

# Wetland Partnership Project

*a strategy for watershed  
improvement*



**Matt Meersman**

*Friends of the St. Joe River*







Pleasant Valley Cemetery

Chapel Hill Memorial Gardens

Jefferson Rd

Birch Rd

Jefferson Rd

Jefferson Rd

W Indiana Ave 16

Vistula Rd

Baugo Bay

N Beech Rd

W County Line Rd

OSCEOLA

Ferretie/  
Baugo Creek

Lincolnway E

Lincolnway W

933

Lincolnway W

Lincolnway E

933

Lincolnway E

Ash Rd

20



# How do we prevent THIS...





**And THIS...**





**And THIS...**



*©Robert & Brasse*



**You get the idea...**



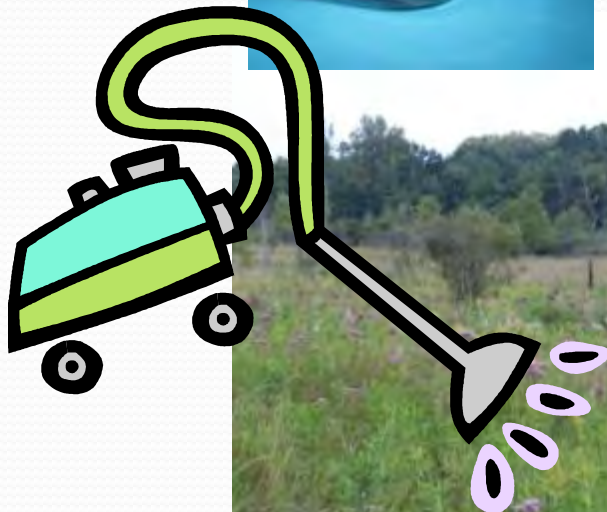


A photograph of a wetland area. In the foreground, there is a dense patch of tall, green grasses. To the left, a pond is visible, covered with lily pads. The background consists of a line of trees with green foliage. The text "Why focus on wetlands?" is overlaid in white, serif font across the upper portion of the image.

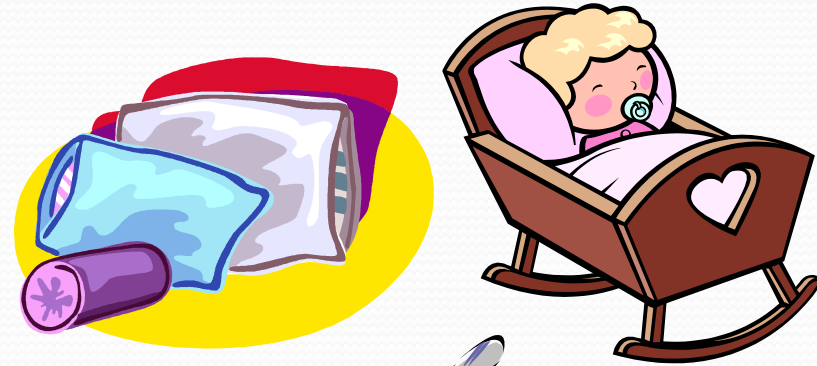
Why focus on wetlands?

# Wetland Functions

## Water Quality Related

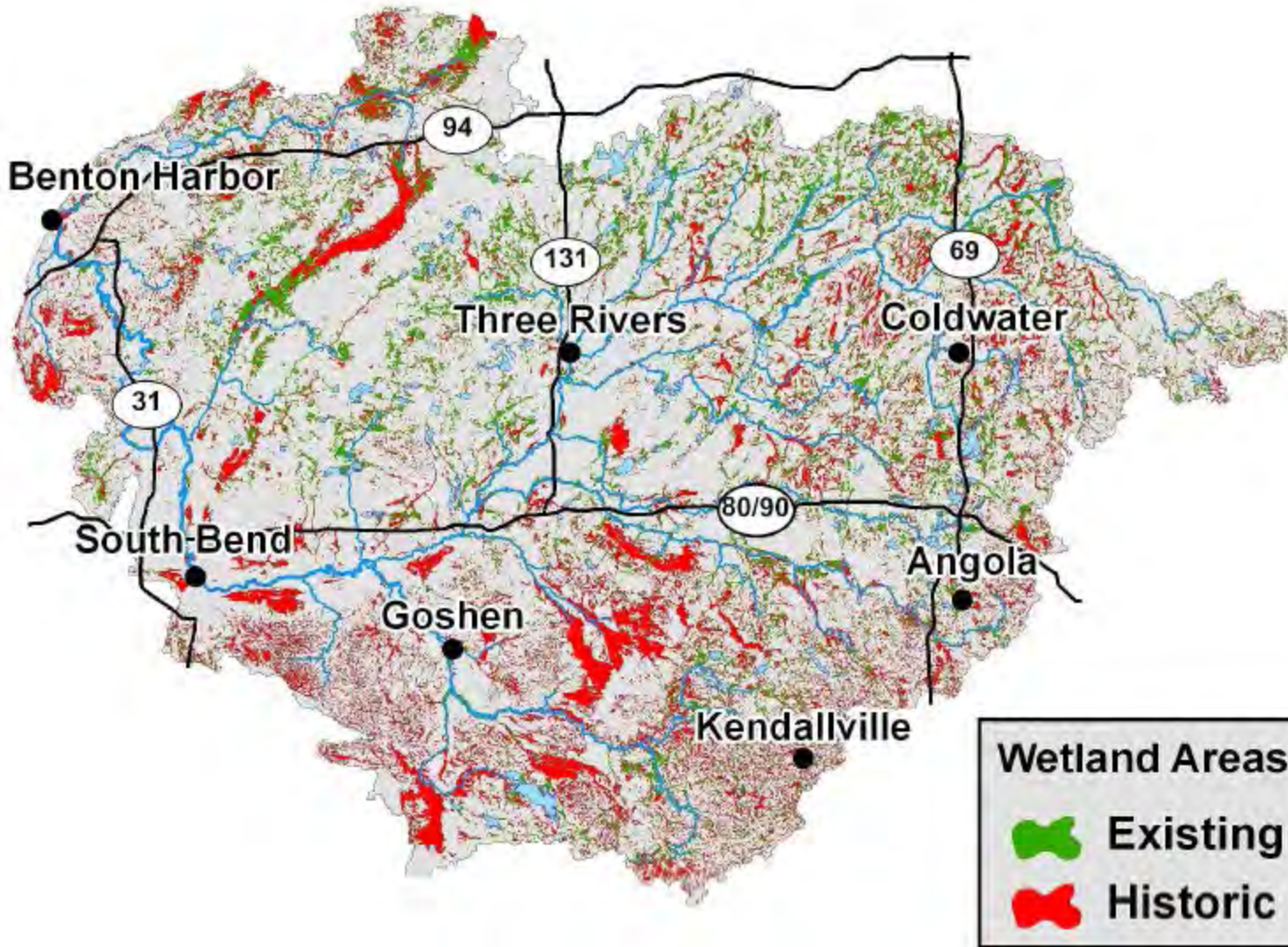


## Habitat Related





# Wetland Loss



**53% Loss  
of Wetland  
Acres here**

**What does  
that really  
mean?**

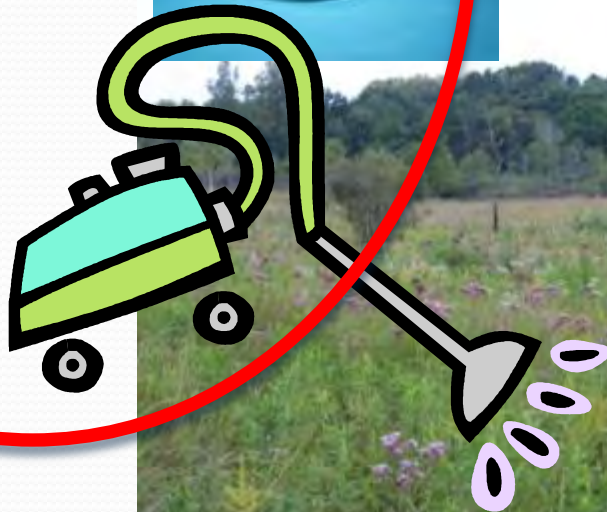
***671,721 Acres Wetlands Pre-Settlement***

***315,878 Acres of Wetland Remaining***



# Wetland Functions

## Water Quality Related



## Habitat Related







**We need WETLANDS, but which ones???**

# SJRW Wetland Project

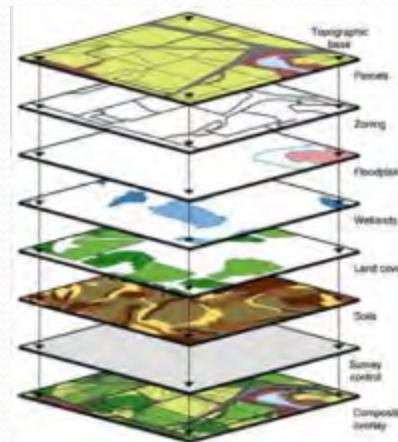
## A 3 Step Strategy for Watershed Improvement:

1. **ENHANCE** existing and historic wetland data
2. **PRIORITIZE** by geography and functional significance
3. **UTILIZE** results to direct implementation efforts

53% Acreage Lost in the SJRW



92% Flood Storage Capacity Lost in St. Joe County



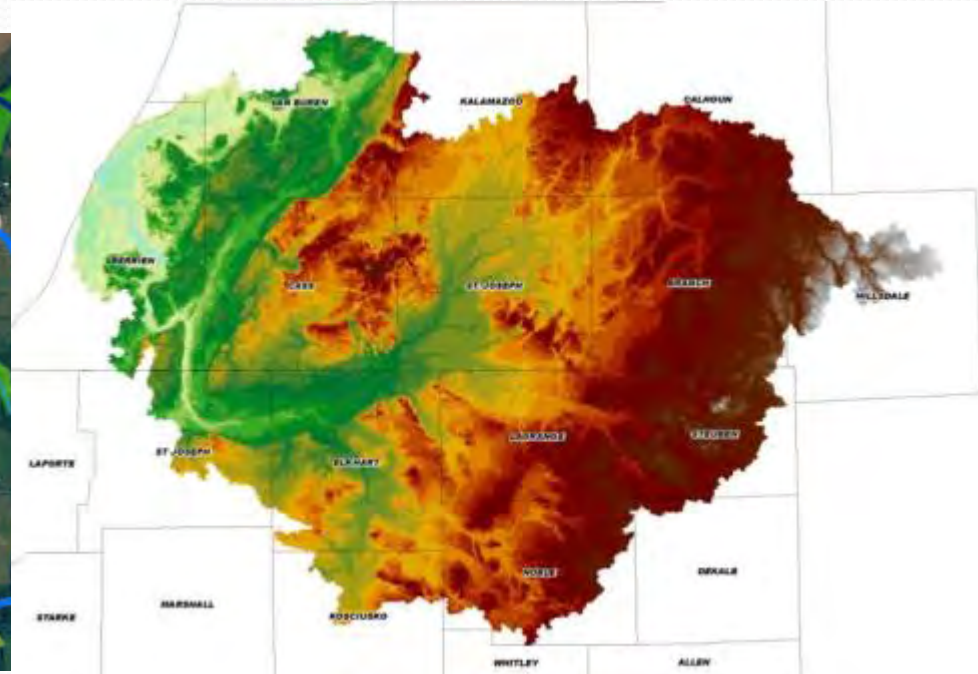
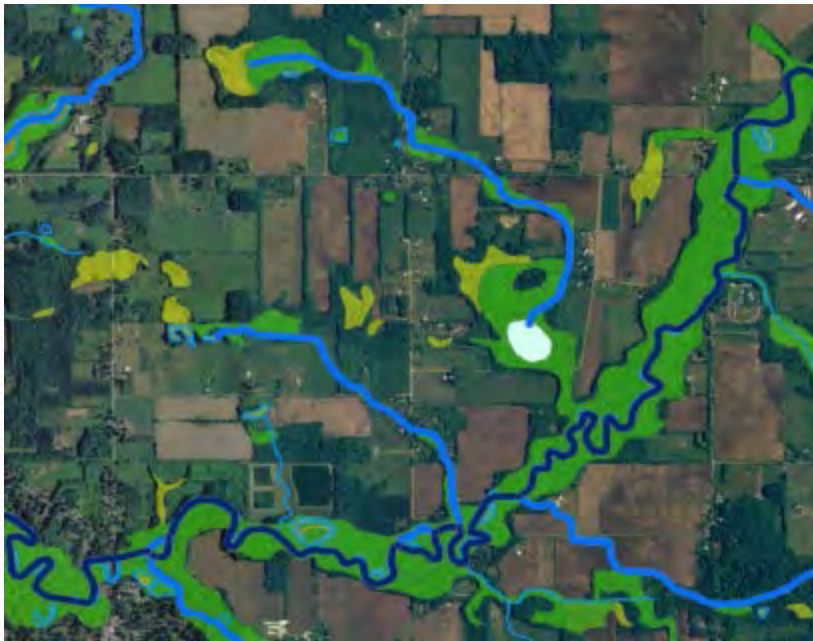
Christiana Creek Subwatershed (0405000114)		
Rank	Potential Landowner	Wetland Acres
1	NELSON FAMILY TRUST	232
2	COUNTY OF CASS, MI	193
3	WESTPHAL, CHARLES R	219
4	LARF LLC	141
5	STATE OF MICHIGAN DNR	148
6	WARREN, DWAIN K & CYNTHIA J	80
7	MC KENZIE, DARLENE J TRUST	132
8	BRANCALEON, TEENA	75
9	SPARKS CEDARLEE FARM	81
10	PAPANDREA, STEPHEN	65



# Step 1. Enhance

## *-Level 1 Assessment*

- Add information to existing wetland data
- Create Pre-Settlement wetland data
- Determine functional significance



# Step 2. Prioritize

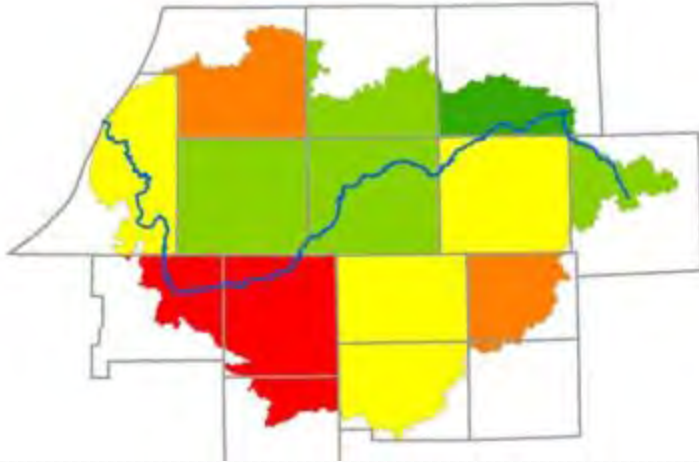
## Understand Acreage vs. Function Loss

Area	Acreage Loss	Floodwater Storage Loss	Sediment Retention Loss	Fish Habitat Loss	Overall Water Quality Loss	Overall Habitat Loss
Baugo Creek	91%	90%	85%	95%	90%	92%
St. Joseph County	92%	92%	87%	98%	92%	93%
St. Joseph River Watershed	53%	59%	49%	69%	52%	55%

- **Water Quality**- Floodwater Storage, Sediment Retention, Nutrient Transformation, Shoreline Stabilization, Streamflow Maintenance, Carbon Sequestration, and E coli Retention
- **Wildlife Habitat**- Fish, Waterfowl, Interior Forest Bird, Shorebird, and Amphibian Habitat.

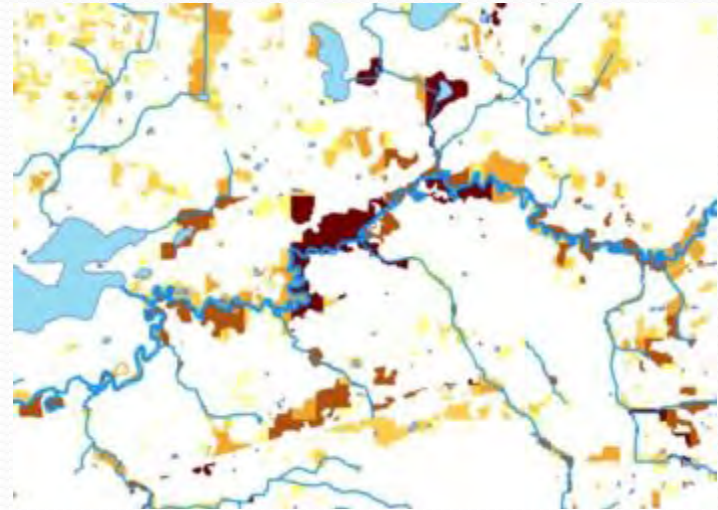
# Step 2. Prioritize

## Rank by Geography & Function



High Remaining Sediment Retention Capacity

Rank	Municipality Name	Wetland Acres	% Wetlands Loss
1	Almena Township	5400.3	32.7%
2	Waverly Township	4190.6	47.8%
3	Hartford Township	3566.1	44.2%
4	Lawrence Township	2885.6	36.1%
5	Paw Paw Township	3263.0	49.7%
6	Benton Township	1614.4	42.6%
7	Antwerp Township	1904.3	24.6%
8	Hamilton Township	1889.9	6.3%
9	Watervliet Township	1423.9	31.5%
10	Keeler Township	1548.8	33.3%
11	Bainbridge Township	1237.4	27.5%
12	Hagar Township	1000.0	28.1%
13	Coloma Township	941.2	28.2%
14	Bangor Township	1104.3	60.5%
15	Bloomington Township	816.6	65.7%
16	Decatur Township	866.2	78.0%



"Top 25" Existing Wetland Owners

	Landowner Name	Wetland Acres	Sediment Retention Functional Units
1	STATE OF MICHIGAN	2,543	1,973
2	BUSY BEE FARMS	252	226
3	HAMLIN HAROLD & MARTHA	140	194
4	HAWKSHEAD COUNTRY CLUB LLC	97	188
5	CONSUMERS ENERGY COMPANY	200	166
6	OAK HAVEN	116	137
7	MICHIGAN NATURE ASSOCIATION	75	133
8	GHIDOTTI BERT	189	129
9	SISCO VICTORIA	60	116
10	BUCK'S & BEARD'S LLC	111	112
11	BAKER KENNETH F	54	109
12	CITY OF BANGOR	82	109
13	THOMAS DAVID L & MELISSA	99	102
14	HEATON ROGER P	59	100
15	WALGREN LAWRENCE C JR	48	95



# Step 3. Utilize

- Targeting Outreach
- Strategic Planning
- Decision Making



*Wetlands at Work*  
*Protecting & Restoring Wetlands for Clean Water*

WETLANDS WORK FOR US, they filter pollutants, absorb floodwaters, provide habitat, and perform a number of other functions that keep our lakes and rivers clean.

YOU ARE INVITED to learn about programs, tools and financing incentives for landowners and public officials to protect existing wetlands and restore degraded or destroyed wetlands.

Join staff from these organizations:

- National Resource Conservation Service (NRCS)
- Michigan Department of Environmental Quality
  - US Fish & Wildlife Service
- Southwest Michigan Land Conservancy
  - Conservation Districts
- Van Buren County Drain Commission
  - Two Rivers Coalition
  - And more!

This event will be offered at two times and locations:  
**Thursday, January 31, 2013**  
3-5 p.m. at Sarett Nature Center, Benton Harbor  
7-9 p.m. at Lake Michigan College, South Haven

Sponsored by the Van Buren Conservation District  
[www.VanBurenCD.org](http://www.VanBurenCD.org) • 269-657-4030 x5



VAN BUREN CONSERVATION DISTRICT

January 7, 2013

Dear Landowner:

Over the last century, Michigan has lost more than 50% of its wetlands. As a result, we have seen increased flooding, degraded water quality and threats to public health and safety. The Van Buren Conservation District is leading a local effort to safeguard our area by targeting wetland restoration and protection.

**Why You Received This Letter:** As part of our project, a study was completed which found extraordinary wetland resources on land that appears to be owned by you or the organization you represent. We invite you to join us for a short program on **Thursday, January 31<sup>st</sup>** to discuss protection and restoration options.

**Why You Should Attend:** There can be financial advantages to protecting or restoring wetlands on your property. Programs exist that cover restoration costs and pay you for each acre of wetland restored. There can be significant tax benefits to protecting wetlands with a permanent conservation easement. Learn more about these opportunities and **bring this letter to be eligible to win a local foods gift basket!**

**What is the Study?** A *Landscape Level Wetland Functional Assessment* (information enclosed) was completed to rank current and historic wetlands based on the significance of the functions they provide (for example, soil retention, floodwater storage, frog habitat, etc.). These functions protect our agricultural resources, our water quality and, ultimately, our livelihoods.

**Please join us at one of the following times on Thursday, January 31<sup>st</sup> to learn more:**

- 3:00-5:00 pm at Sarett Nature Center (2300 North Benton Center Road, Benton Harbor)
- 7:00-9:00 pm at Lake Michigan College (125 Veterans Boulevard, South Haven)

Representatives from key organizations/agencies will be present to answer questions. There is no admission fee and light refreshments will be provided. If you're not able to make it but would still like information about wetland restoration or protection, please don't hesitate to contact us.

Thank you for your time. We hope to see you there!

Sincerely,

Matt Meersman and Erin Fuller  
Watershed Coordinators  
Van Buren Conservation District

1035 E. Michigan Avenue, Paw Paw, Michigan 49079  
Phone 269.657.4030 x5 • Fax 269.657.4925  
[WWW.VANBURENCD.ORG](http://WWW.VANBURENCD.ORG)

# Step 3. Utilize

## Targeting Outreach

- Educating landowners about their wetlands, restoration programs and protection incentives



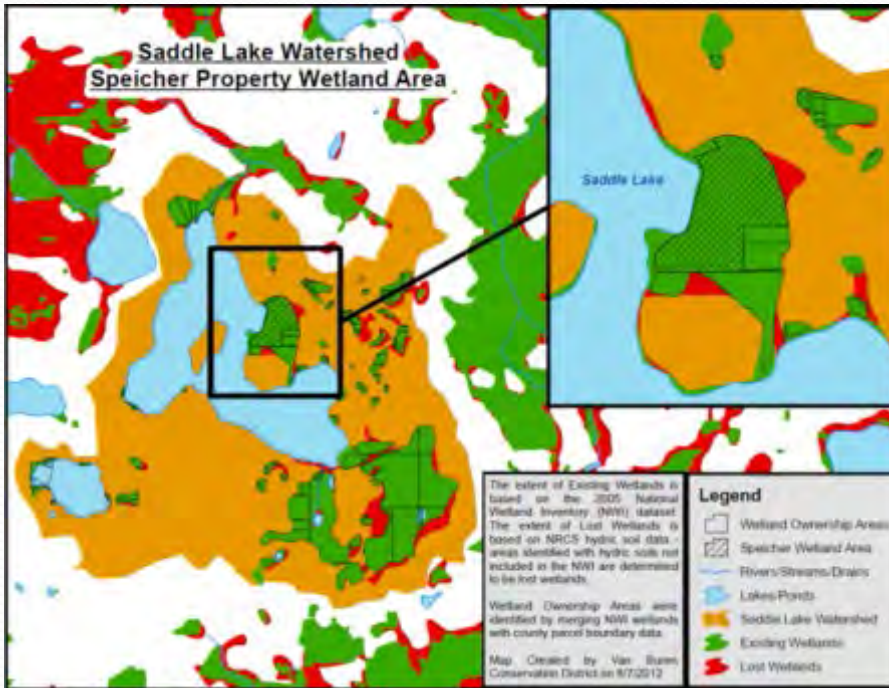
Wetlands  
Reserve  
Program





# Step 3: Utilize

## Targeting Outreach: Landowners



Want to know how good certain wetlands are for a particular function???

### Wetland Functional Report

Eureka! Property - Paw Paw River Watershed

WETLAND AREA FUNCTIONAL SIGNIFICANCE		
EXISTING WETLAND ACRES:	236	
	<i>Significance*</i>	<i>Rank**</i>
<b>FUNCTION:</b>		
<i>Water Quality Combined</i>	1.73	4***
Floodwater Storage	1.98	3
Streamflow Maintenance	0.97	10
Nutrient Transformation	1.82	4
Sediment Retention	1.94	3
Shoreline Stabilization	1.92	3
<i>Habitat Combined</i>	1.47	3****
Fish	1.93	4
Waterfowl	0.59	13
Shorebird	0.98	4
Forest Bird	1.9	2
Amphibian	1.94	4

\* Functional Significance is rated on a scale of 0 to 2, with 1 being "Moderately Significant" and 2 being "Highly Significant".

\*\* Ranking is based on Functional Units, which are calculated by multiplying the size of the Wetland Area by the Functional Significance. **Ranking is relative to 6,757 other wetland areas in the Paw Paw River Watershed.**

\*\*\*Behind Pokagon Band of Potawatomi Indians, Almena Twp. and Sarett Nature Center

\*\*\*\*Behind Almena Twp. and the Pokagon Band of Potawatomi Indians

# Step 3. Utilize

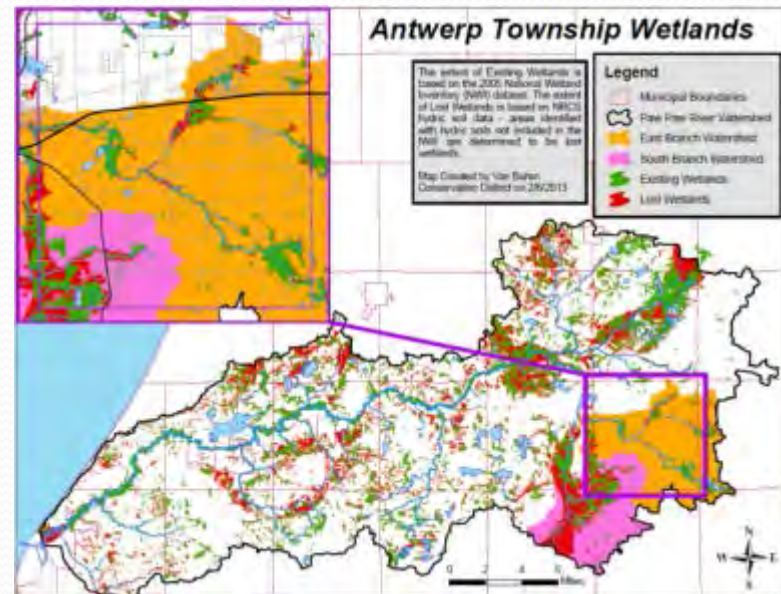
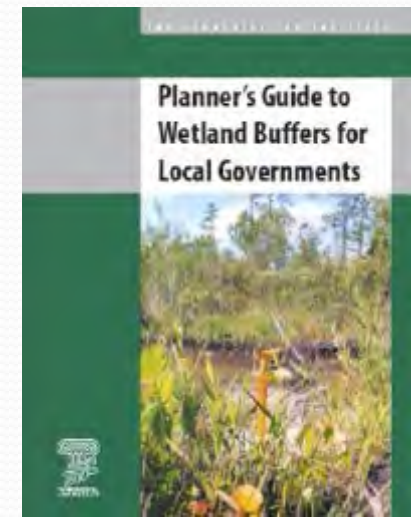
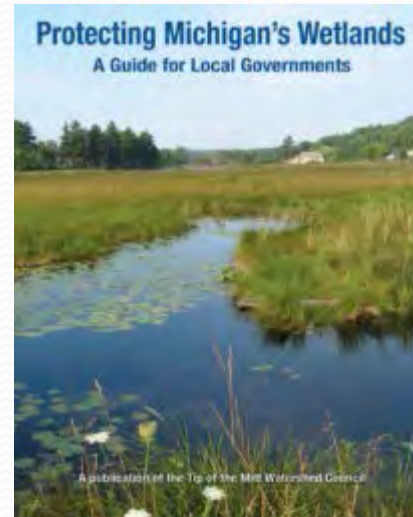
## Targeting Outreach

- Promote planning and zoning to public officials

### Landscape Level Wetland Functional Assessment Report

*Antwerp Township & the Paw Paw River Watershed*

	<i>Watershed (HUC 10)</i>	<i>Watershed in Township</i>	<i>Subwatershed</i>	<i>Subwatershed</i>
NAME AND/OR ID:	Paw Paw River (0405000124/5)	Antwerp Township	East Branch Paw Paw River	South Branch (Lawton Drain) Paw Paw River
TOTAL ACRES:	285,799	22,378	21,647	16,768
EXISTING WETLAND ACRES:	37,391	1,904	2,010	1,836
HISTORIC WETLAND ACRES:	64,792	2,525	2,451	5,858
WETLAND LOSS:	42%	25%	18%	69%
	<i>Predicted Percent Change in Functional Capacity *</i>			
<b>FUNCTION:</b>				
<i>Water Quality Combined</i>	-45%	-31%	-25%	-58%
Floodwater Storage	-52%	-38%	-31%	-64%
Streamflow Maintenance	-38%	-28%	-14%	-44%
Nutrient Transformation	-44%	-30%	-23%	-51%
Sediment Retention	-53%	-35%	-35%	-70%
Shoreline Stabilization	-40%	-28%	-21%	-55%
<i>Habitat Combined</i>	-50%	-45%	-24%	-51%
Fish	-51%	-45%	-20%	-64%
Waterfowl	-17%	-14%	7%	-28%
Shorebird	-44%	-28%	-21%	-45%
Forest Bird	-45%	-34%	-26%	-51%
Amphibian	-72%	-79%	-52%	-57%

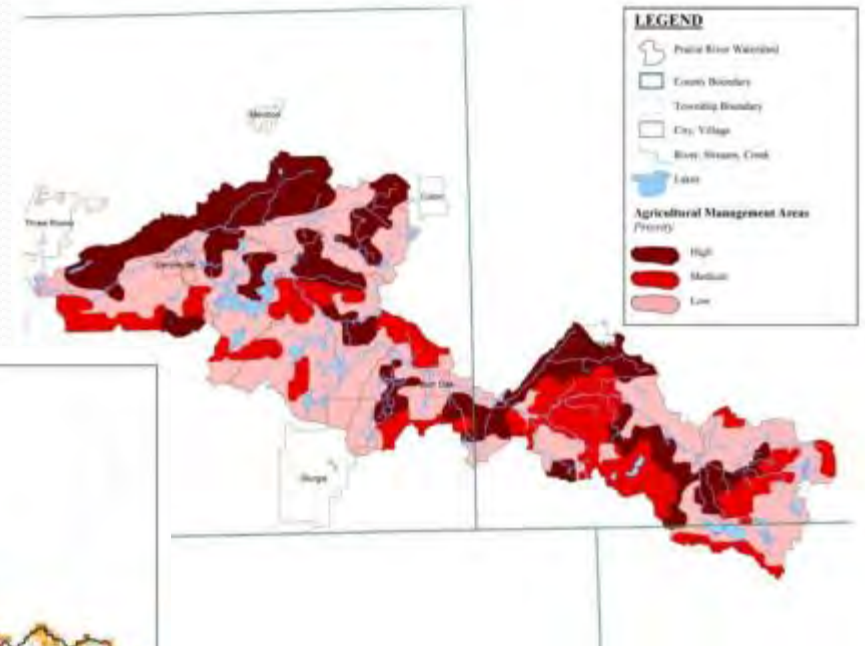
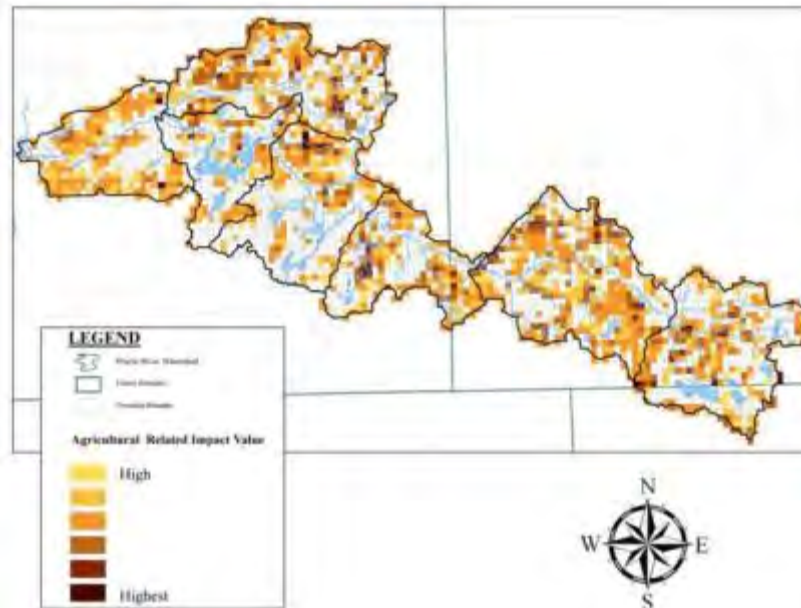




# Step 3. Utilize

## Strategic Planning

- Identify critical areas in watershed planning



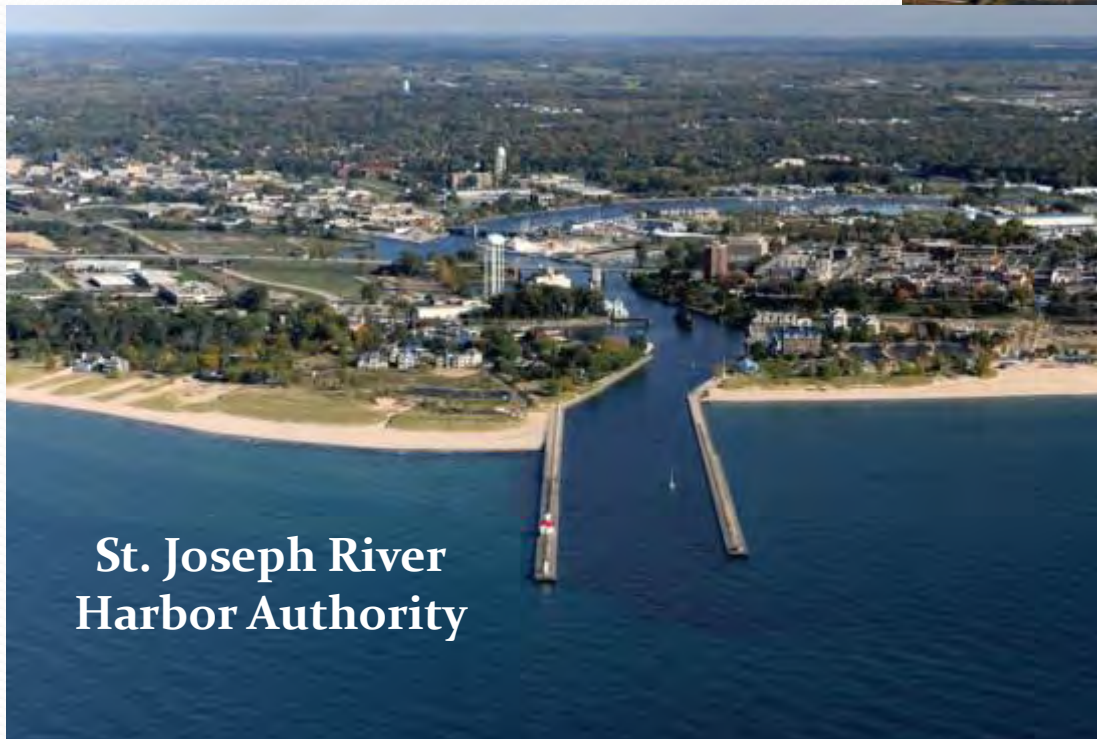
# Step 3. Utilize

## Strategic Planning

- Direct the efforts of water related groups



St. Joseph River Basin Commission



St. Joseph River  
Harbor Authority






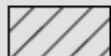
# Step 3. Utilize

## Decision Making


- Support more restrictive zoning and better land use planning

### Legend


 Existing Wetlands


 Lost Wetlands

### Future Land Use

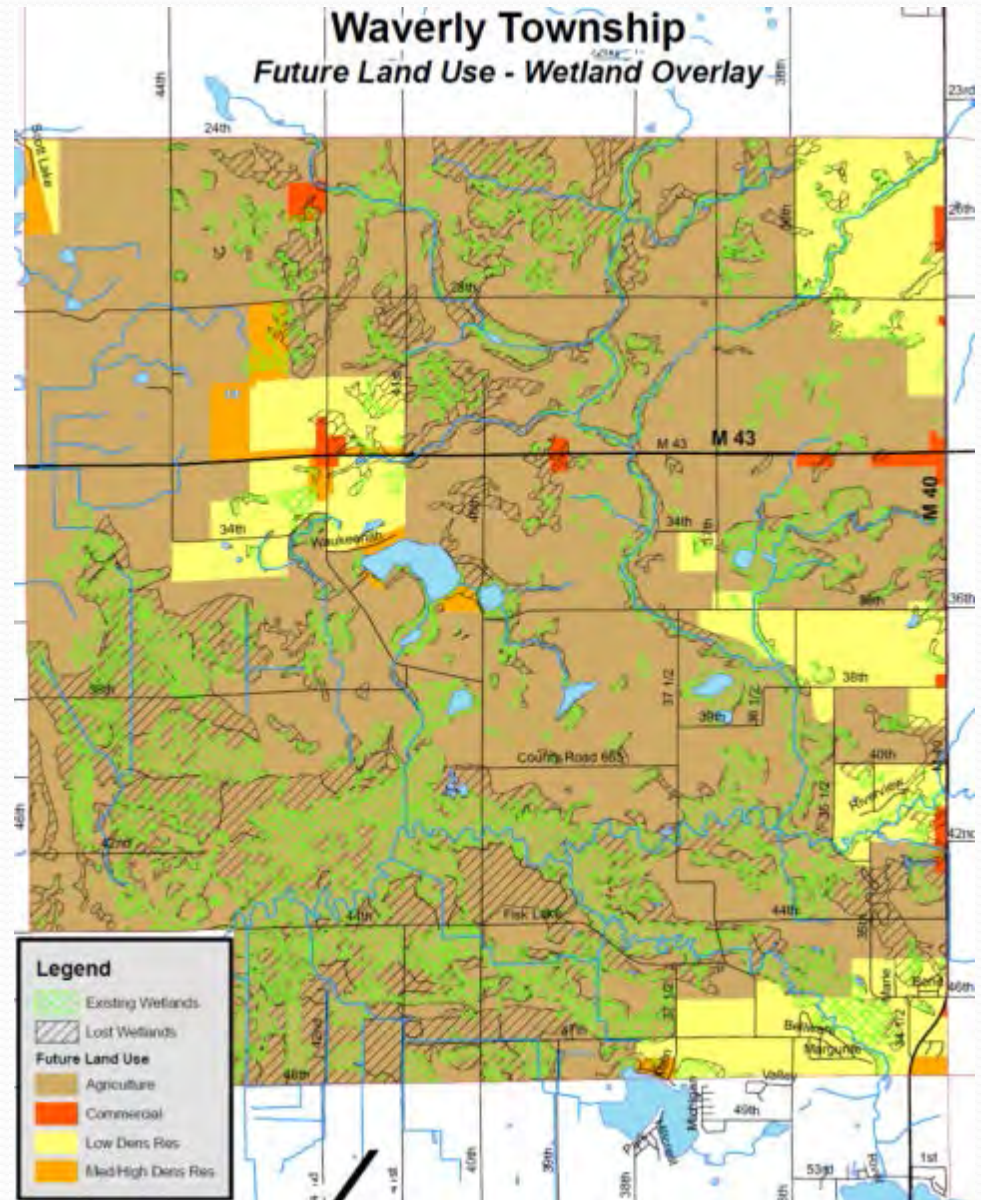
 Agriculture

 Commercial

 Low Dens Res

 Med/High Dens Res

*Keeping Opportunities for  
Protection and Restoration*



# Step 3. Utilize

## Decision Making

- Strengthen grant funding requests
- Assist agencies in evaluating projects
- Identifying mitigation sites





# Acknowledgements

## Wetland Enhancement Methodology

- Chad Fizzell, Michigan Dept. of Environmental Quality  
[fizzellc@michigan.gov](mailto:fizzellc@michigan.gov) or 517-335-6928
- Jeremy Jones, Michigan Dept. of Environmental Quality  
[JONESJ28@michigan.gov](mailto:JONESJ28@michigan.gov) or 517-241-3218



## Municipal Planning and Zoning Techniques

- Marcy Colclough, Southwest MI Planning Commission  
[ColcloughM@swmpc.org](mailto:ColcloughM@swmpc.org) or 269-925-1137



## For more information:

- Wetland Partnership Project  
[www.fotsjr.org/wetlandpartnership](http://www.fotsjr.org/wetlandpartnership)
- Friends of the St. Joe River  
[www.FotSJR.org](http://www.FotSJR.org)

## Or contact:

- Matt Meersman  
[paddleheadz@gmail.com](mailto:paddleheadz@gmail.com)

