

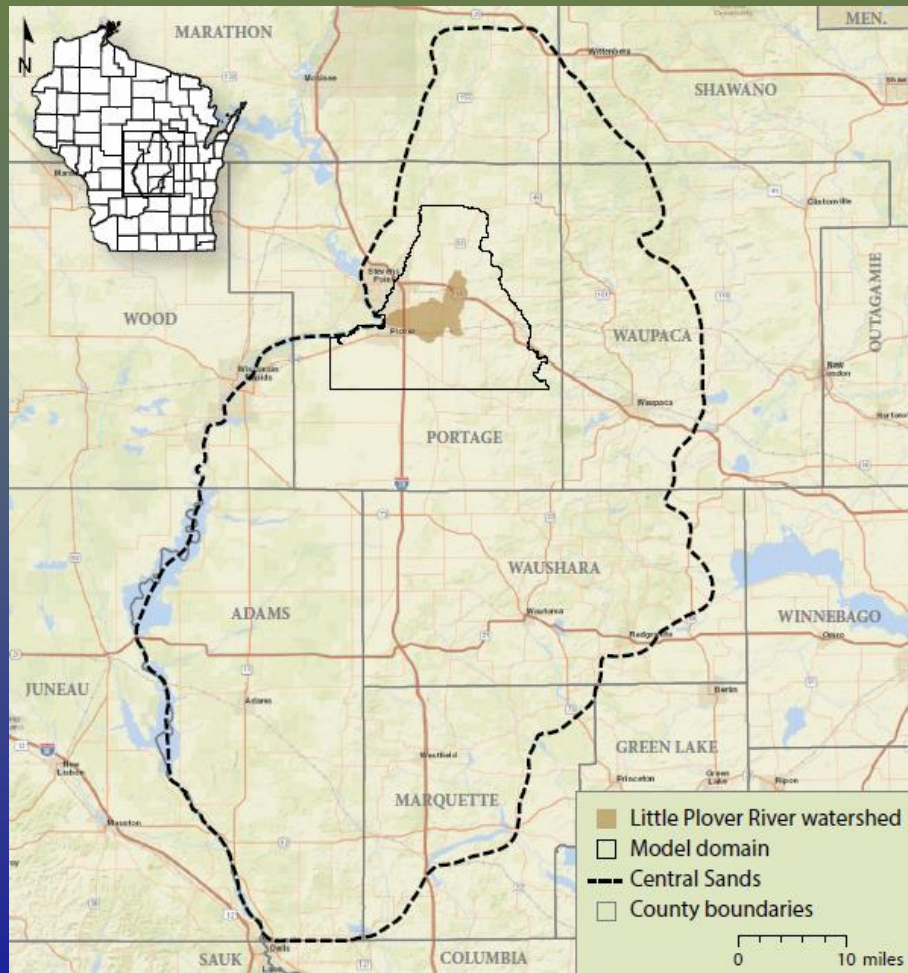
AWRA Wisconsin

March 8, 2018

Steve Gaffield, Nick Hayden & Rob Montgomery



Little Plover River



WGNHS, 2017



USGS

Current Opportunity

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



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- Knowledge
 - UW-SP studies
 - Irrigation research
 - WGNHS/USGS model
 - M. Kniffin dissertation
- Publicity
- Mitigation actions
- Dedicated & motivated partners

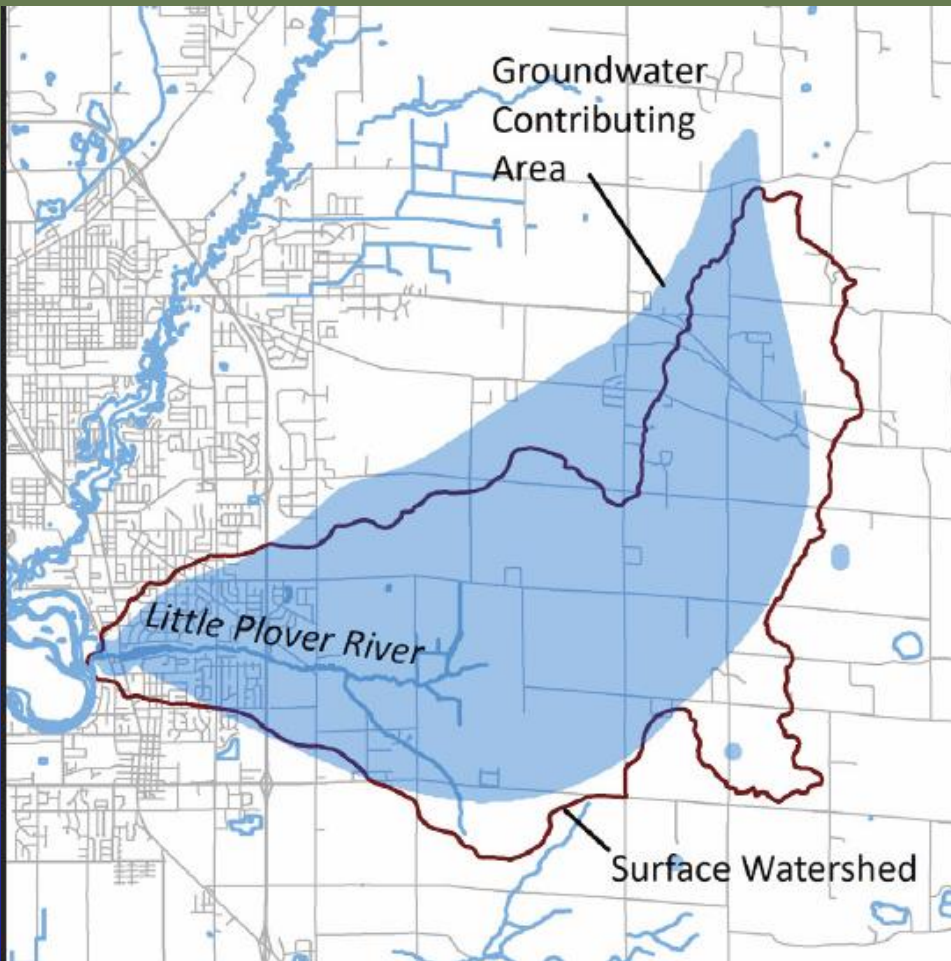


Little Plover River Watershed Enhancement Project

- Improve watershed health (esp. fishery)
 - Increase river flow
 - Enhance habitat
- Find voluntary solutions
- Implement soon



Project Elements



- Targets (short- & long-term)
- Prioritization strategy
 - Short-term
 - Long-term
- Project implementation
- Monitoring

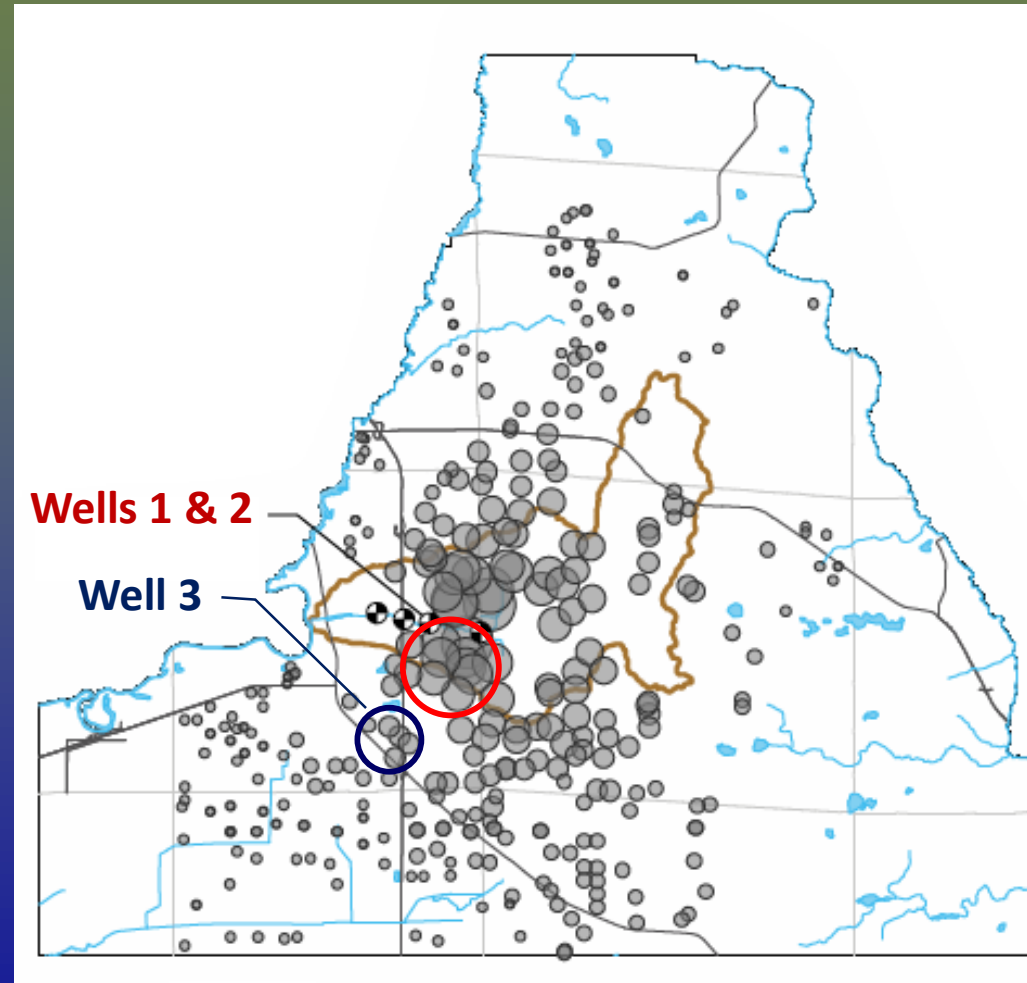


Flow Restoration



Plover Water Use

- Annual pumping distribution
- Seasonal optimization
- Conservation
- Leak reduction

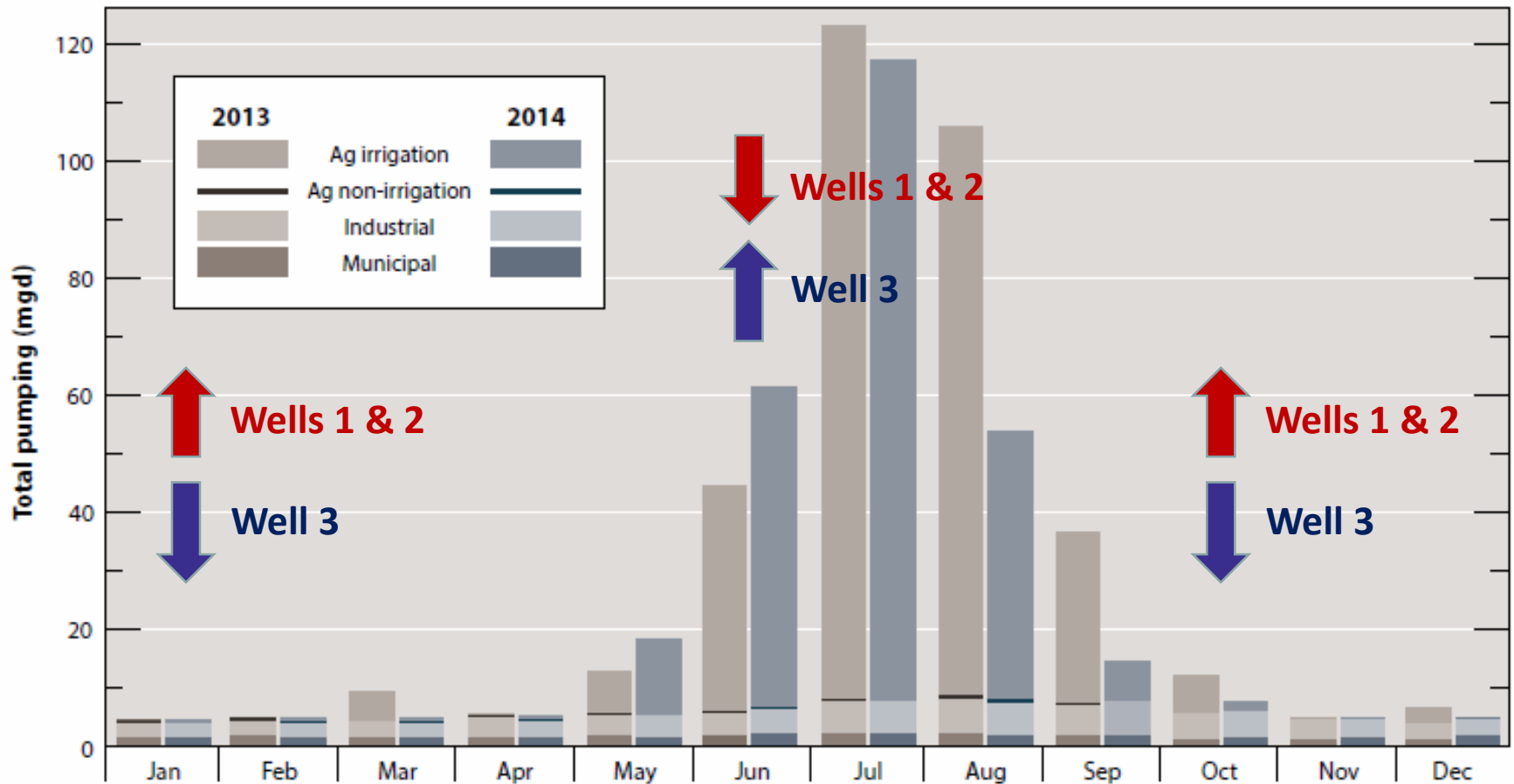


(WGNHS & USGS)



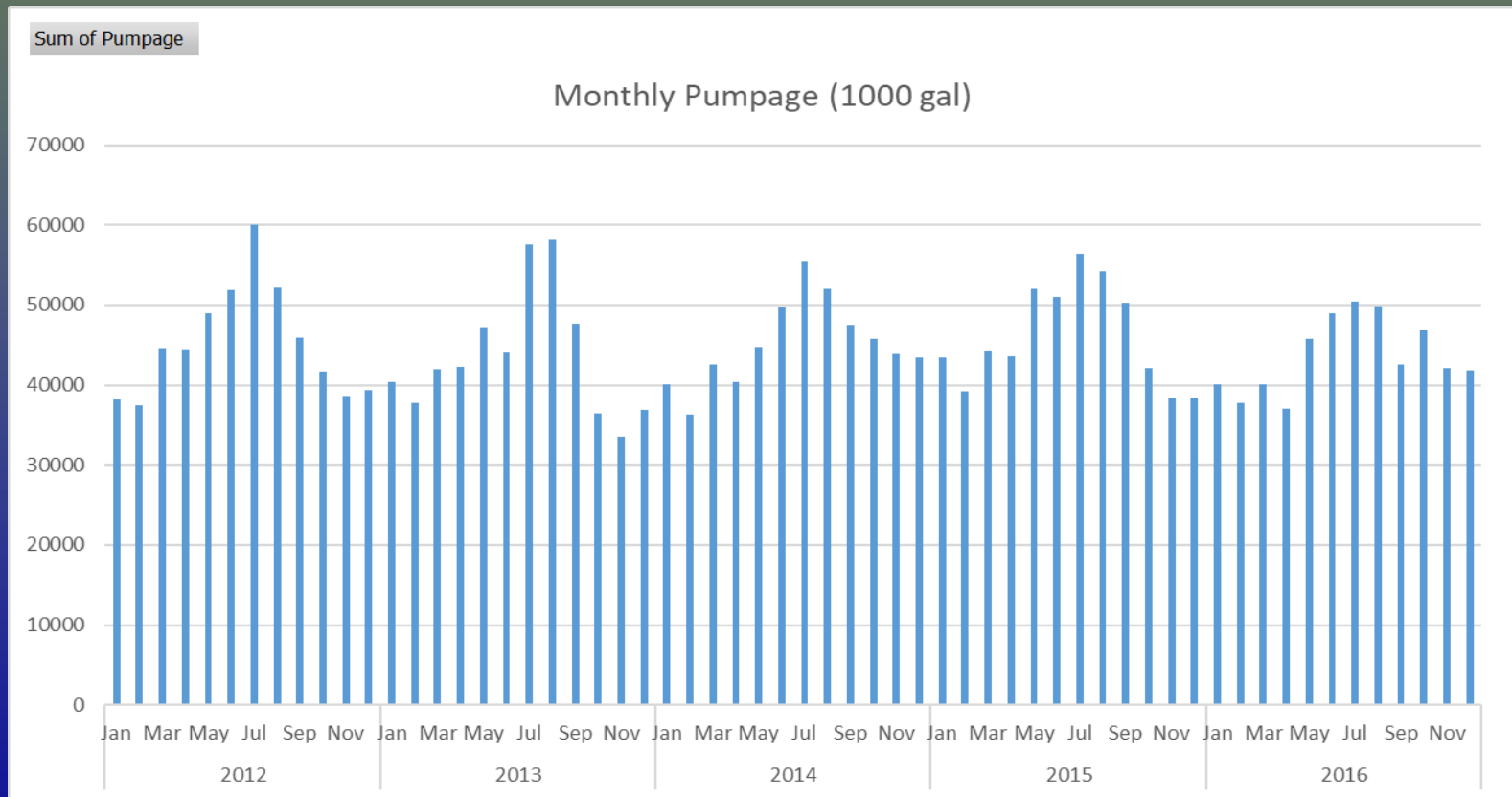
Transient Water Use

Water use, 2013-14 (WGNHS & USGS)

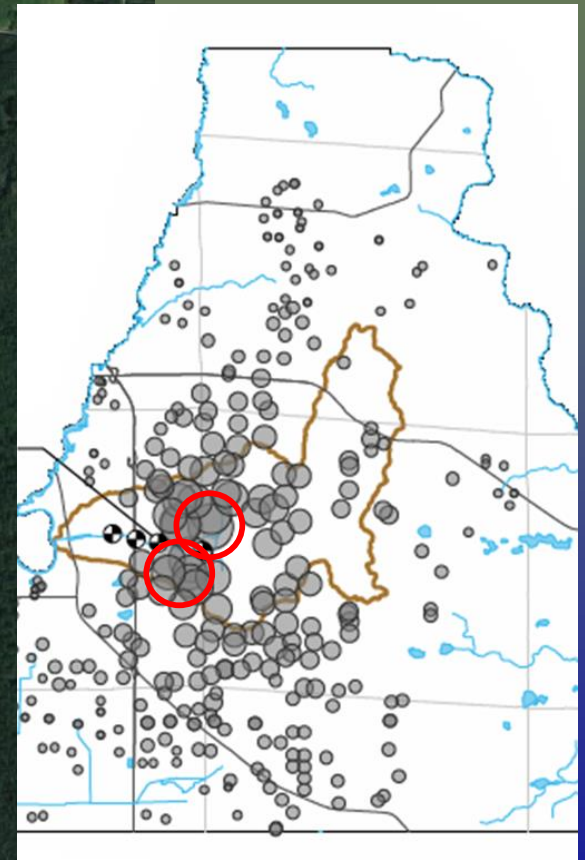


Conservation

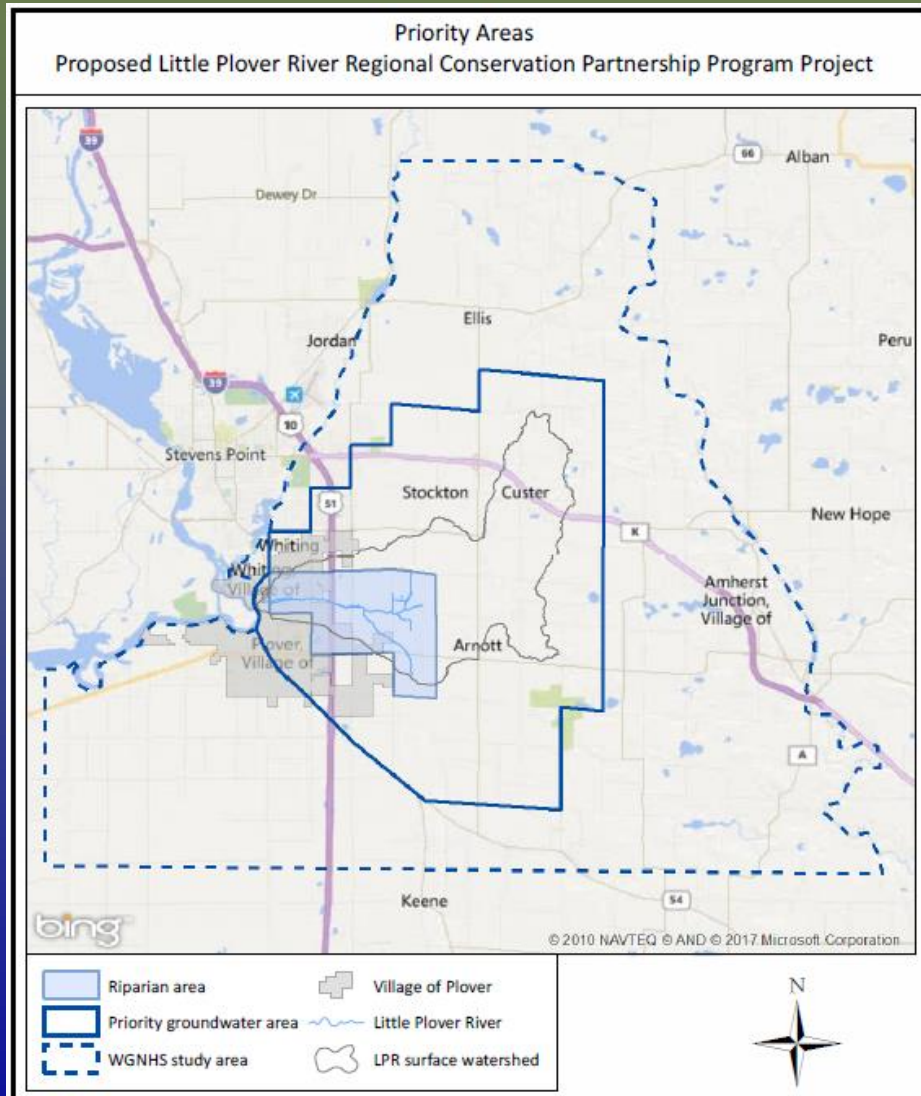
- Residential per capita use ~ 50 gal/cap/day
- Reduce summer demand?



Retire Some Irrigated Land



Agricultural Water Use

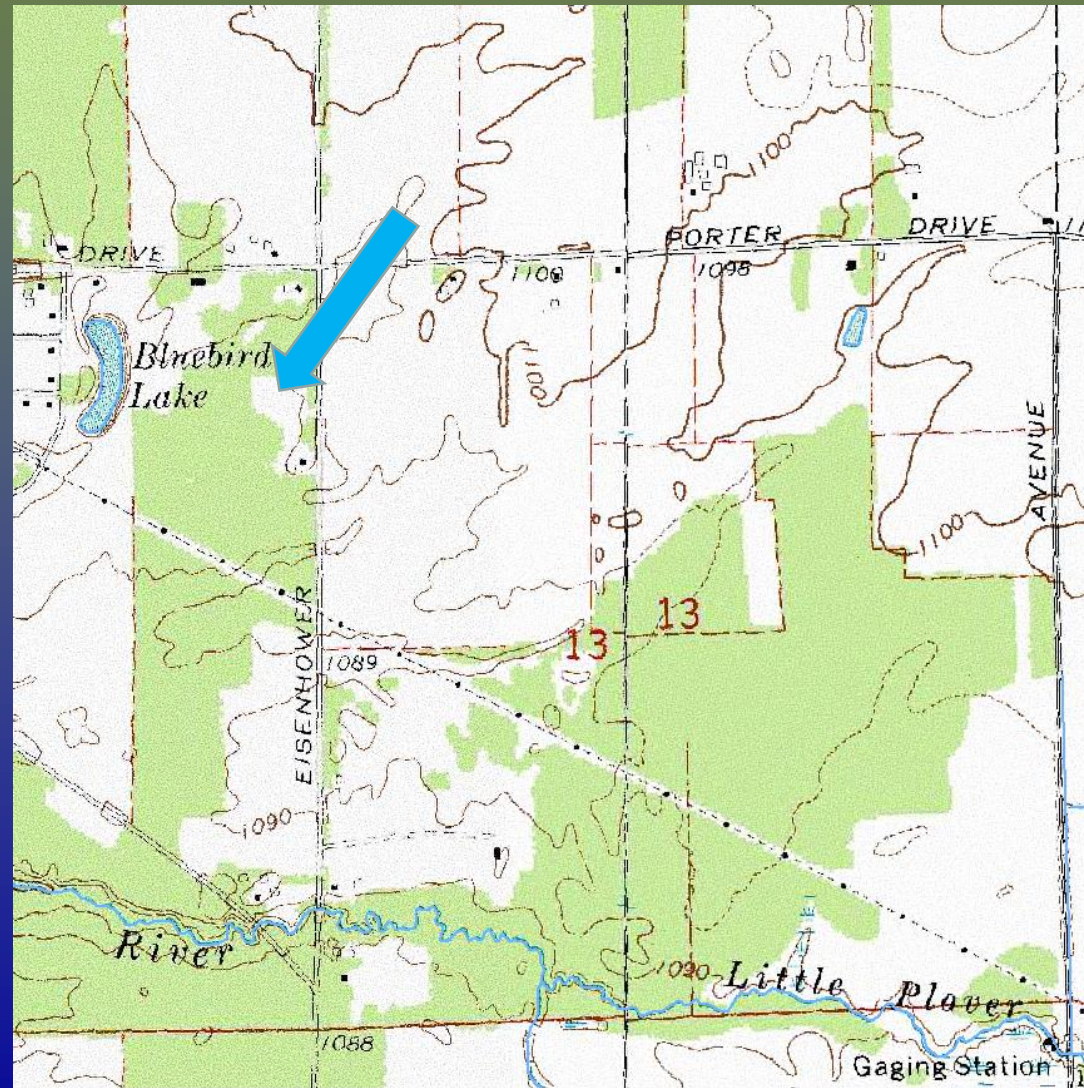


- Deficit irrigation
- Crop rotation based on location relative to stream & flow/weather conditions
- Other strategies?
- NRCS RCPP program to engage growers



Flood Reduction

- Runoff floods road & neighborhood
- Infiltrate to groundwater?
- Win-win
 - Relieve recurring problem
 - Small recharge benefit
- Public education



Restoration Strategy

- Evaluate potential flow improvements
- Compare with goals
- Revise / add measures
- Implement projects
 - Prioritize high-benefit projects that are feasible soon
 - Pursue longer-term, more difficult ideas as necessary



Habitat Improvement

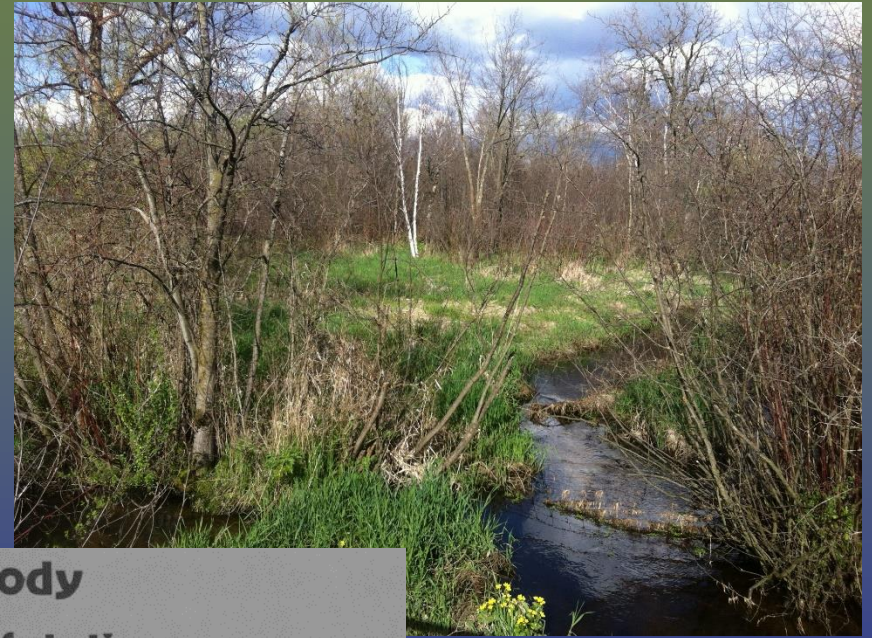


Wetland Restoration

- Retire irrigated land in historic wetland
- Fill ditches
- Predict more baseflow in headwater stream with brook trout



Riparian Forest Management



Removal of Woody Streambank Vegetation to Improve Trout Habitat



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Thank You

- Village of Plover
- WPVGA
- WDNR
- WGNHS
- USGS
- George Kraft
- Maribeth Kniffin

