

Work in Our Watershed

Sarah Longenecker
St. Joseph County Soil & Water
Conservation District



St. Joseph County
Soil & Water
Conservation District



Natural Resources
Conservation Service





CLEAN WATER INDIANA GRANT

“RAINSCAPING – EDUCATION, DEMONSTRATION AND INSTALLATION”

- \$75,000 – TRI-COUNTY, 3 YEAR GRANT FOR RAINGARDEN EDUCATION, OUTREACH, DEMO GARDENS, AND INSTALLATION COST SHARE



Stormwater Protection



CLEAN WATER INDIANA GRANT

“CONSERVATION CROPPING SYSTEMS TO IMPROVE SOIL HEALTH”

- \$75,000 – 3 YEAR GRANT FOR EDUCATION, OUTREACH, AND COST SHARE FOR AGRICULTURAL PRACTICES THAT PROMOTE WATER QUALITY AND SOIL HEALTH
 - FILTER STRIPS
 - COVER CROPS
 - NO-TILL
 - NUTRIENT MANAGEMENT



=



No-till



Cover Crop



Filter Strips



Nutrient Management

“4 R’s”

- Right Timing
- Right Placement
- Right Rate
- Right Source



PARTNERSHIP IN CONSERVATION



**Natural Resources
Conservation Service**

The logo for the "Unlock the Secrets in the Soil" campaign. It features a small green sprout with two leaves at the top. Below it, the text "unlock the" is in a green, lowercase, sans-serif font. The word "SECRETS" is in a large, bold, brown, uppercase, serif font. Below that, "IN THE" is in a small, brown, uppercase, sans-serif font, and "SOIL" is in a large, bold, brown, uppercase, serif font. The background of the text is a textured, brownish-green color.

Wetlands: Wetland Reserve Easement (WRE)



ANIMAL TRAILS AND WALKWAYS, HEAVY USE AREAS, PRESCRIBED GRAZING



CONSERVATION COVER





Work in Our Watershed

Questions?



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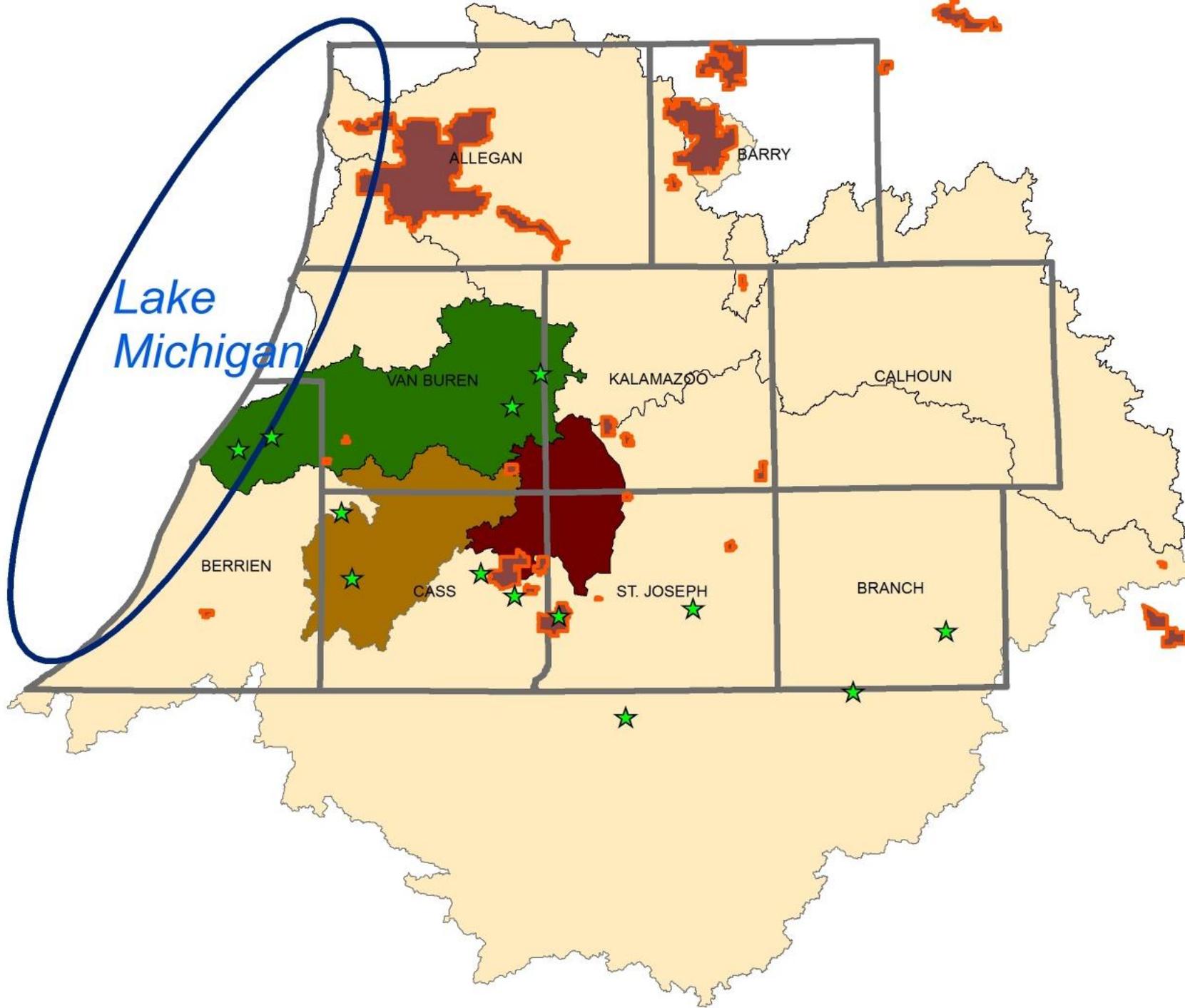
Geoff Cripe

Southwestern Michigan
Land Conservancy

Preserve the natural, scenic, and historic landscapes in southwest Michigan



Strategic Conservation Planning, Land Protection, Active Stewardship



Lake Michigan

ALLEGAN

BARRY

VAN BUREN

KALAMAZOO

CALHOUN

BERRIEN

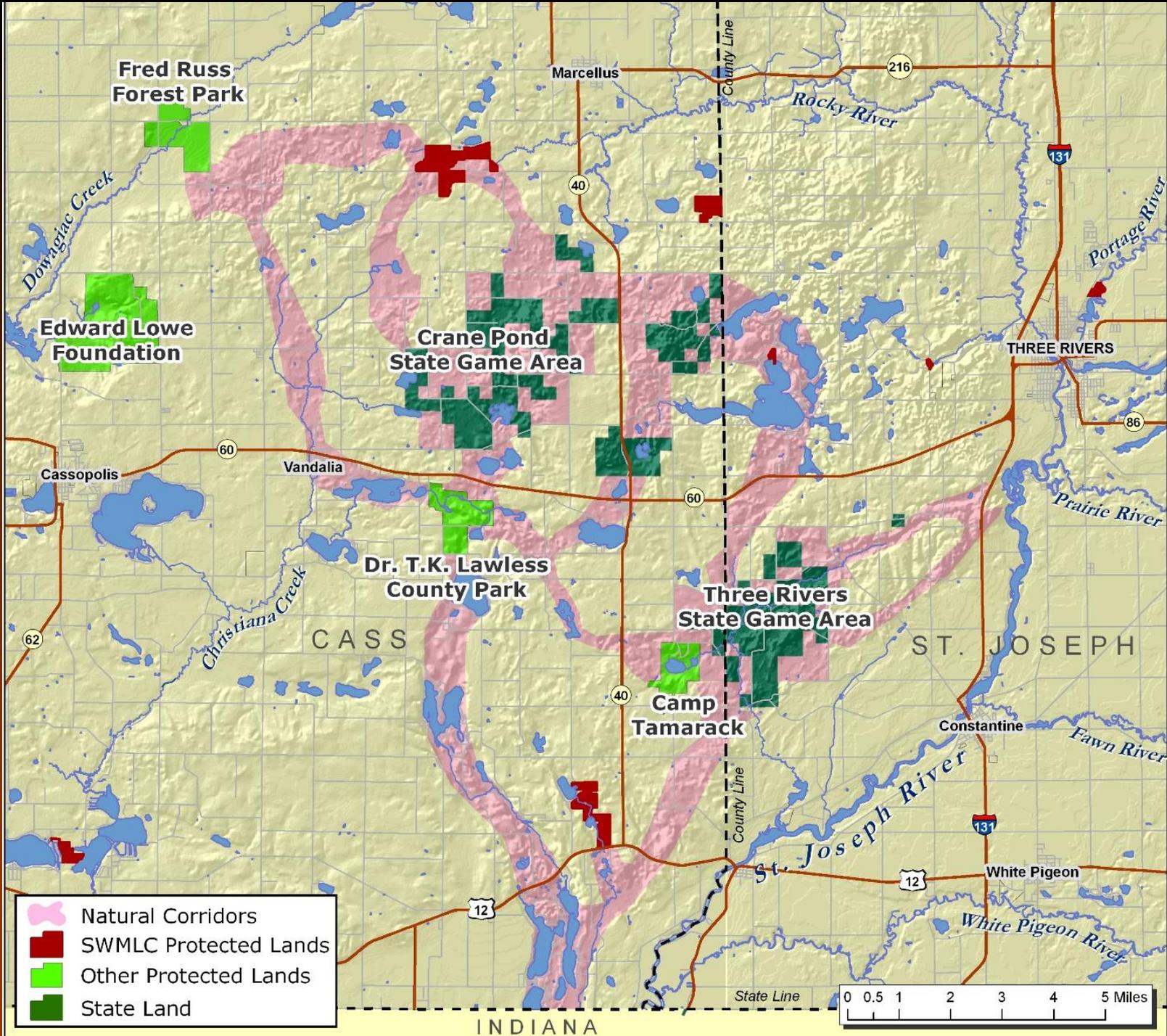
CASS

ST. JOSEPH

BRANCH

SWMLC Focus Areas





Jones, MI Regional Conservation Plan

2015



A partnership for the conservation and restoration of land connecting the Jones State Game Areas.

Project Partners:

Southwest Michigan Land Conservancy
Michigan Department of Natural Resources
Ducks Unlimited
Cass County Parks
Farm Service Agency
Natural Resources Conservation Service
Swiss Valley Ski Area
Lowe Foundation
Michigan Nature Association
Pheasants Forever
Newburg Township
St. Joseph County Drain Commissioner



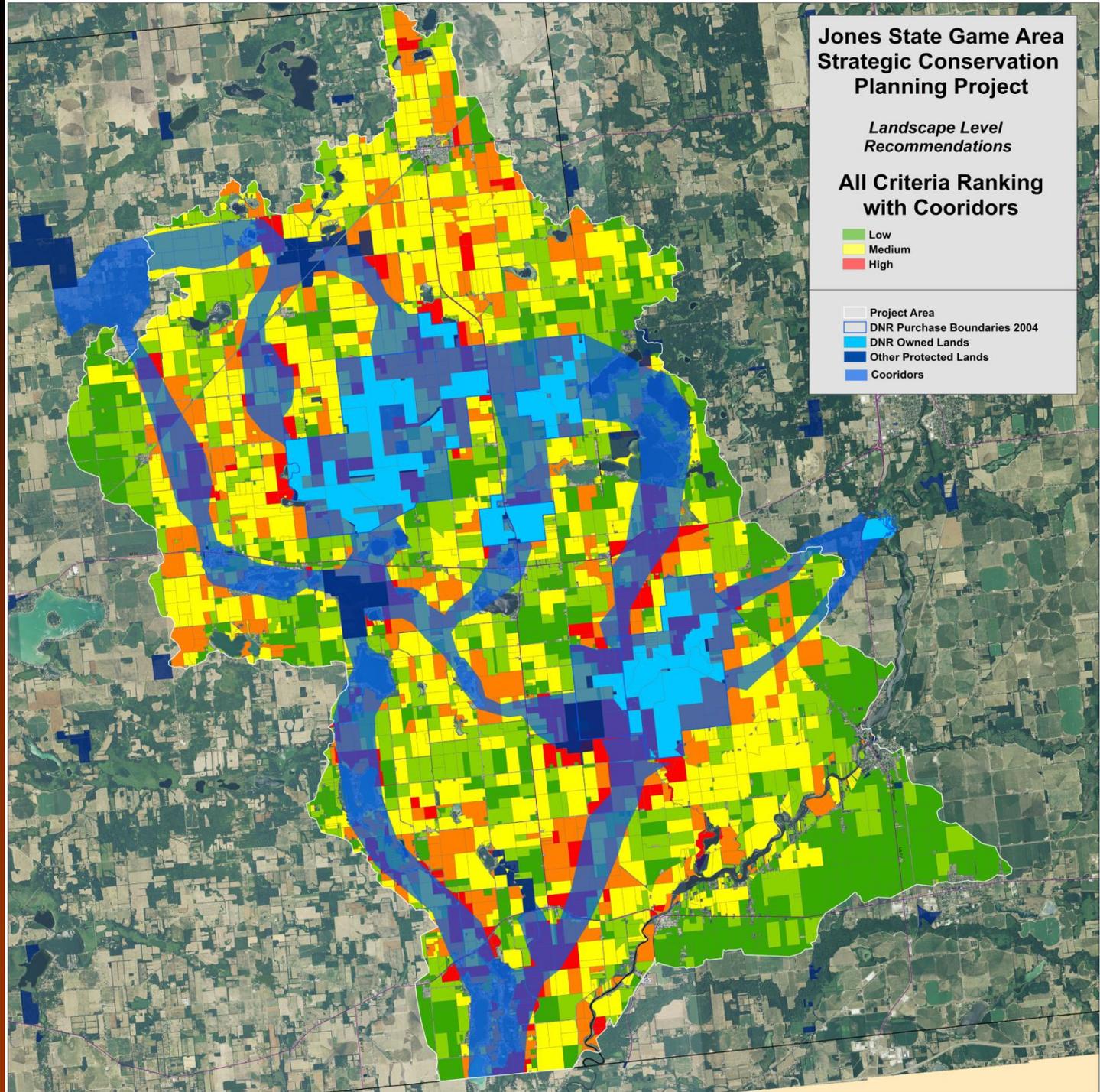
Jones State Game Area Strategic Conservation Planning Project

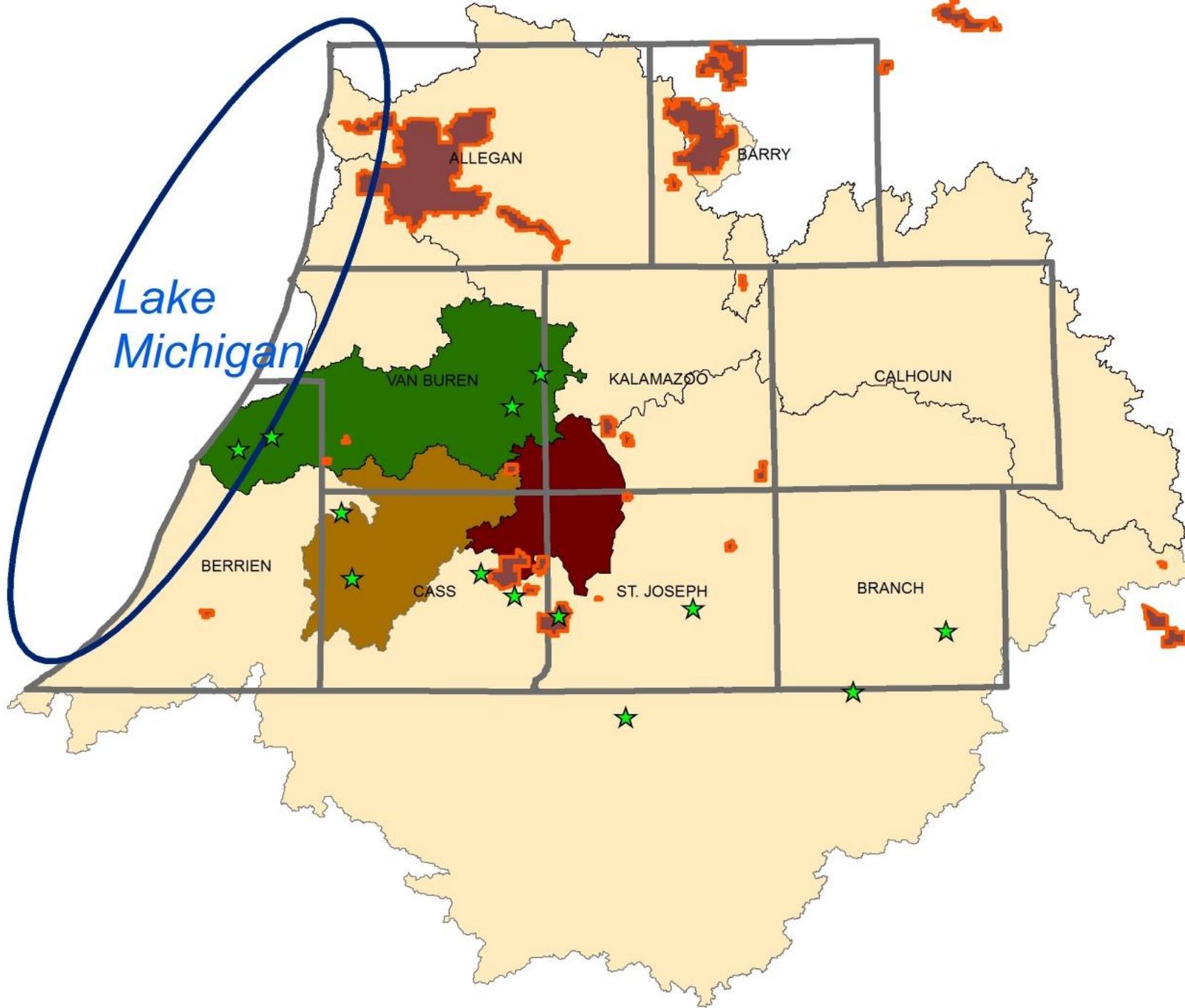
*Landscape Level
Recommendations*

All Criteria Ranking with Cooridors

- Low
- Medium
- High

- Project Area
- DNR Purchase Boundaries 2004
- DNR Owned Lands
- Other Protected Lands
- Cooridors





Lake Michigan

ALLEGAN

BARRY

VAN BUREN

KALAMAZOO

CALHOUN

BERRIEN

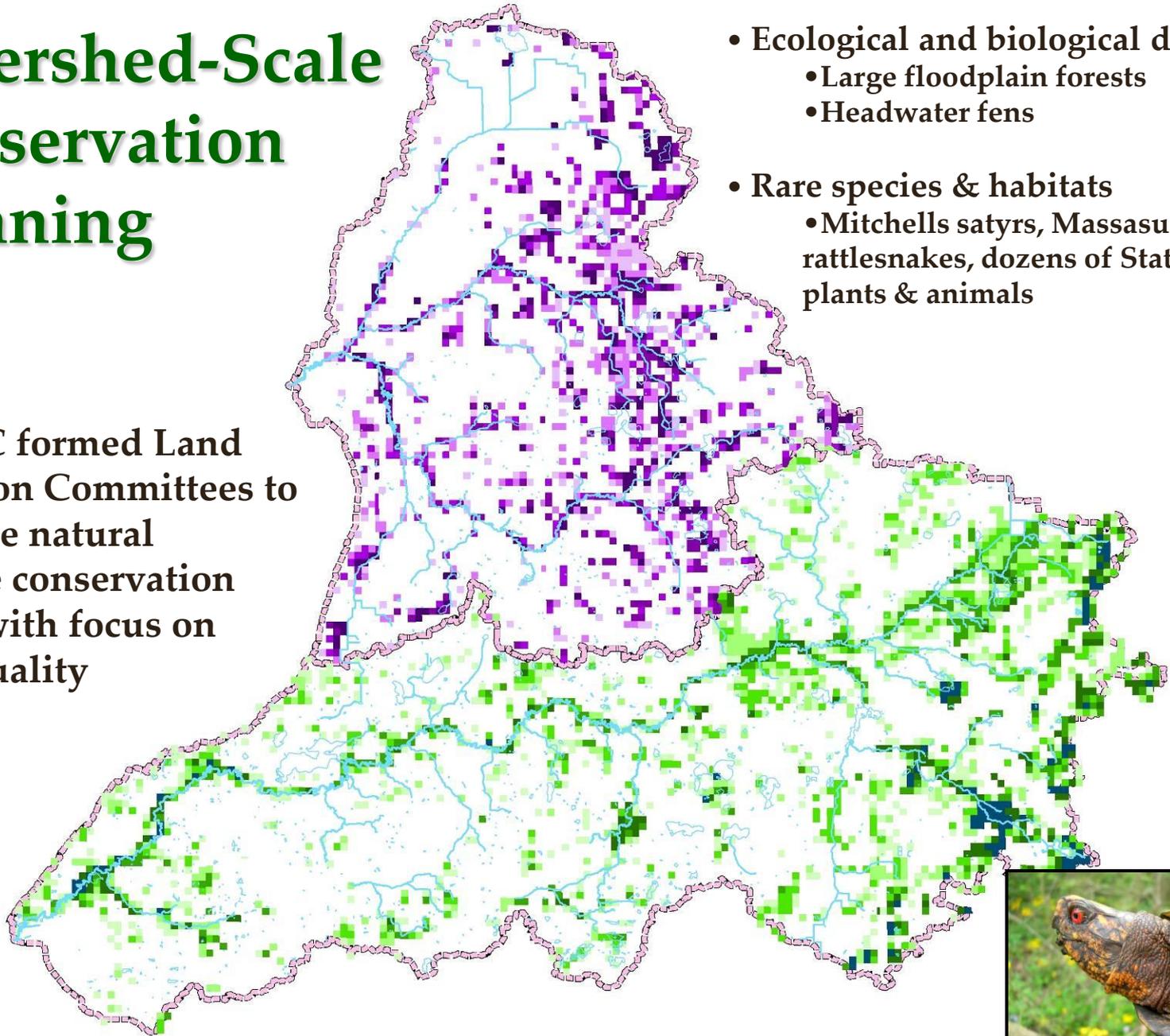
CASS

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BRANCH

Watershed-Scale Conservation Planning

SWMLC formed Land Protection Committees to prioritize natural resource conservation values with focus on water quality



- Ecological and biological diversity
 - Large floodplain forests
 - Headwater fens
- Rare species & habitats
 - Mitchells satyrs, Massasuaga rattlesnakes, dozens of State-listed plants & animals



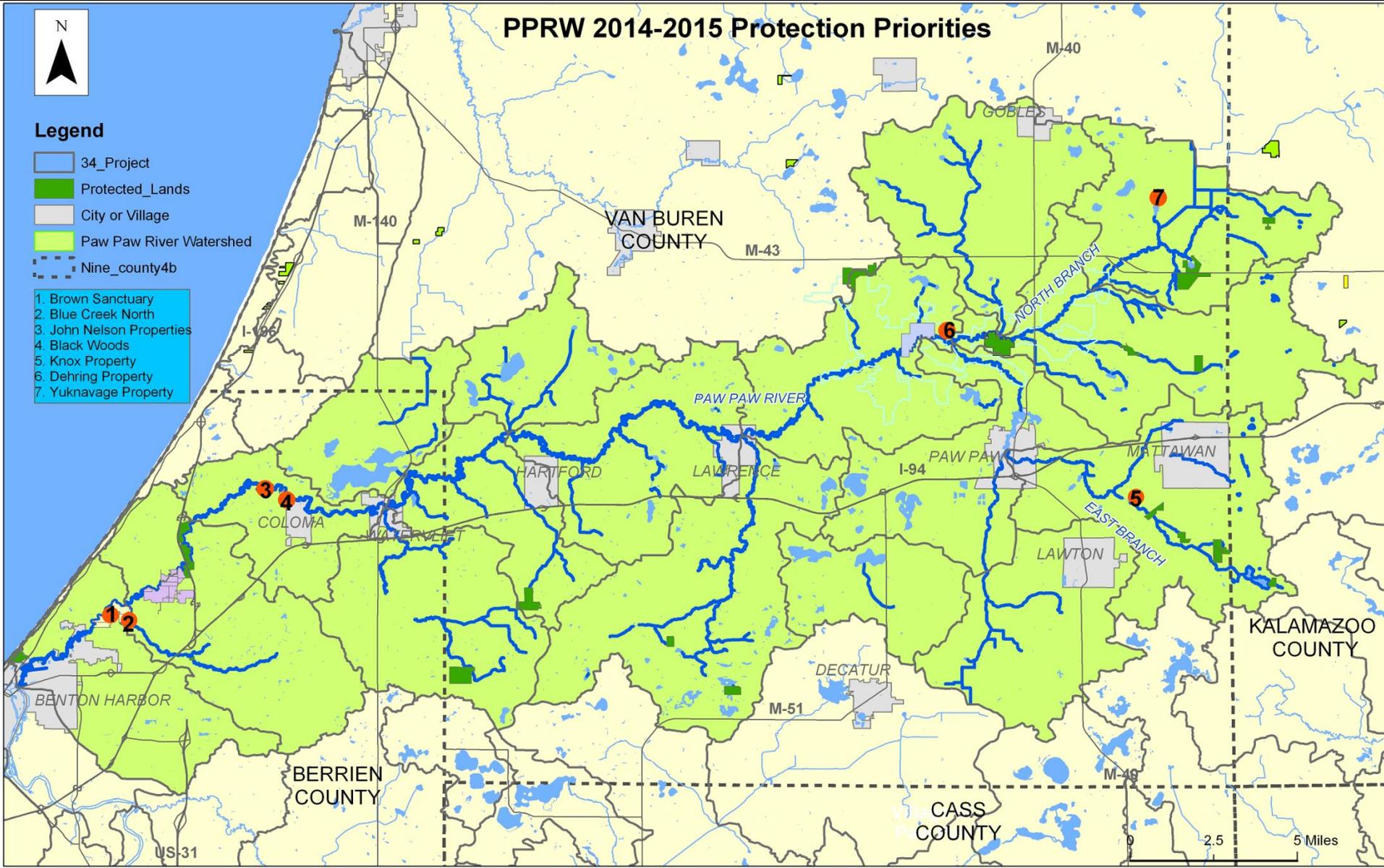
PPRW 2014-2015 Protection Priorities



Legend

-  34_Project
-  Protected_Lands
-  City or Village
-  Paw Paw River Watershed
-  Nine_county4b

- 1. Brown Sanctuary
- 2. Blue Creek North
- 3. John Nelson Properties
- 4. Black Woods
- 5. Knox Property
- 6. Dehring Property
- 7. Yuknavage Property



Objectives for Future Work:



Strengthen Partnerships around Conservation Plans

RCPP Outreach

Partner to Protect More Farmland- Especially Fruitbelt



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Karl Kopec

Mishawaka Wastewater



Mishawaka Wastewater Treatment Plant

MISHAWAKA WASTEWATER TREATMENT PLANT

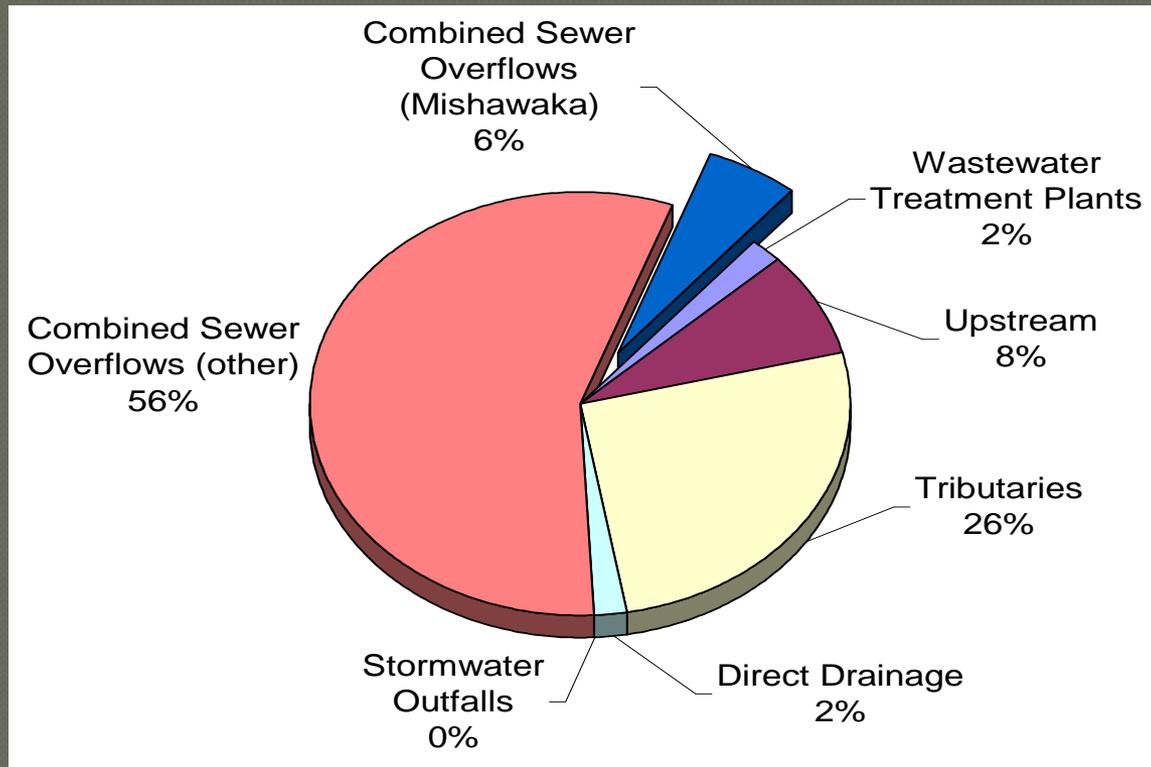
- Currently have 21 CSO's
- Early Action Projects Began in 1990 - \$ 112 million spent so far including 2 WWTP expansions.
- Consent Decree Signed 5-2014 (10 years)
- Zero Overflows in the Typical Year
- \$160 Million
- CSO Storage and Conveyance Tunnel Next Major Project - \$80 Million

INFLUENT FLOW (MGD)

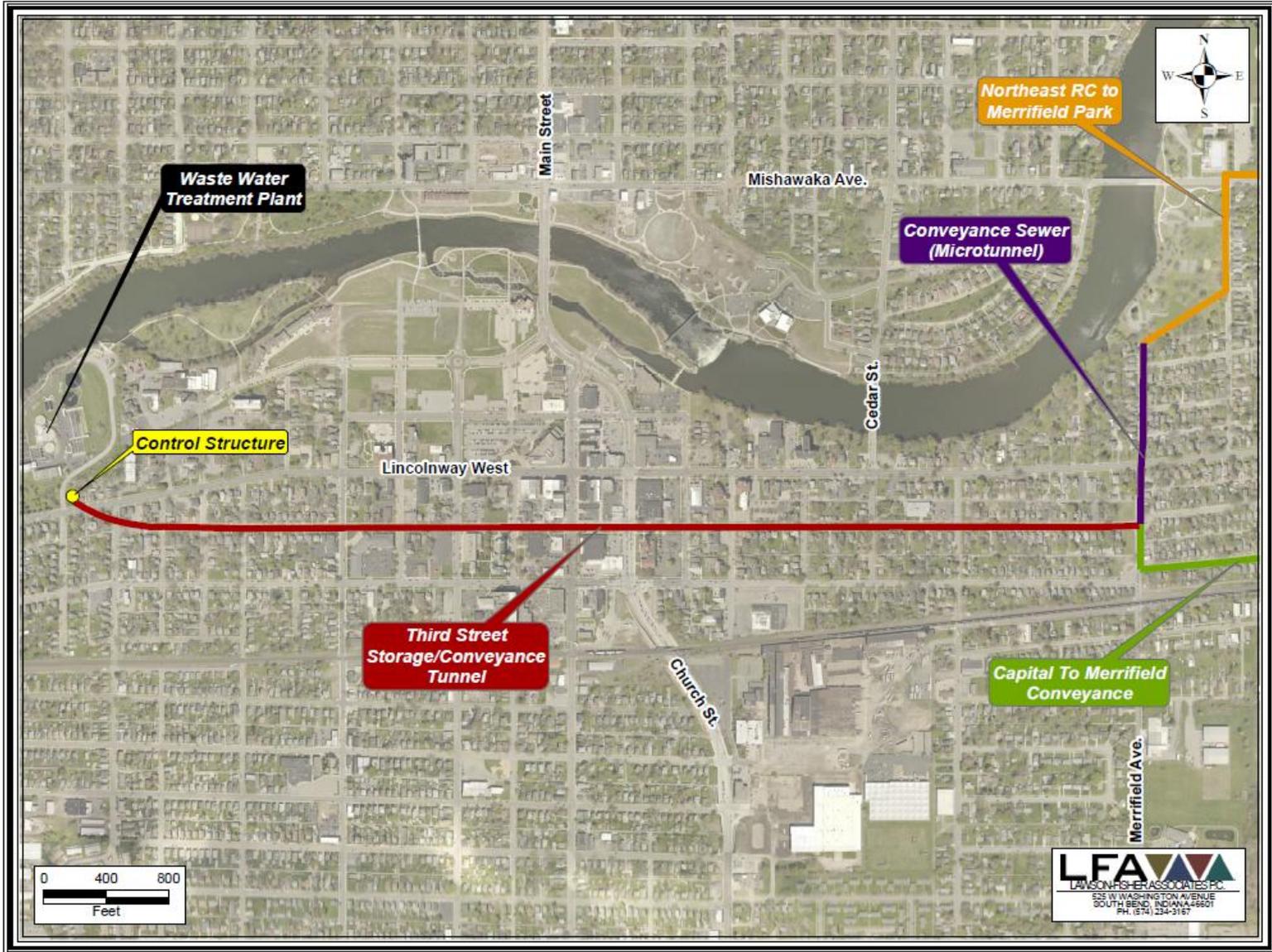


Typical Year *E. coli* Loads to St. Joseph River

Current Conditions



- Sewer overflows are the biggest contributor of *E. coli* bacteria in the St. Joseph River



Waste Water Treatment Plant

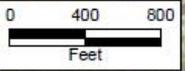
Control Structure

Third Street Storage/Conveyance Tunnel

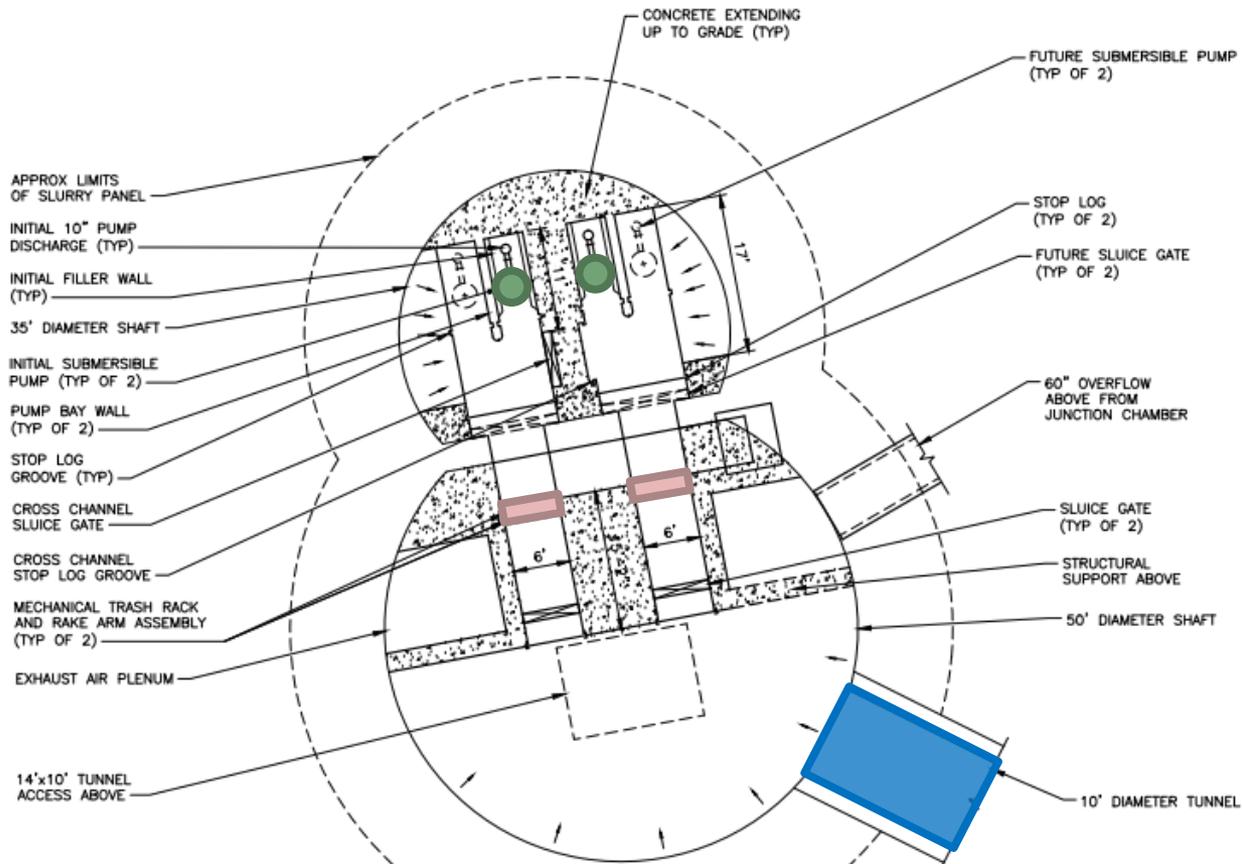
Conveyance Sewer (Microtunnel)

Capital To Merrifield Conveyance

Northeast RC to Merrifield Park



LFA
LAWSON FISHER ASSOCIATES, P.C.
535 W WASHINGTON AVENUE
SOUTH BEND, INDIANA 46601
PH. (574) 234-2167



SUBMERSIBLE PUMP STATION -
SECTIONAL PLAN 6' ABOVE TUNNEL INVERT

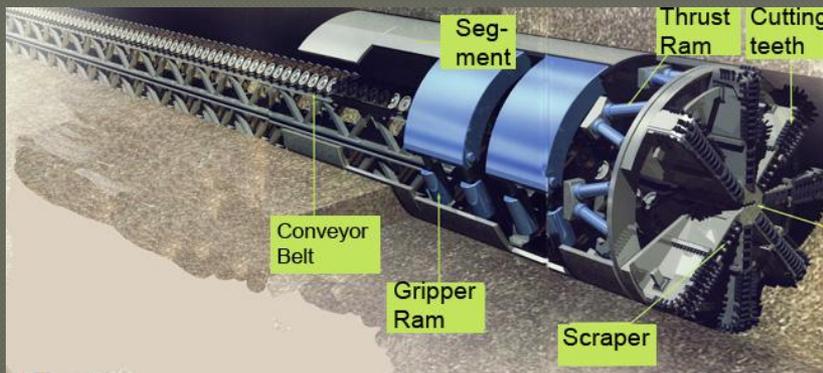
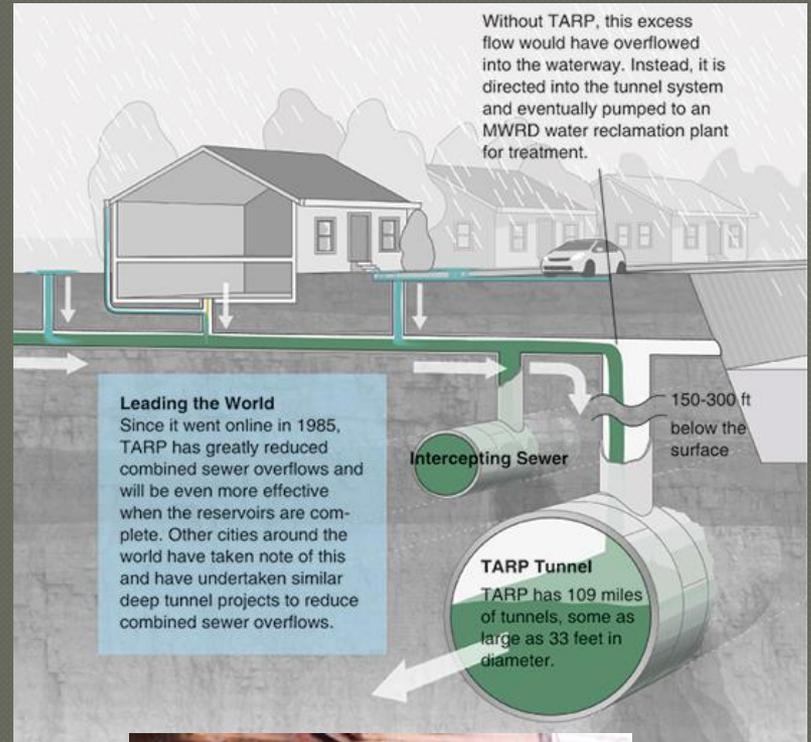
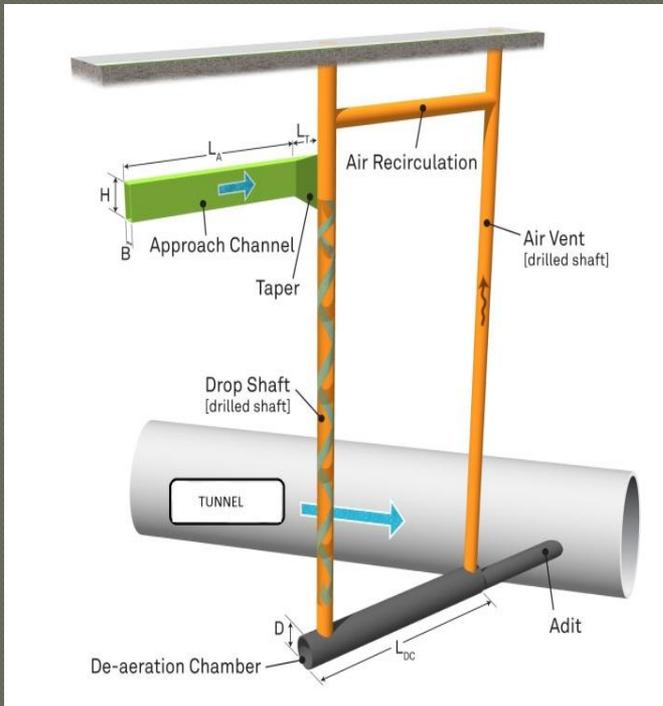


0 8 16 24 FT 3/32"=1'-0"

CSO TUNNEL LIFT STATION
 MISHAWAKA, IN
 MAY 2016

Pump Station Architectural Concepts

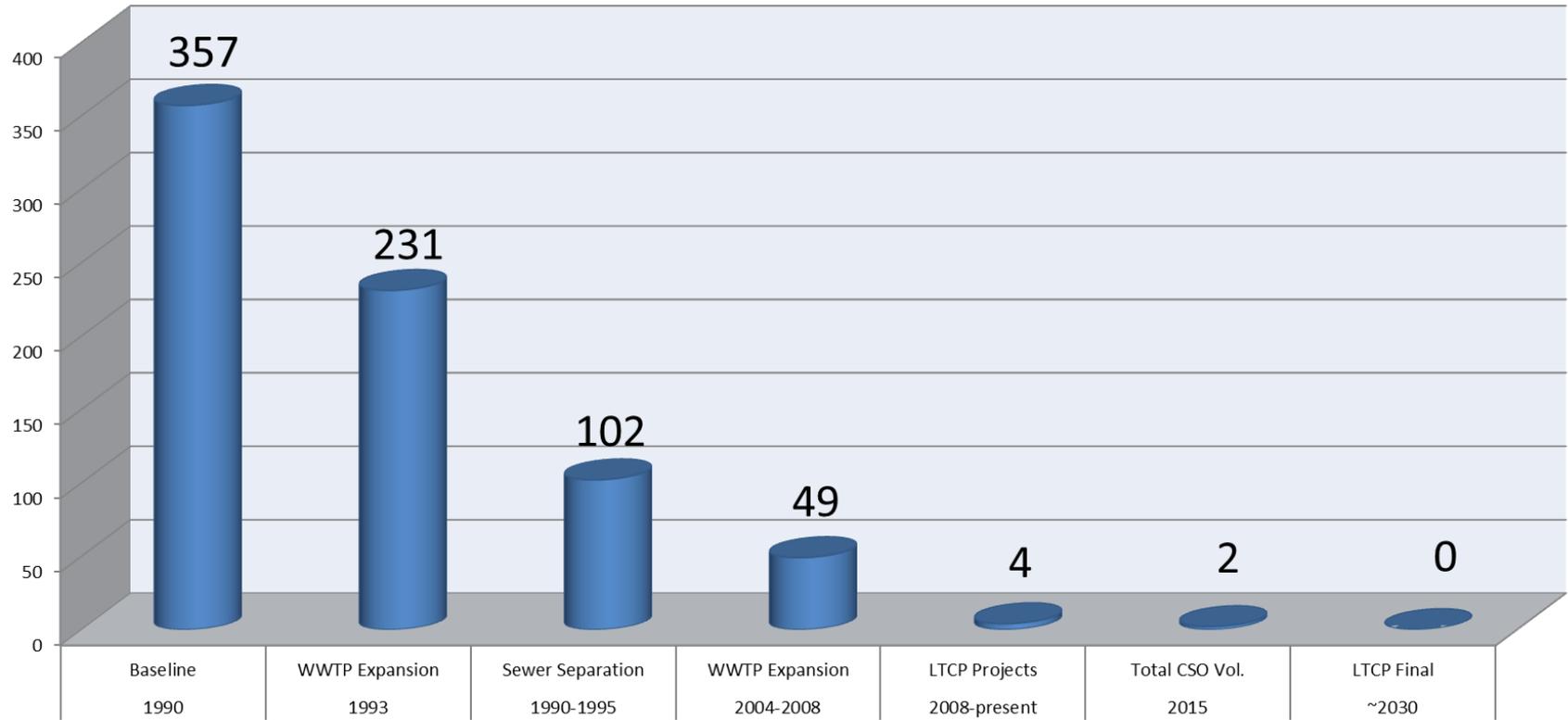




FUN FACTS

- Construction begins Nov. 2017 – ends Oct. 2021
- Main tunnel 7,000 feet in length – 70 feet deep
- North interceptor micro-tunnel – 1,200 feet in length
- 40,000 cubic yards of “muck” to remove and haul away
- 3,000 truck loads
- 5,500 kVA electric requirement – largest customer of our electric utility
- 24 hour per day mining operation
- No dry weather flow projected in tunnel until 2059 – eliminates continuous double pumping

Combined Sewer Overflows in Typical Year (Million Gallons)





Hitz 日立造船株式会社
Hitachi Zosen



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Matt Meersman

Van Buren County
Conservation District



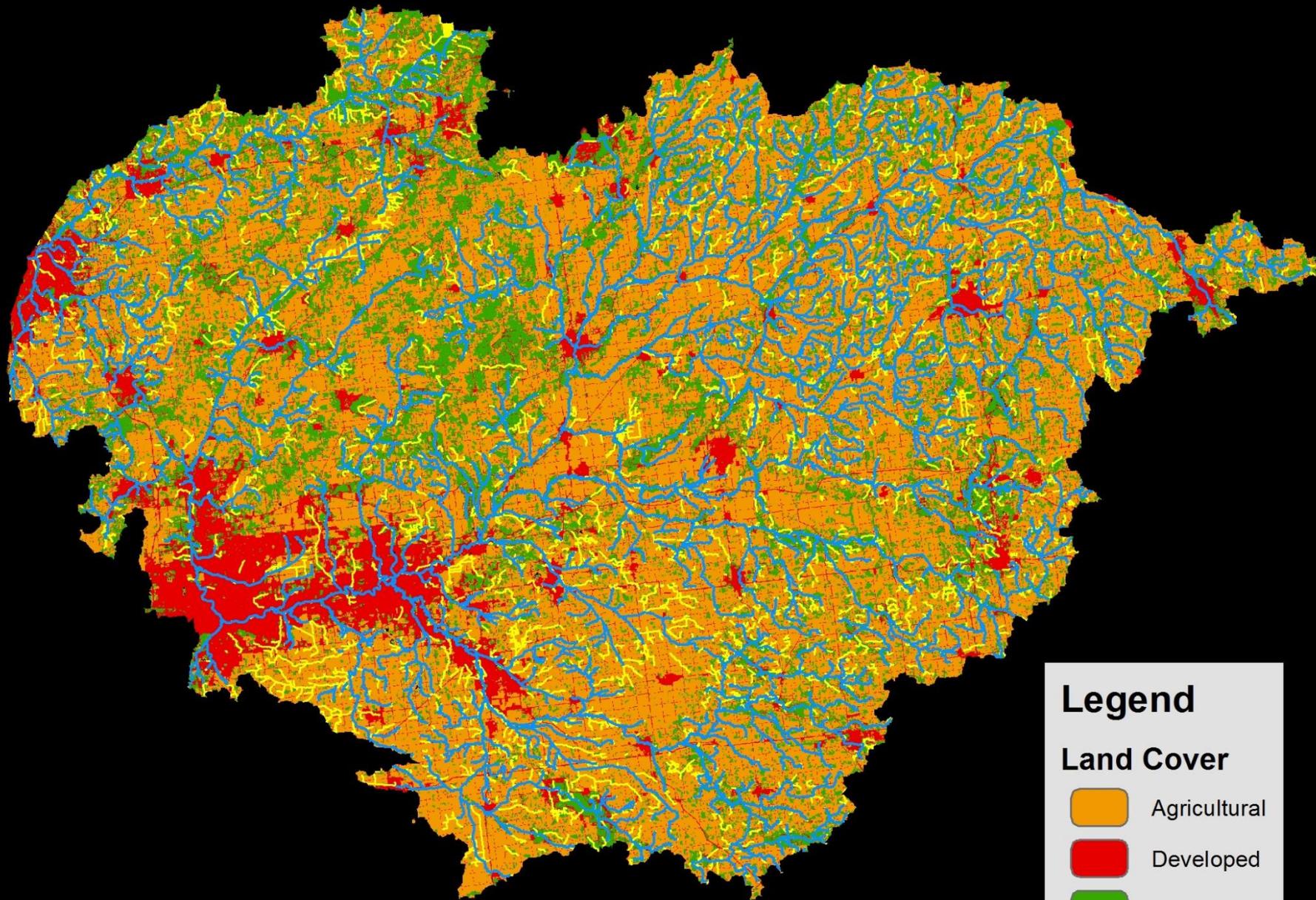
VAN BUREN
CONSERVATION DISTRICT





\$700,000,000



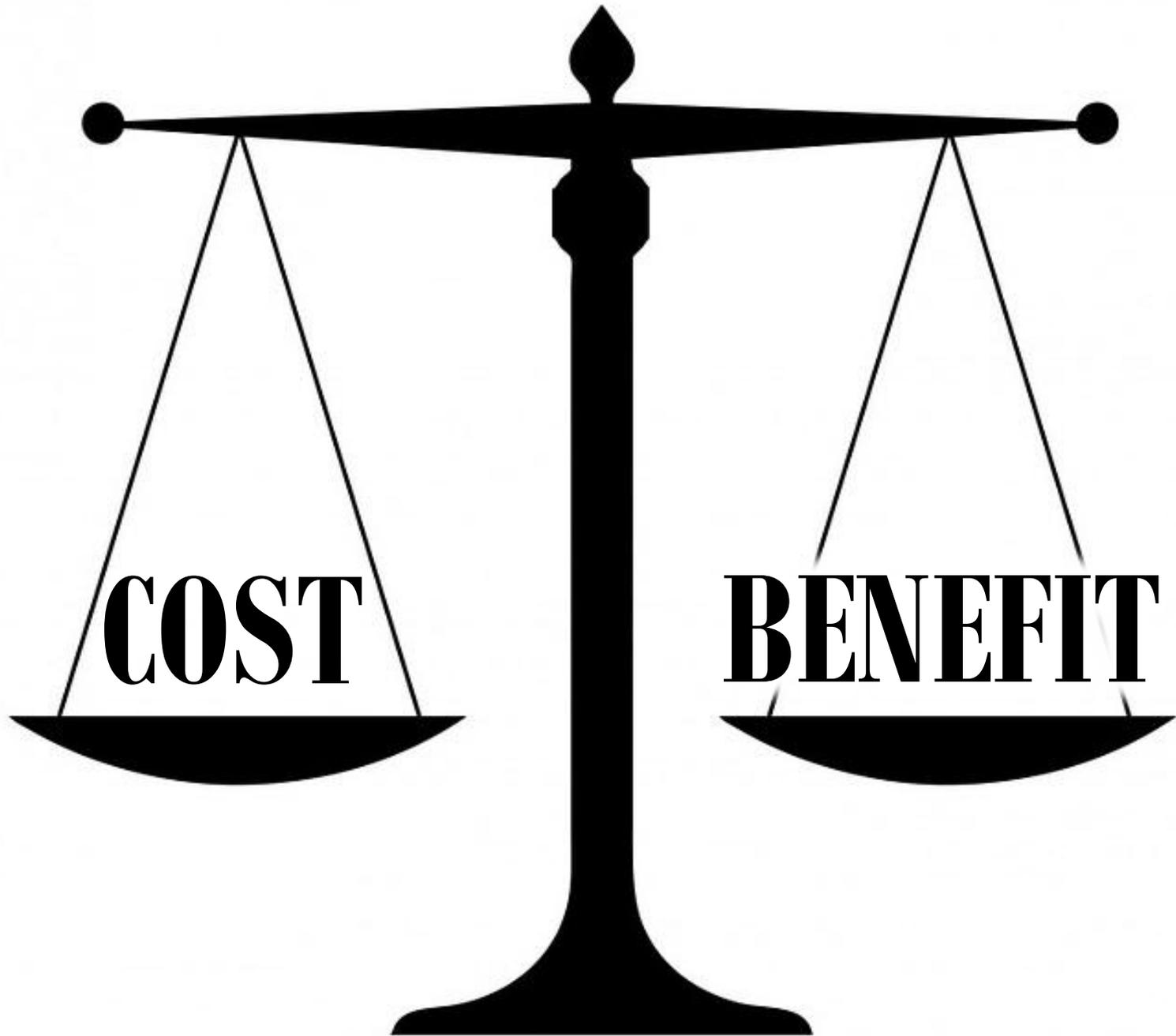


Legend

Land Cover

-  Agricultural
-  Developed
-  Natural



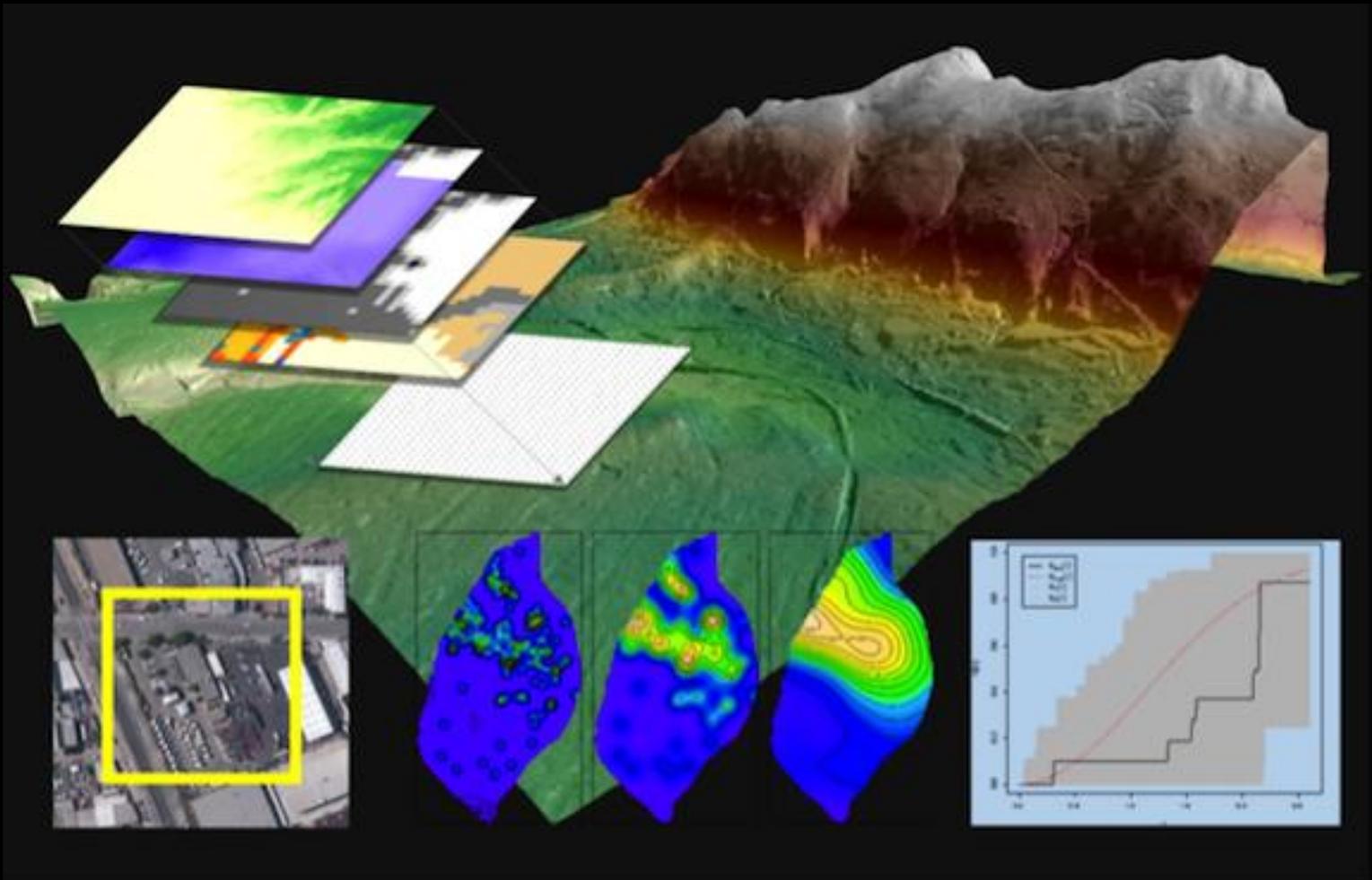


COST

BENEFIT











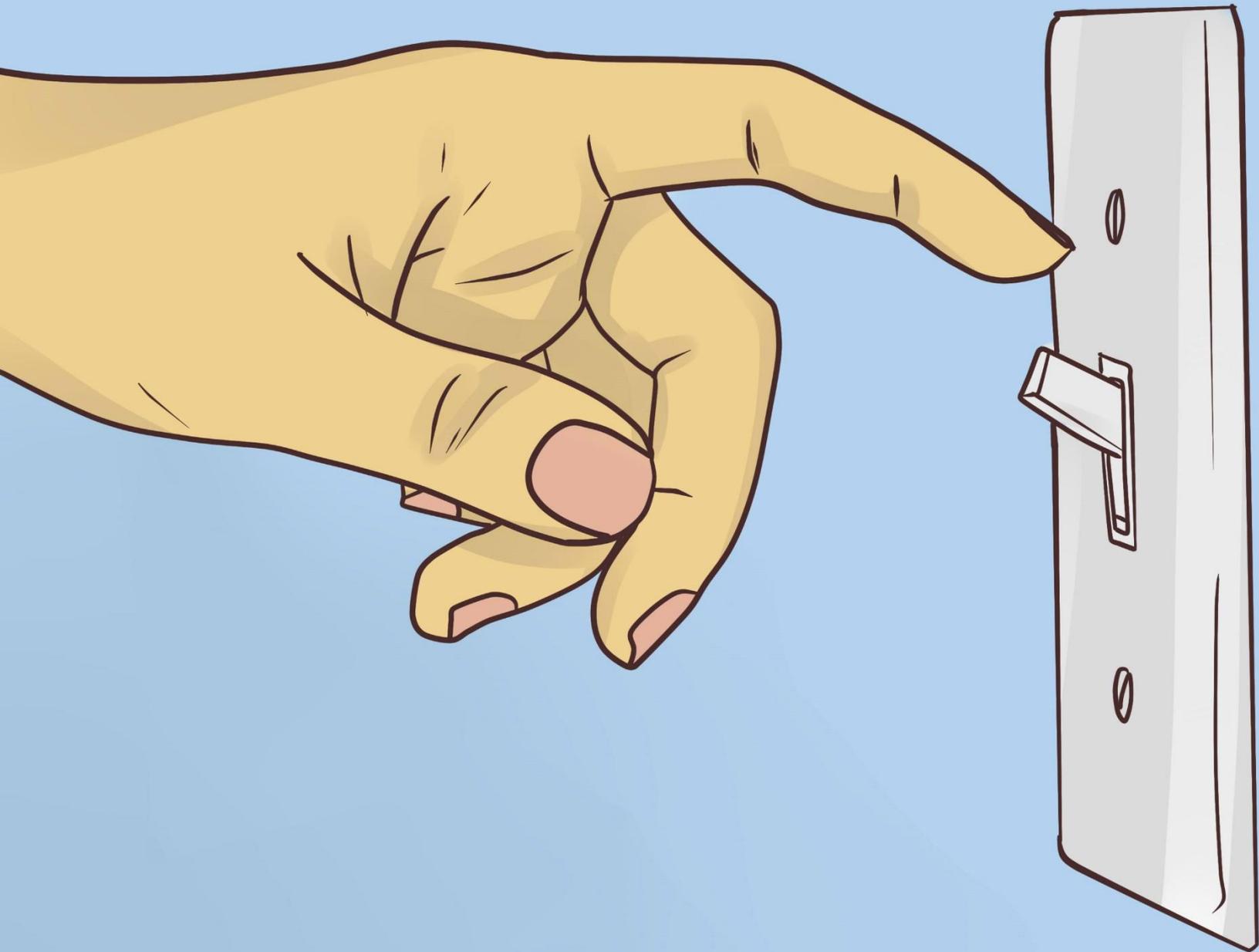


GRANTS













S

A

V

E



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Questions?



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Carolyn Grace
St. Joseph County
Conservation District

St Joseph County
Conservation District
River Clean Up Project
Carolyn Grace, Administrator

Choosing and Preparing the Locations

- Cutting the path at all times of the year
- Community and Volunteer Input
- River Trails Committee
- FaceBook Posts



Selecting the Staff

Volunteer vs Paid

Duties

- Set up craft for volunteers
- Secure Pick up and Drop off point
- Waivers
- Knowledge of Drugs
- Thank you snack or lunch

River Coordinator



Lining up Volunteers through Media

- Newspaper articles
- Shoreline Magazine
- County web page
- Community Meetings
- Paddling Clubs
- FaceBook



Scheduling the Events

Our 2016 schedule

- St. Joseph River - June 18th at 9:30 am (starting at So. Railroad Street bridge in Mendon and ending at River Run Road bridge, 2.5 miles), with lunch provided by Three Rivers Lions Club
- St. Joseph River - July 9th at 9:30 am (starting at River Run Road bridge and ending at Angevine Road bridge, 2.5 miles), with lunch provided
- St. Joseph River - July 23rd at 9:30 am (starting at Angevine Road bridge and ending at Covered Bridge Park at Schweitzer Rd, 2.5 miles), with lunch provided
- Rocky River – August 6th at 9:30 am (starting at DeLong Rd Bridge ending at Pulver Rd, 2.5 miles) Lunch at Brewsters
- Portage River – August 20th at 9:30 am (starting at Portage Lake landing and ending at Parkville Rd 2.5 miles) Lunch Provided
- Portage River - September 10th at 9:30 am (N. Fisher Lake Rd ending at Heimbach Rd 2.5 miles) (possible addition Heimbach Rd to Carpenter Rd 2.2 mi for a total of 4.7 miles. Snacks, water and lunch provided

River Coordinator



Items we've discovered and recovered from our Rivers

All this in a 2.3 mile span.



Yes, this is a safe that was tossed into the Prairie River.



Selecting the Dumpster

Size does matter!

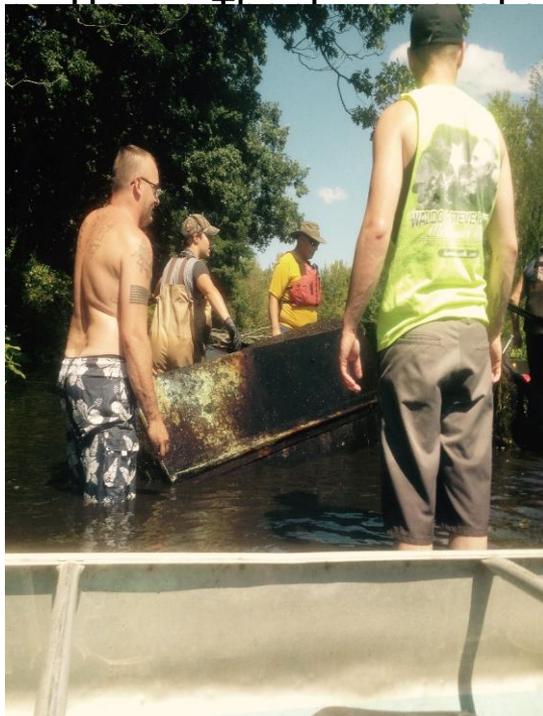


- Determine how many miles you want to tackle per trip. 2-3 miles takes about 4 hours if lots of trash has been dumped
- Ask for a donation match from trash company. A partial match can increase the size you choose.
- Location of your dumpster on your property.



Make the day worth while

- Have fun, work as a team
- Hand out T-shirts
- Provide food and drinks before or after
- Provide a snack for the paddle



at the end



If you build positive relationships,
they will continue to come back each
year!



Questions???

Visit our webpage www.stjoecountycd.com

Call Carolyn Grace 269-467-6336 ext 5





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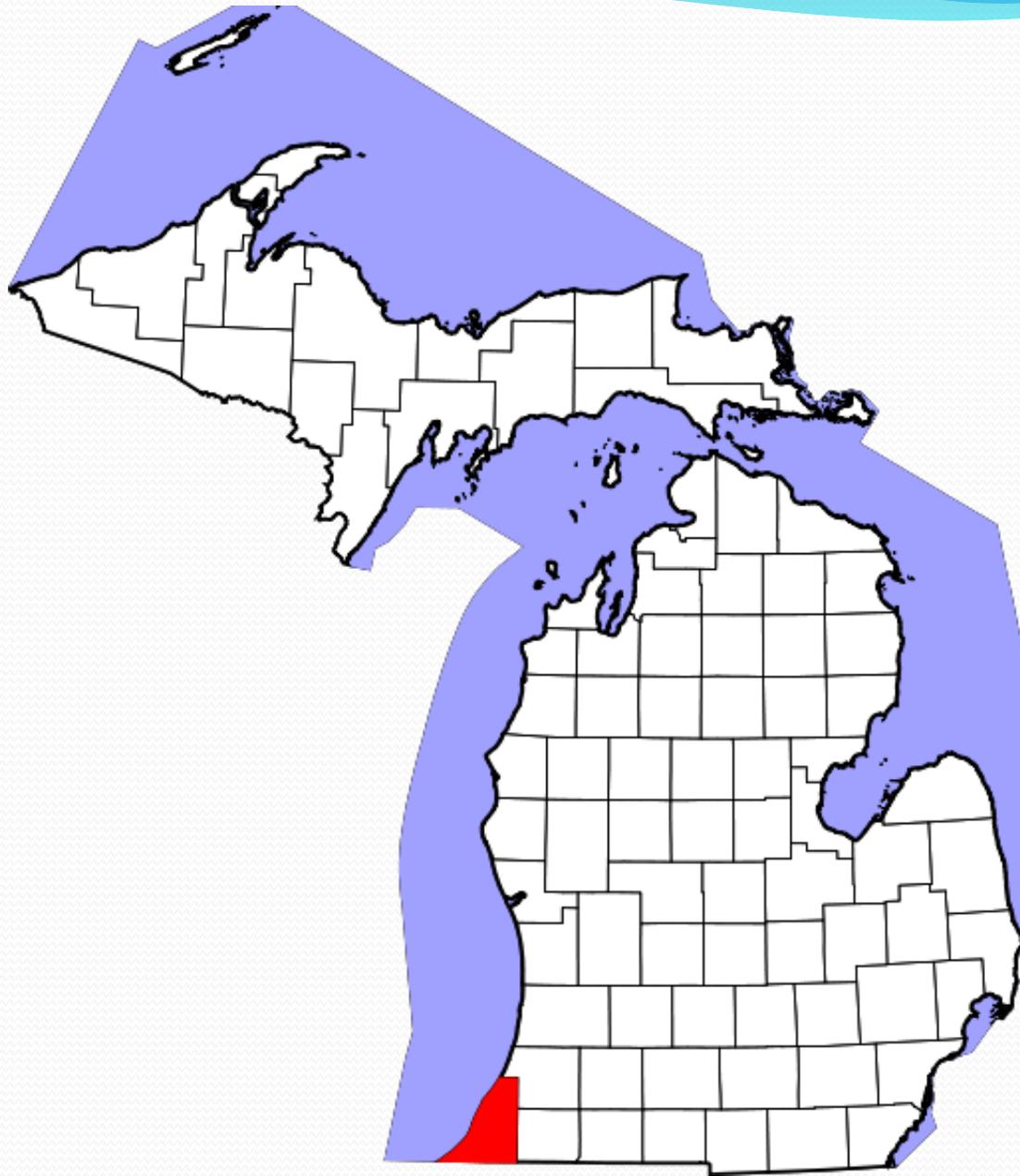
Questions?



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Ken Priest & Laird Willard

Berrien County Health Dept









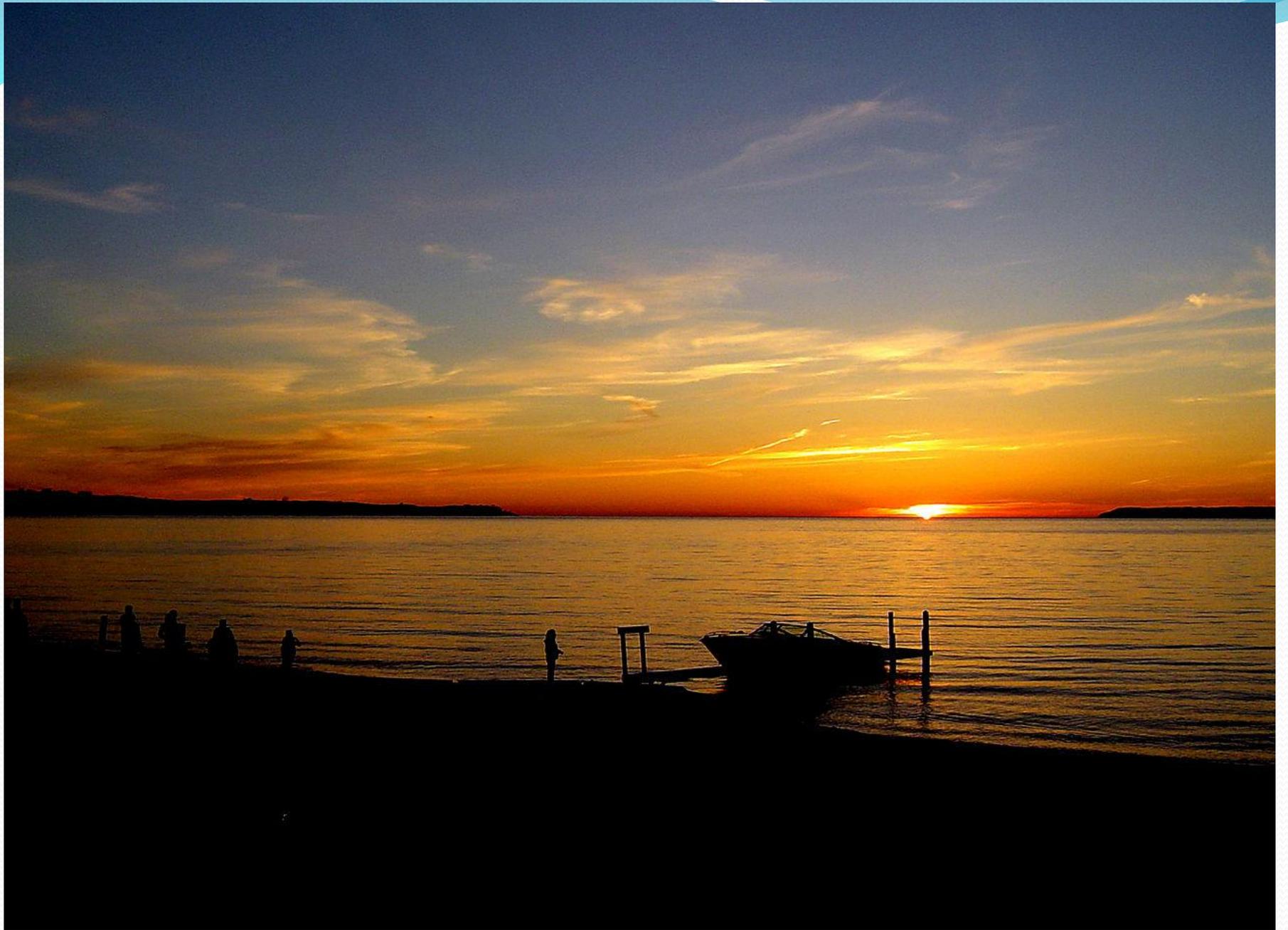














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