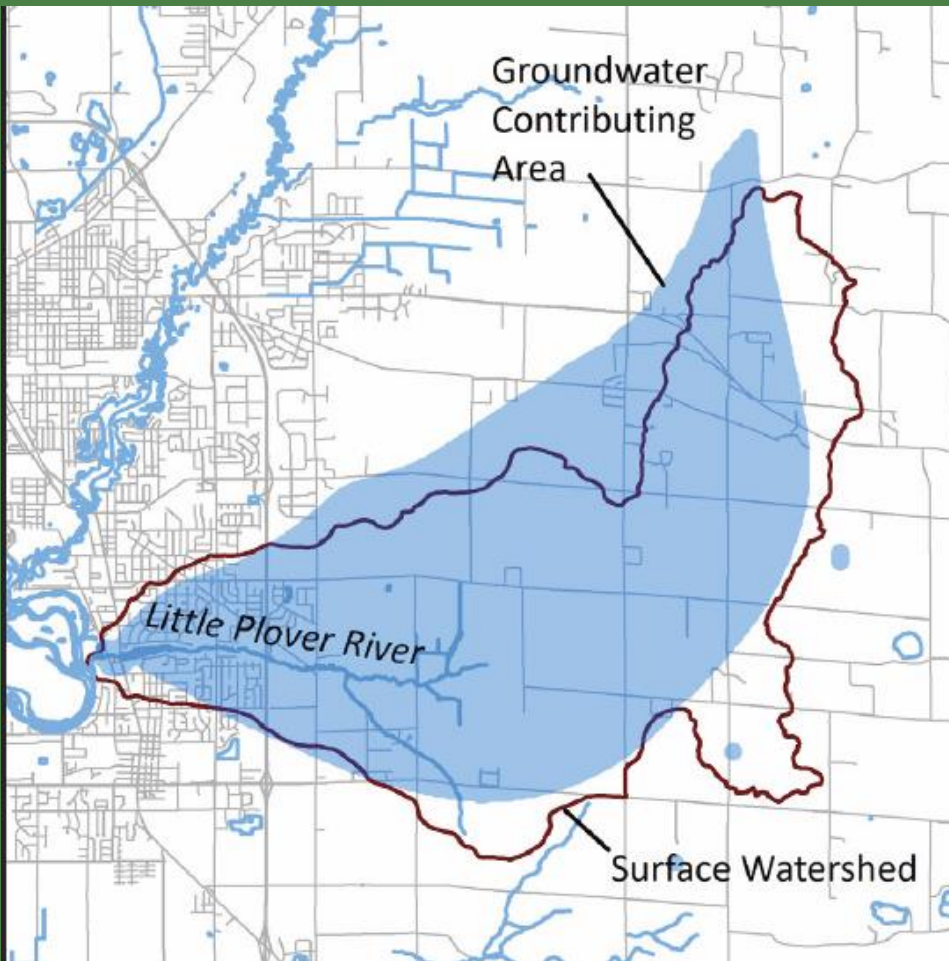


- Dozens of wells affect flow.
- Closer wells have more impact.
- Prioritizing actions by location / benefits.
- Groundwater model quantifying flow increases.

Depletion potential from MODFLOW (WGNHS & USGS)



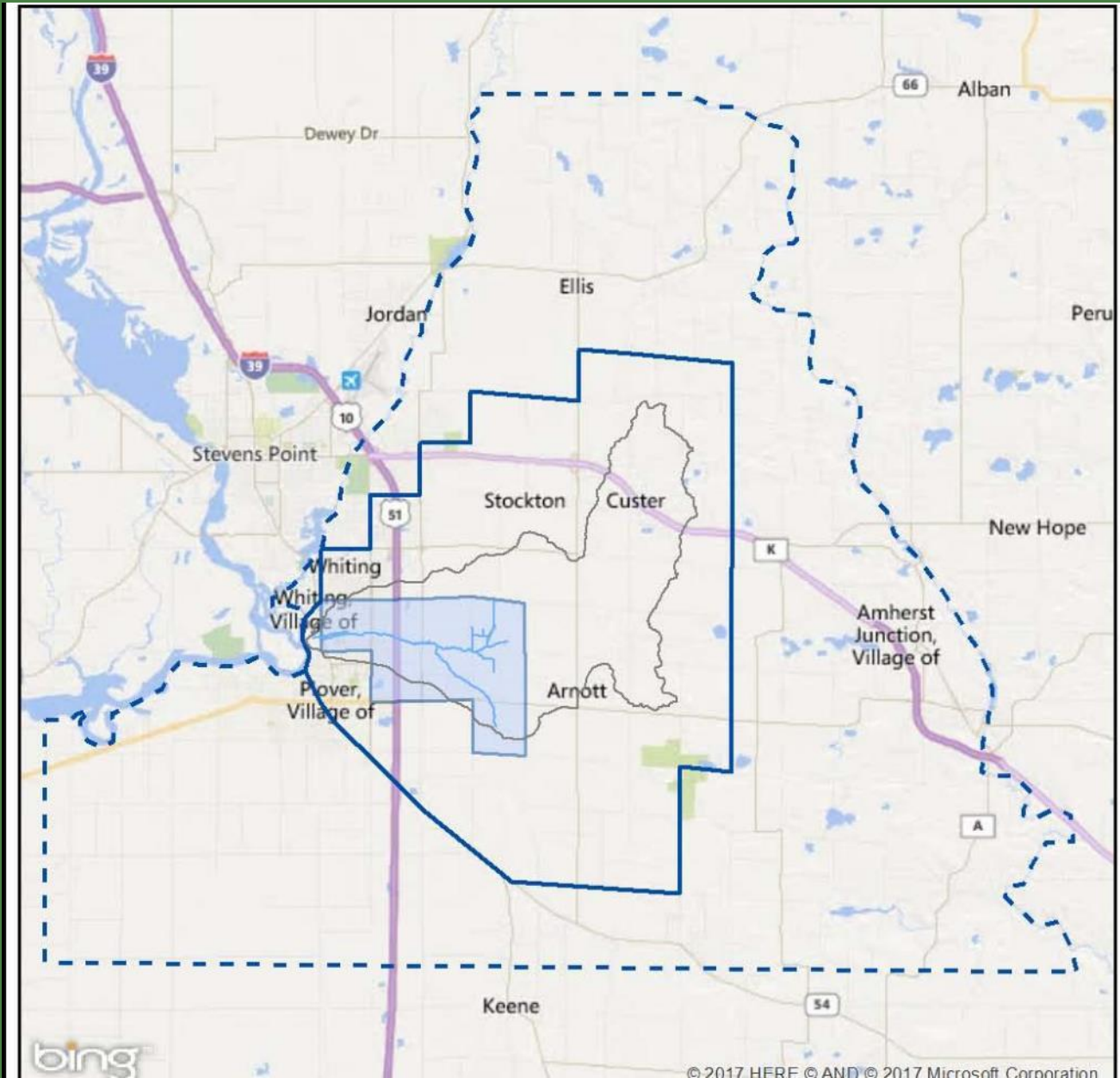
# Potential Flow Restoration Actions



- Village well operation changes.
- Transitioning irrigated agricultural land to conservation areas.
- Additional agricultural irrigation changes.
- Other actions.



# NRCS RCPP



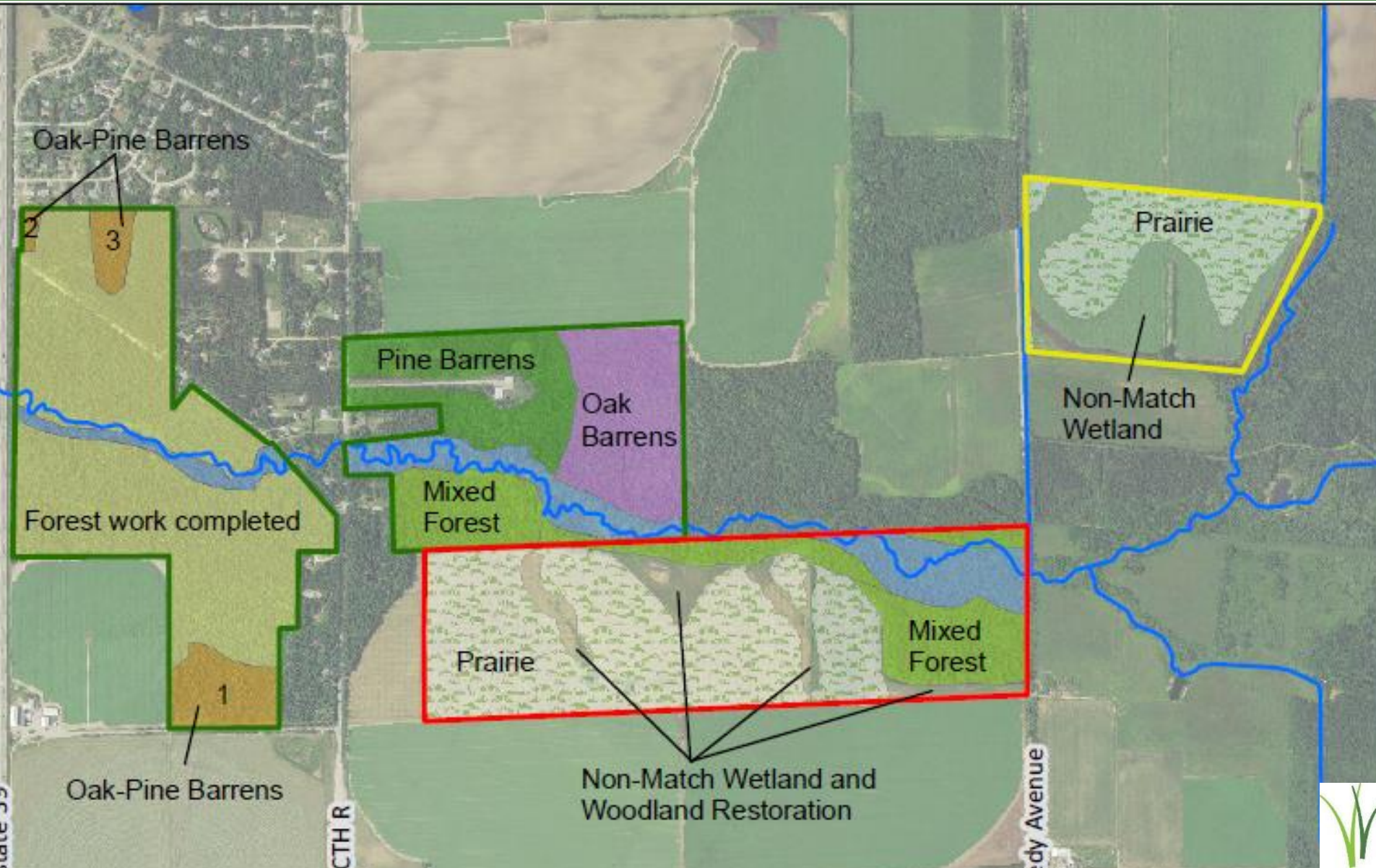


# Implementation





# Habitat Projects





# Historical Perspective





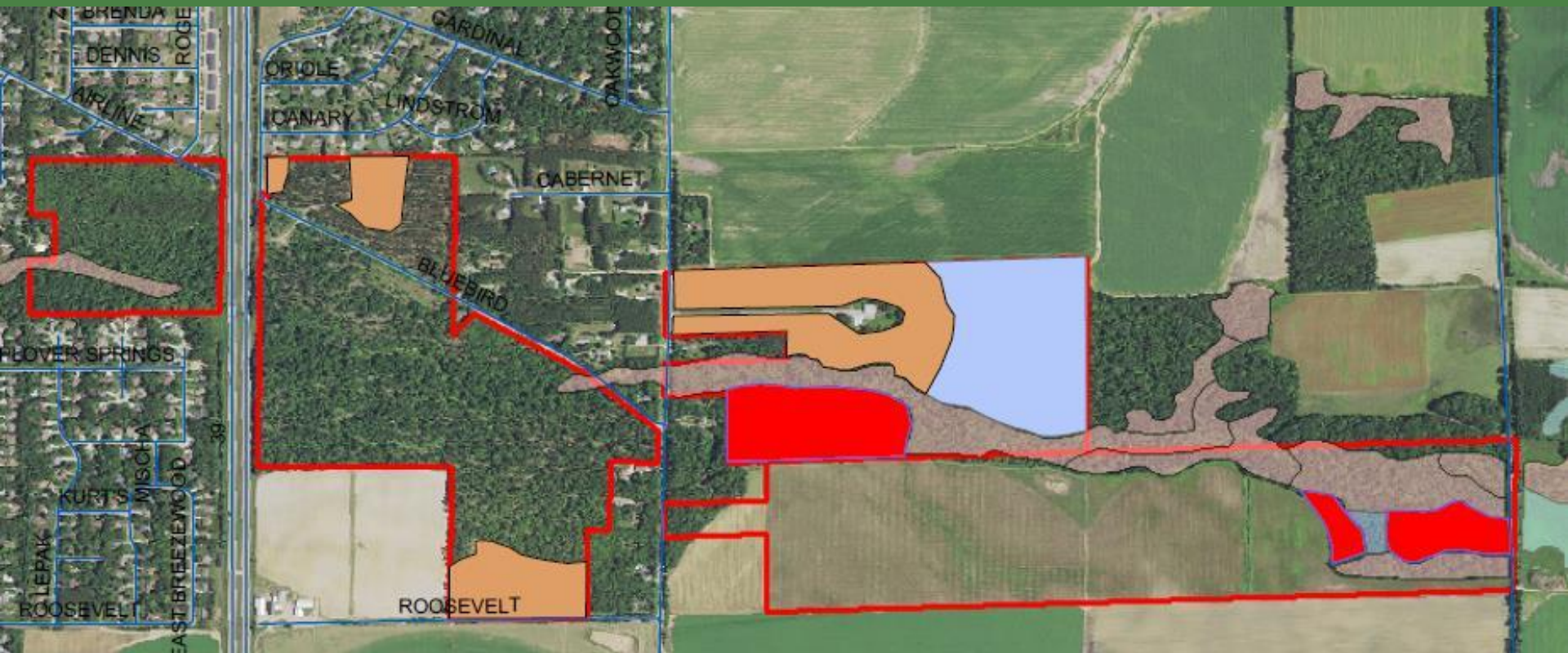
# Upland Grassland Restoration

**LPR Conservancy Area**  
Write a description for your map.





# Upland Forest Restoration





# UWSP Forestry Students





# Pine and Oak Barrens





# Thinning and Invasives Removal





# Channel & Floodplain Restoration

**Removal of Woody Streambank Vegetation to Improve Trout Habitat**



Technical Bulletin No. 115  
DEPARTMENT OF NATURAL RESOURCES  
Madison, Wisconsin  
1979



Wooded: wide & shallow



Open: narrow & deep





# Historical Perspective - Wetlands

1937

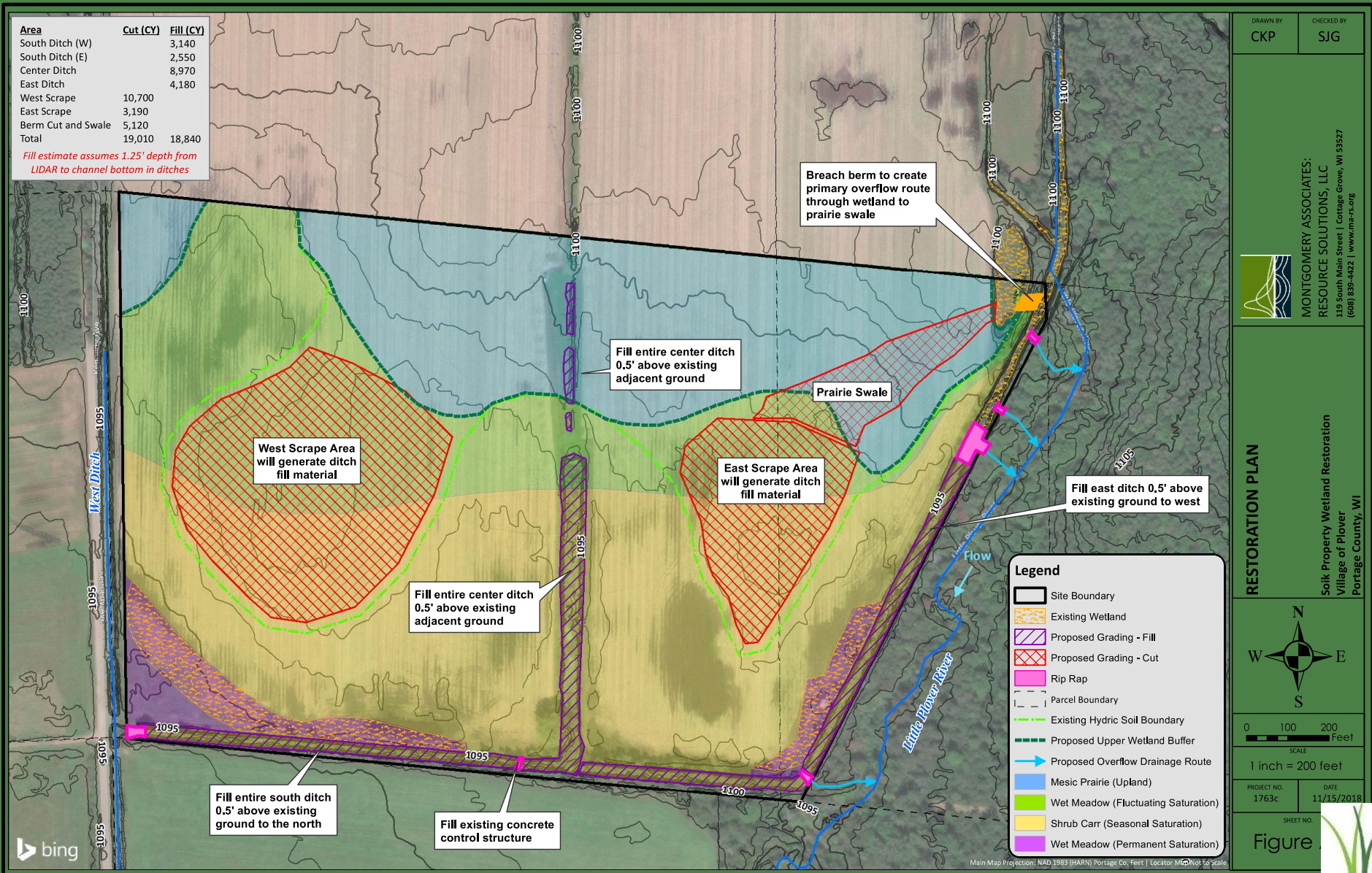


2016





# Wetland Restoration - Soik





# Historical Perspective – Flow Paths

1937



2016





# Soik Property – Ditch Fill



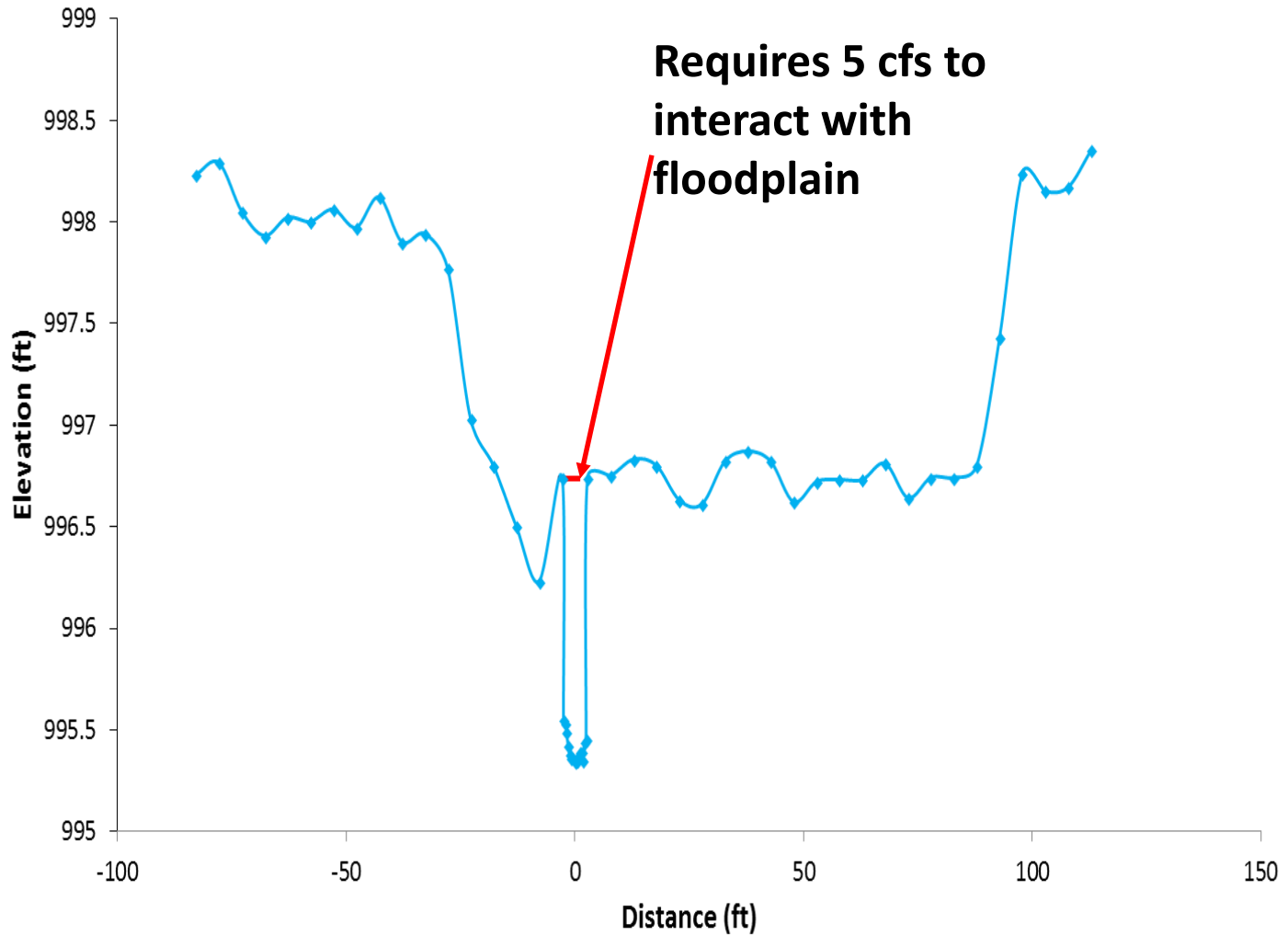


# Channel Width – Floodplain Disconnection



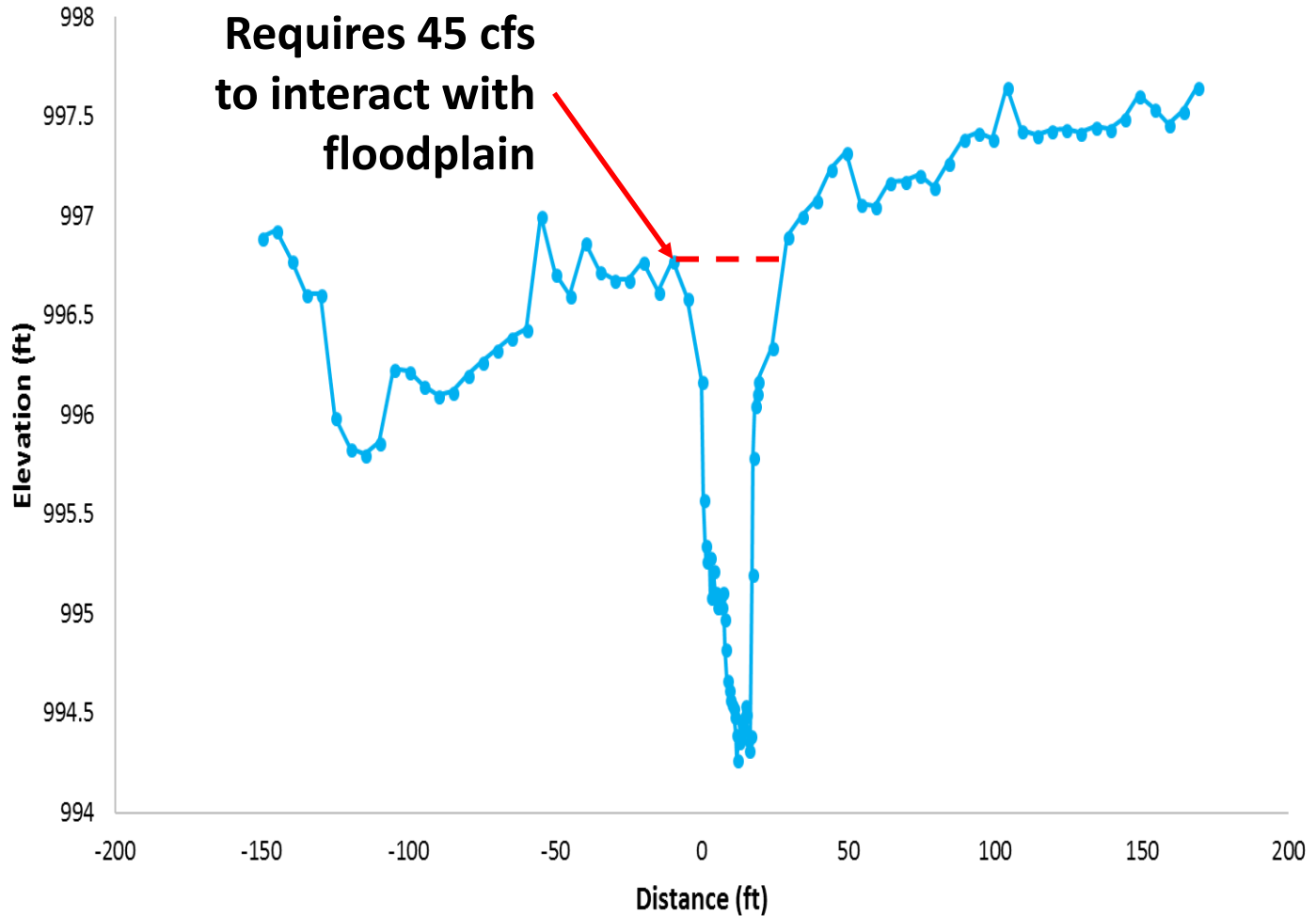


# Channel Shape East of Kennedy





# Channel Shape West of Kennedy

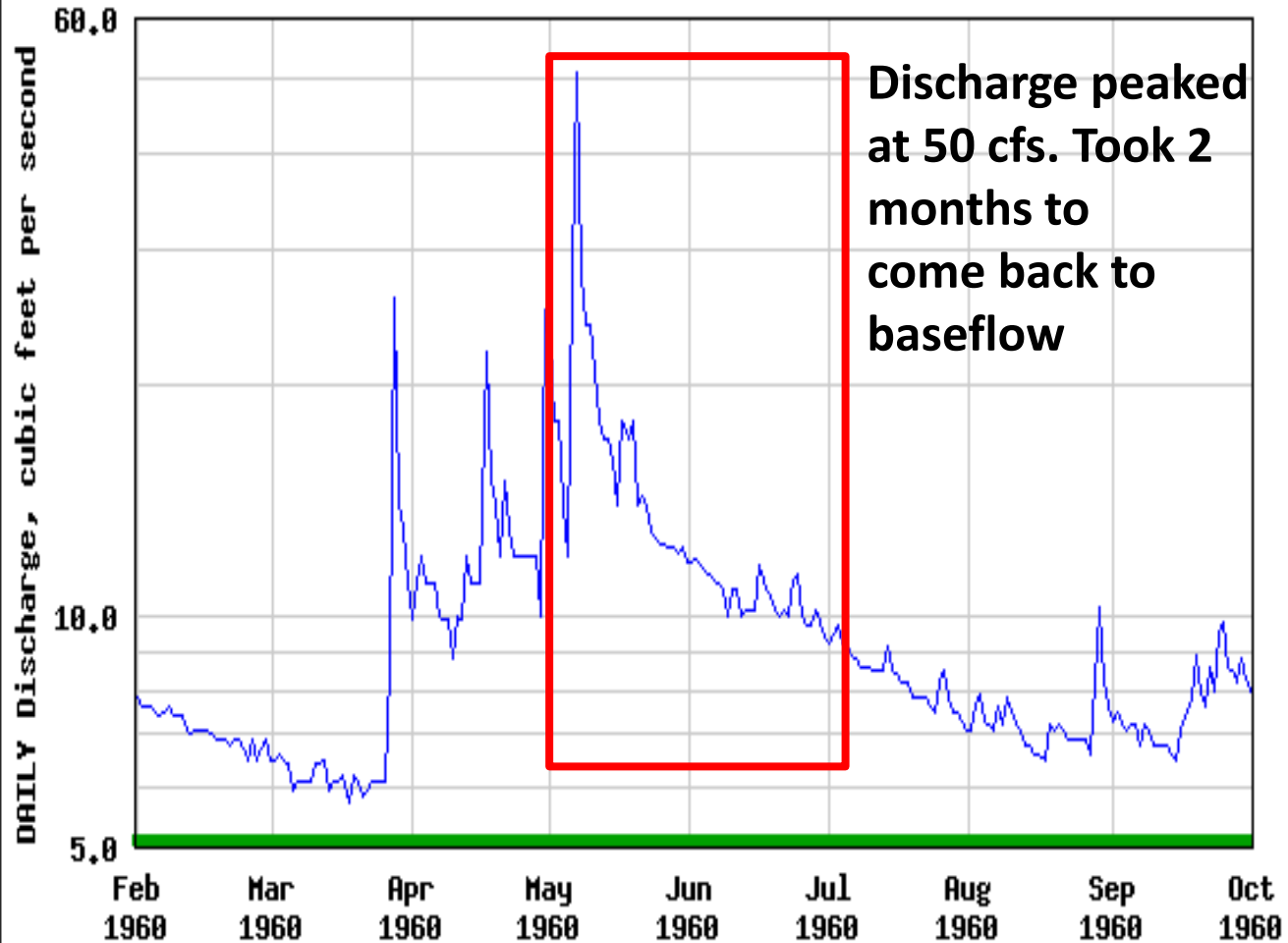




# 1960



## USGS 05400650 LITTLE PLOVER RIVER AT PLOVER, WI



— Daily mean discharge

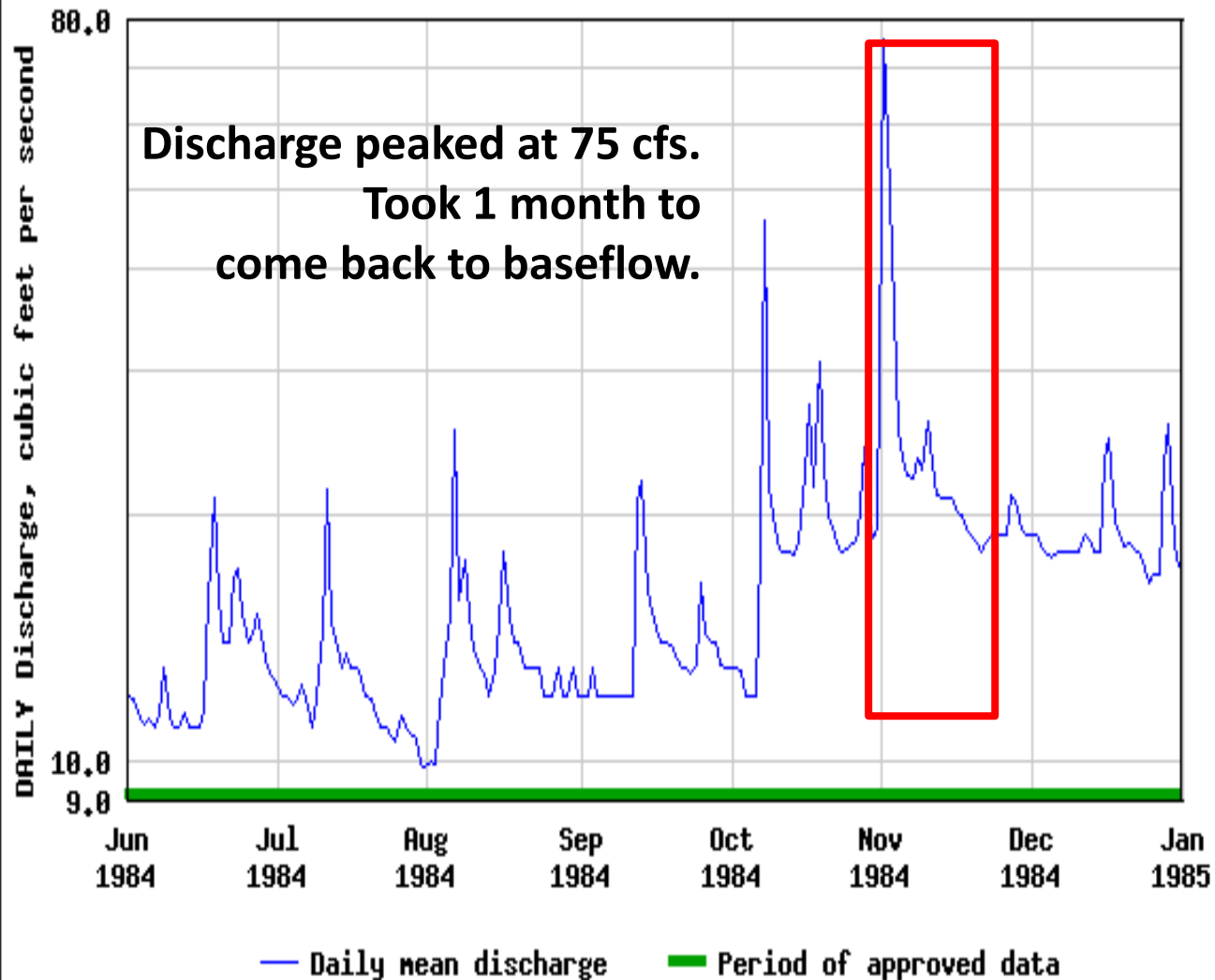
— Period of approved data



# 1984



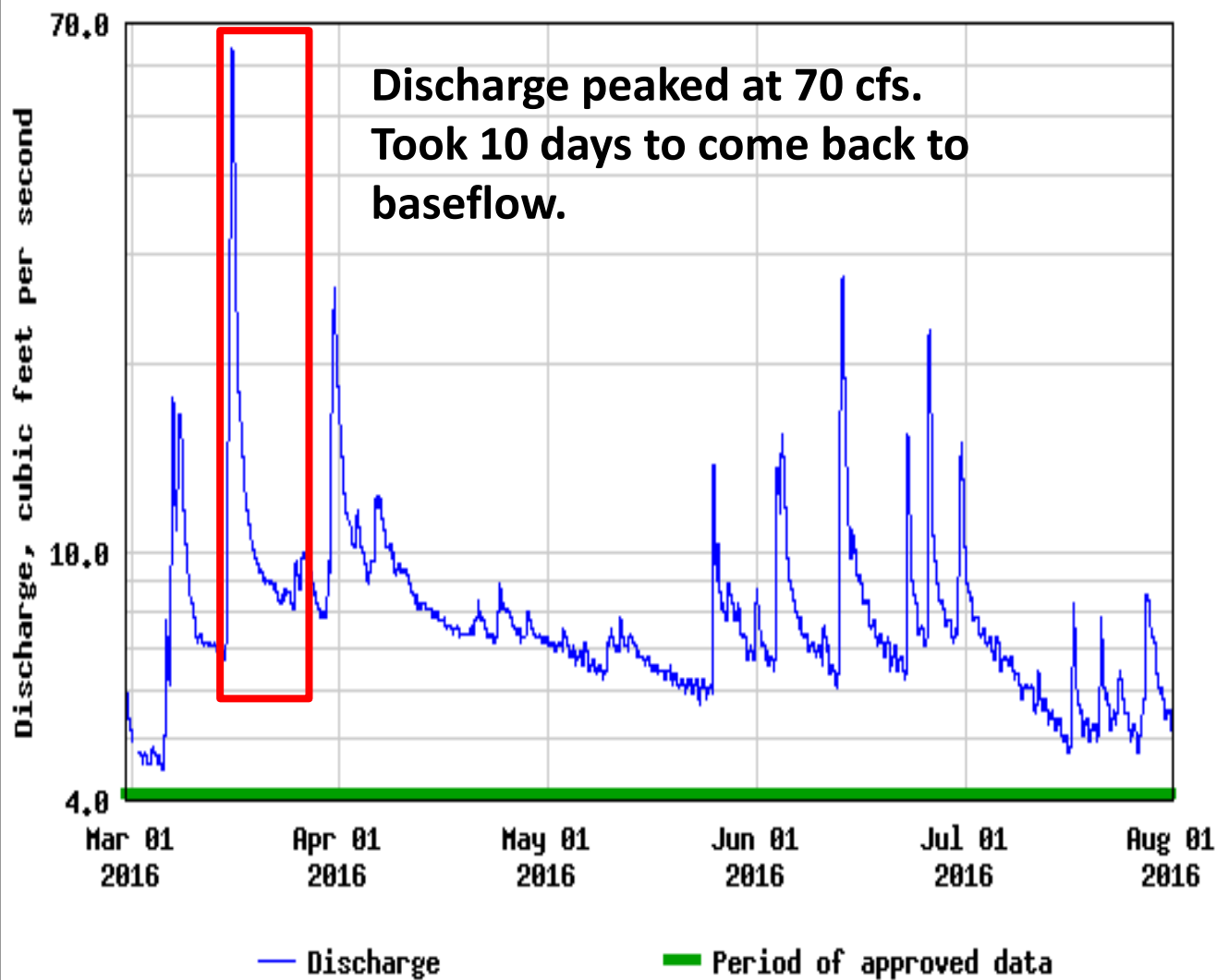
## USGS 05400650 LITTLE PLOVER RIVER AT PLOVER, WI



# 2016

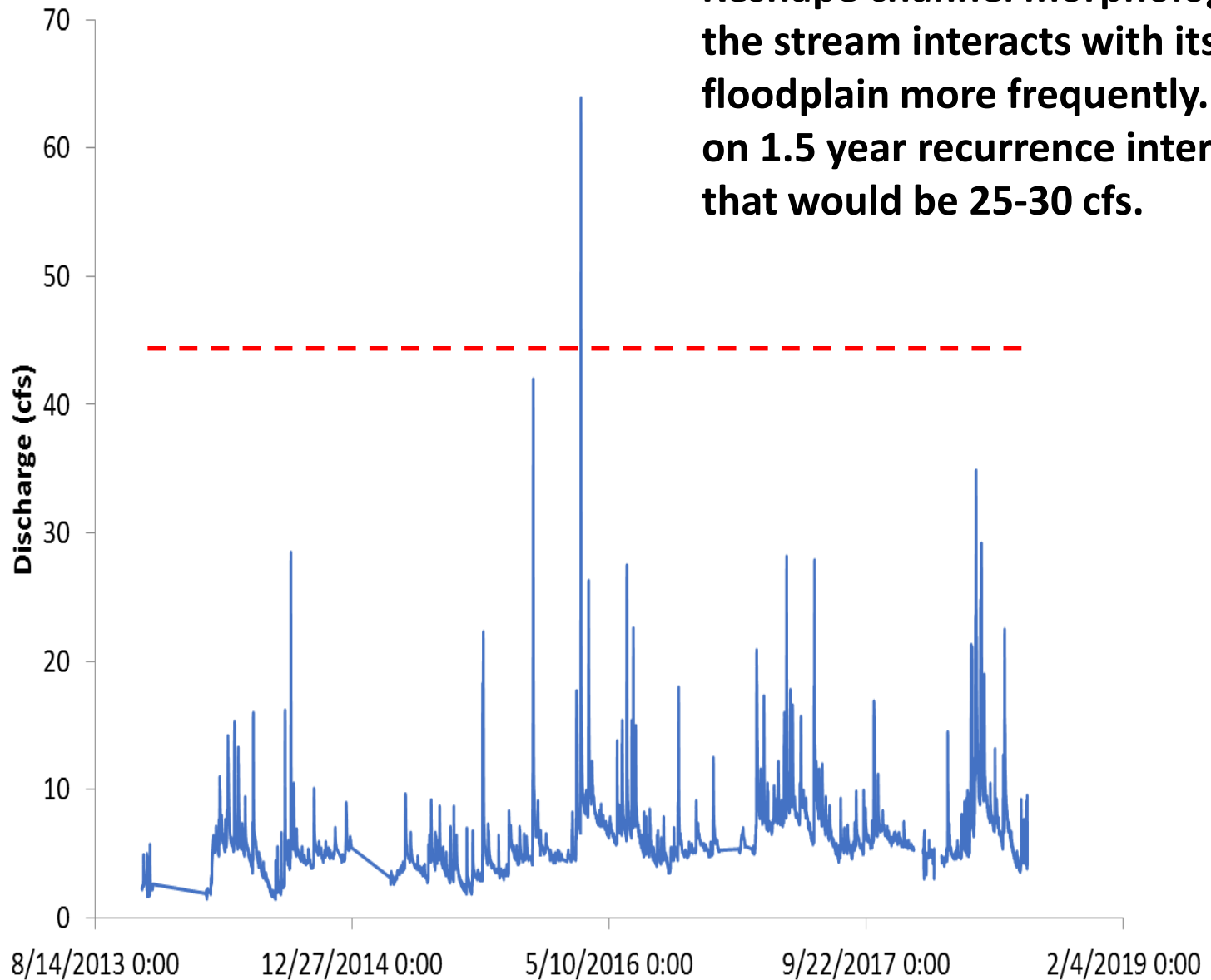


## USGS 05400625 LITTLE PLOVER RIVER NEAR PLOVER, WI





**Reshape channel morphology so the stream interacts with its floodplain more frequently. Based on 1.5 year recurrence interval that would be 25-30 cfs.**





# Forest Restoration – Floodplain





# Historical Perspective - Forest Habitat

1937



2016





# Main Channel – Alder Removal





# Main Channel – Volunteer Work Days





# Before



# After





# Main Channel – Alder Bundling





# Main Channel – Narrow Channel





# Thank You!

LPRWEP Partners:

Village of Plover

Portage County

WPVGA

WWA

WWF

MARS

WDNR

UWSP

