

Efforts to Reduce Sediment

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Sediment in the SJRW



Year	General Condition	Total Soil Erosion in SJRW (m ³ /year)	Total Sediment at Harbor Mouth (m ³ /year)
1830	Pre-Development	55,000	21,000
1978	Agriculture	650,000-902,000	52,000 - 60,000
1992	Agriculture & Urbanization	676,000	44,000 (25% from Paw Paw River)

Primary Reasons for Increased Sediment in the St. Joseph Harbor

- Wetland Loss
- Farming Practices
- Impervious Surface - Hydrology – In stream channel erosion
- Dams/Road Stream Crossings

Projects to Reduce Sediment

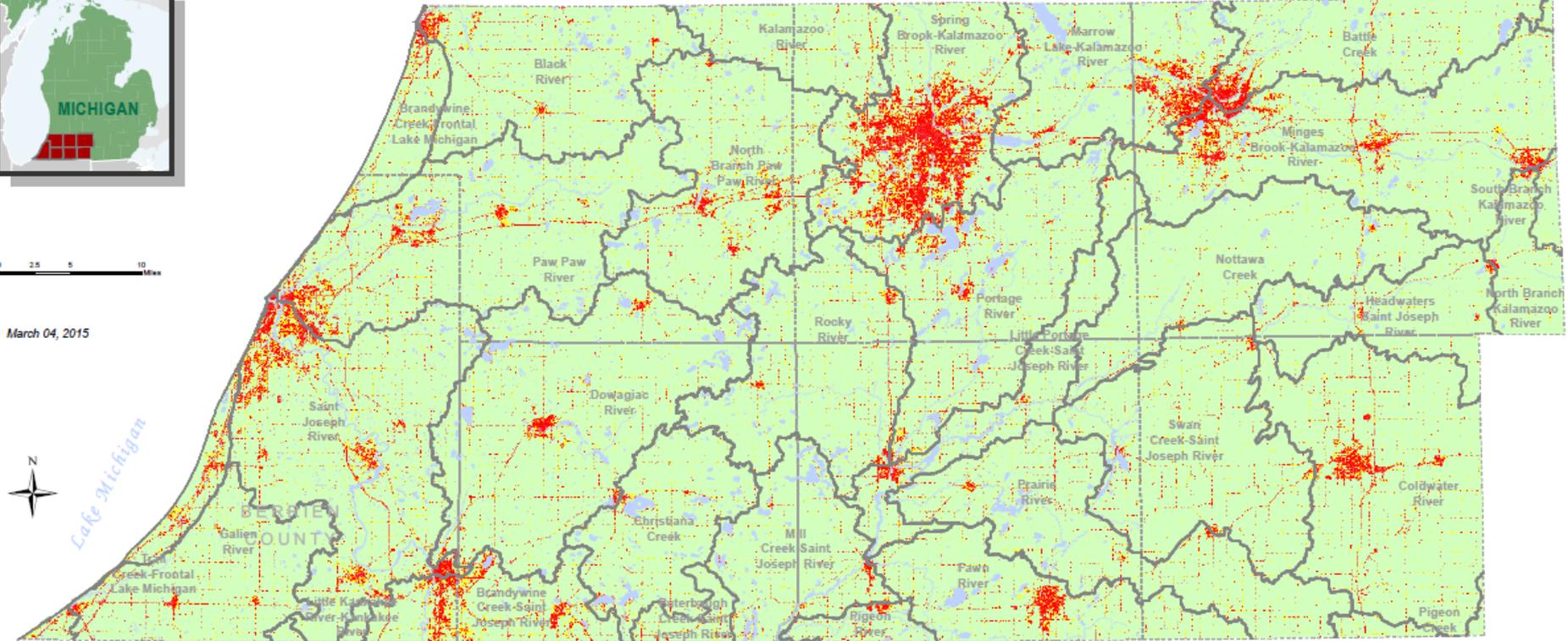
- Wetland Protection/Restoration
- Agricultural BMPs Implementation
- Low Impact Development
- Dam Removal/Road Stream Crossing Inventory

Impervious Surface - Development



0 2.5 5 10 Miles

March 04, 2015

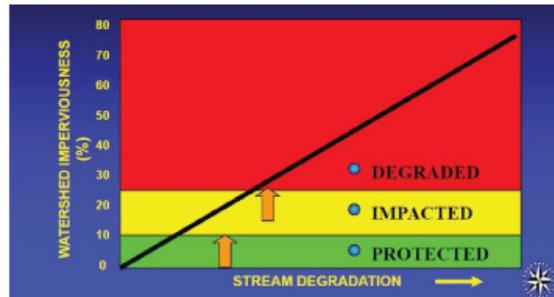


Percent Developed Imperviousness

- GREATER THAN 25% IMPERVIOUS SURFACE
- 10% TO 24% IMPERVIOUS SURFACE
- 0% TO 9% IMPERVIOUS SURFACE

Data Sources
 Base Layers: Michigan Geographic Framework, V14a
 Impervious: USGS, NLCD 2006 Percent Imperviousness, 2011
 Southwest Michigan Planning Commission
 www.swmpc.org

The use of this map is for general reference purposes.



REGIONAL PROSPERITY INITIATIVE

REGION 8

Counties: Berrien, Branch, Calhoun, Cass, Kalamazoo, St Joseph, & Van Buren

WATERSHEDS

Better Development

WATER - SLOW IT DOWN – SPREAD IT OUT - SOAK IT IN

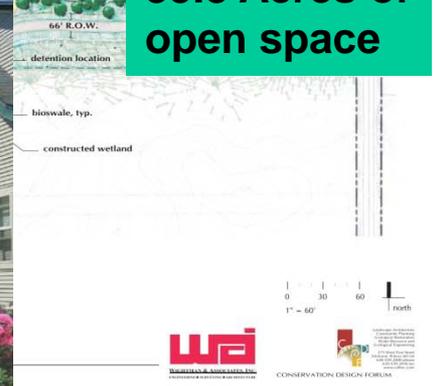
- Low Impact Development – Increase infiltration!
- Promote open space preservation and natural resource protection



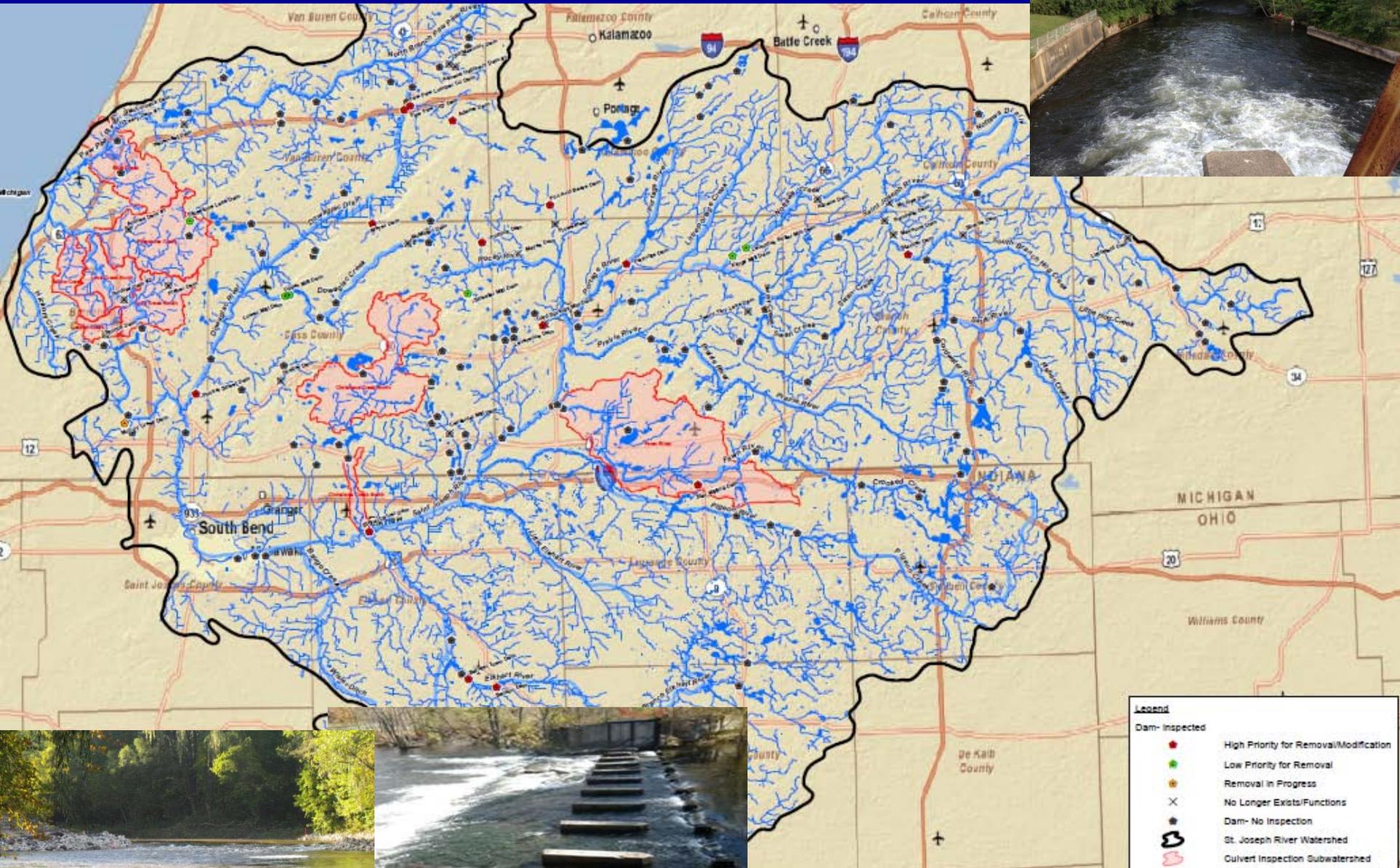
www.swmpc.org/lid.asp



43.2 Acres total
20 Homes
35.8 Acres of open space



Dam Removals



Road Stream Crossings

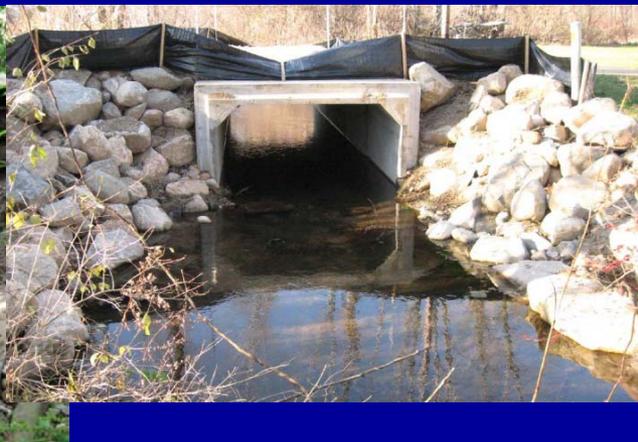
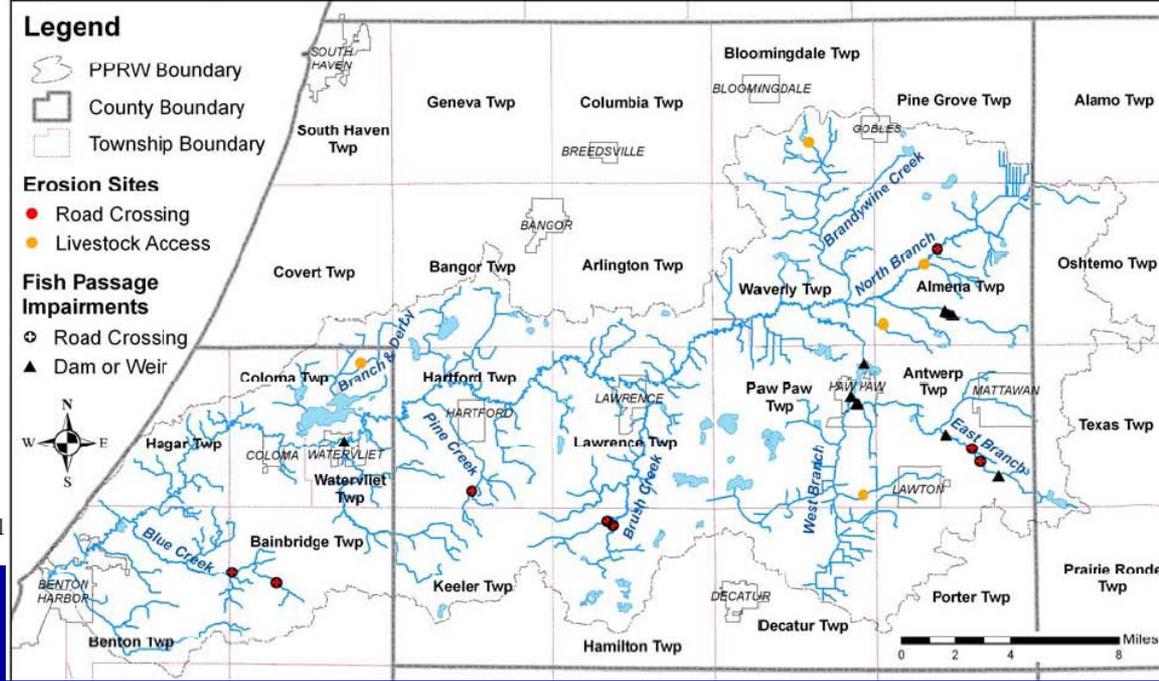
Before Pictures – Site #1



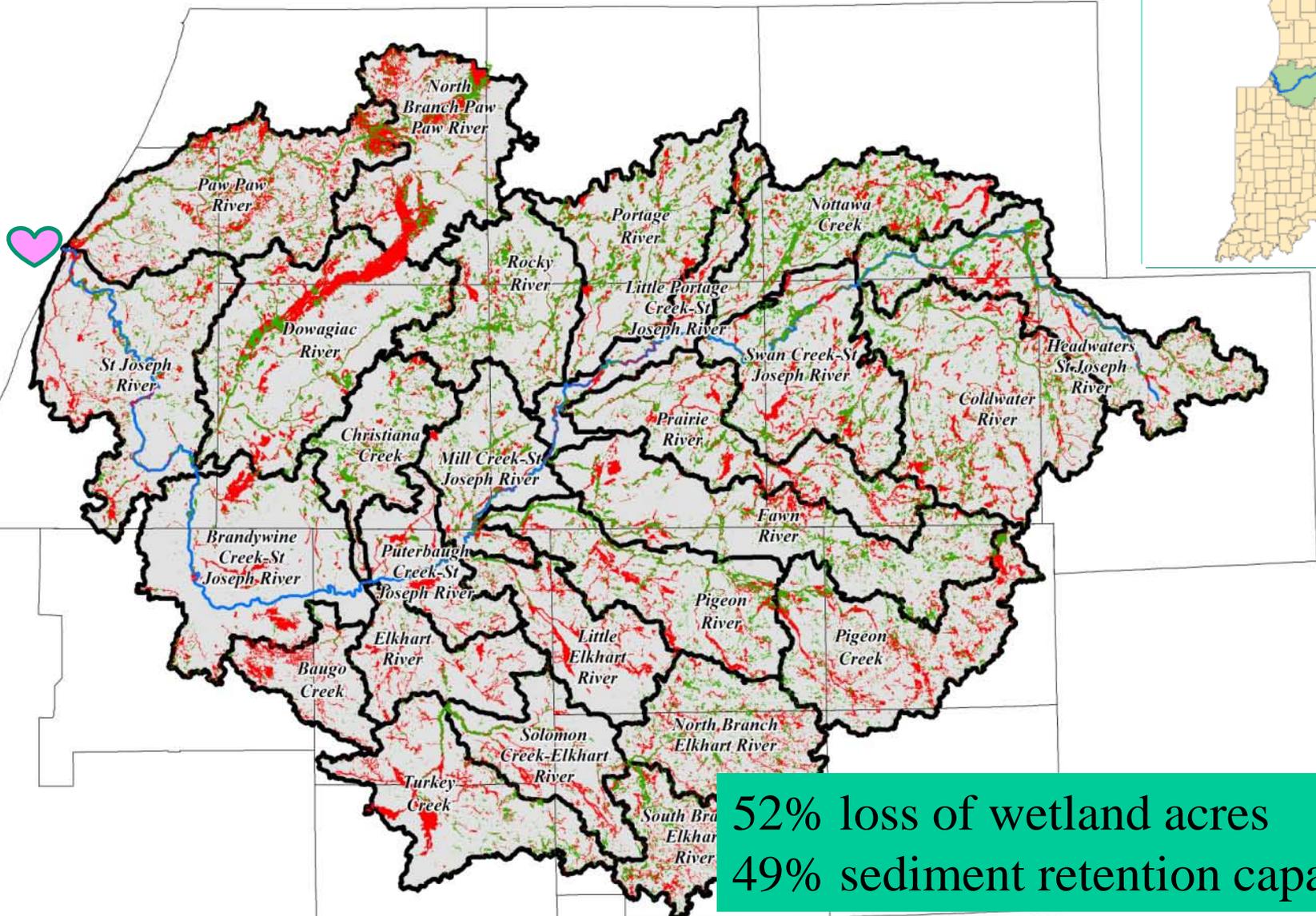
Looking upstream at Red Bud Trail culvert on Old Bitty Creek. Note soil measures installed after partial failure of crossing. (Brian Gunderman 7/15/10)



Figure 26. Problem Sites

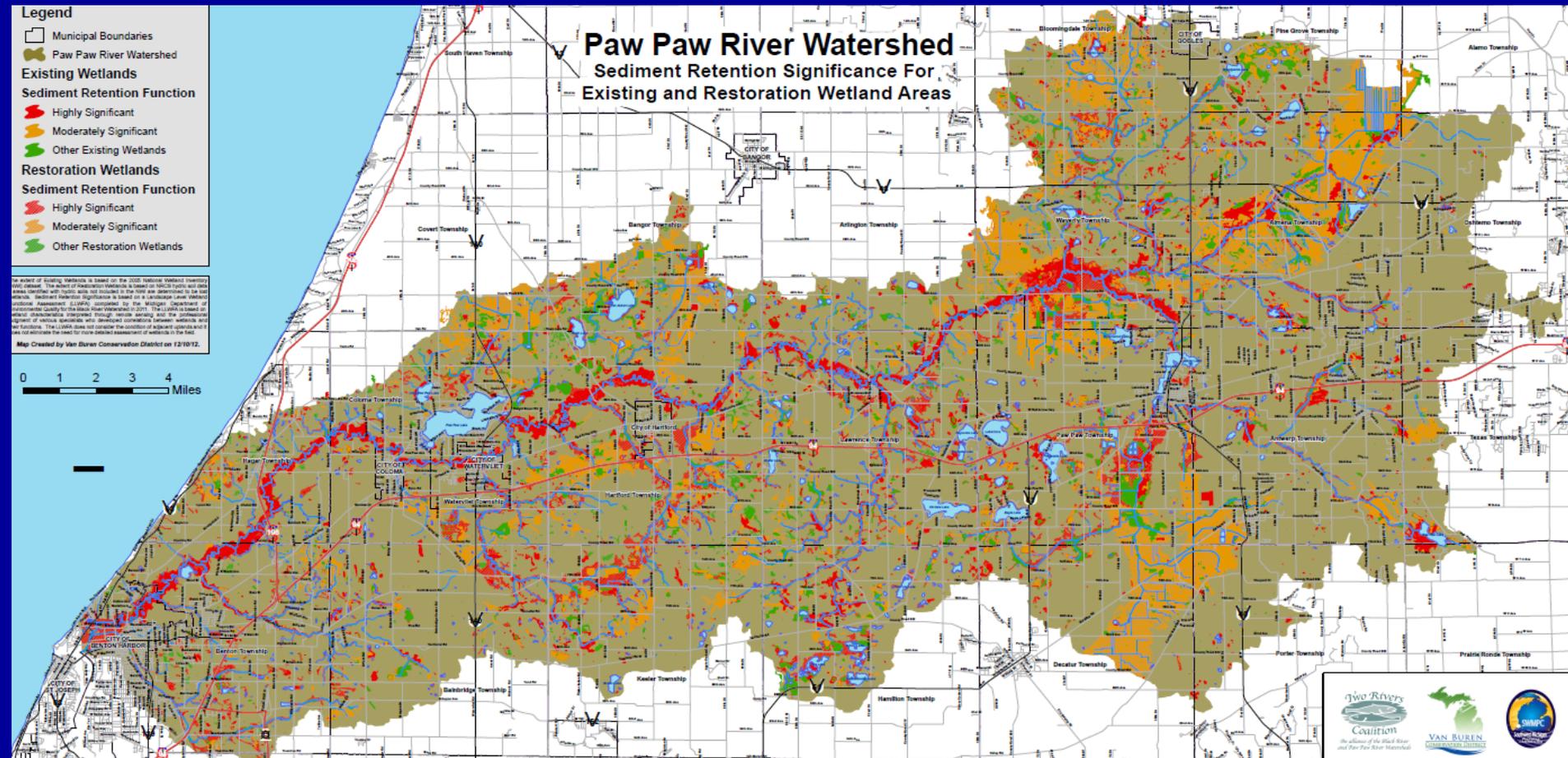


Wetland Loss in the SJRW



52% loss of wetland acres
49% sediment retention capacity

Wetland Loss - Paw Paw Watershed



42% loss of wetland acres
53% sediment retention capacity

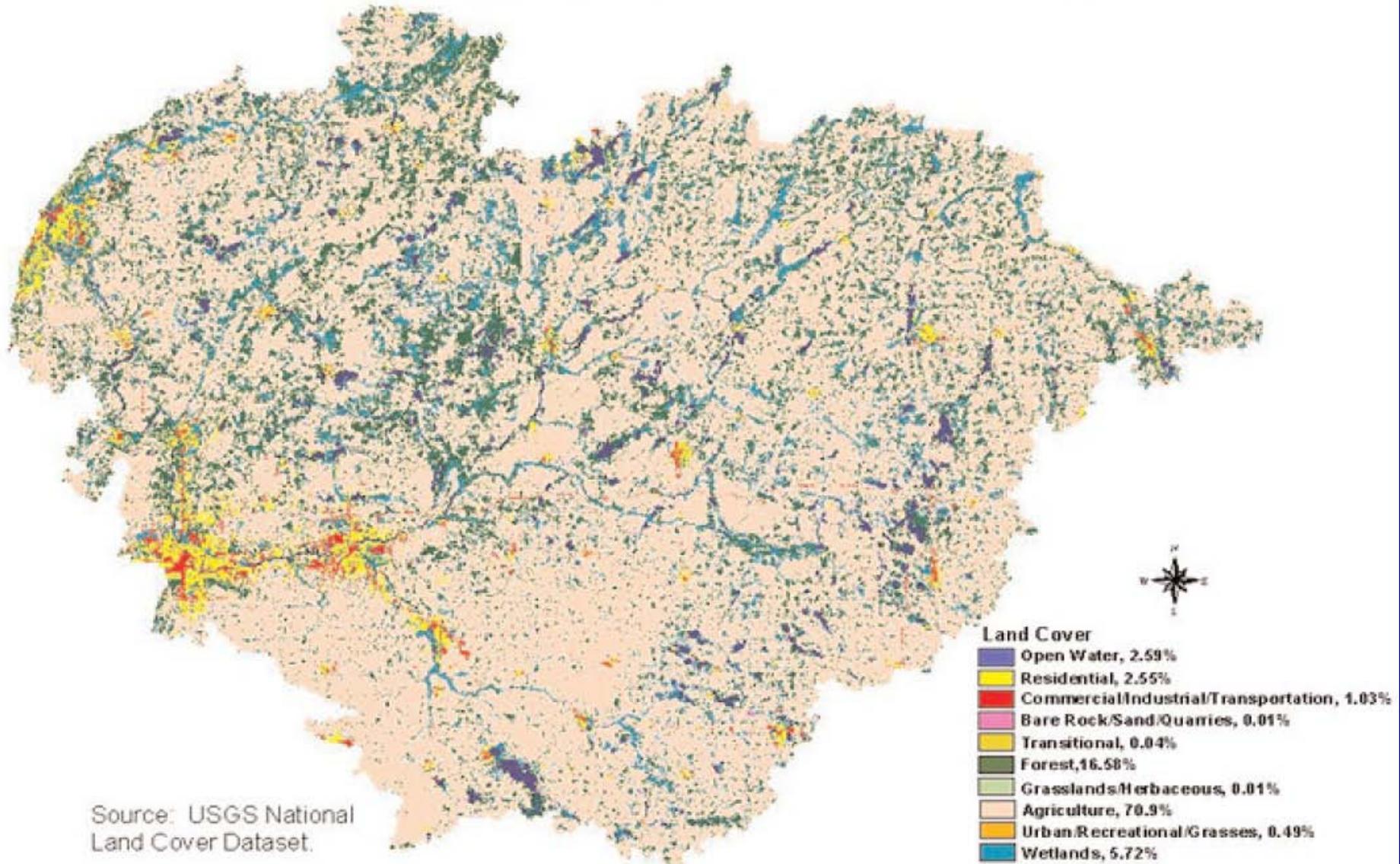
Targeting Restoration/Protection



- Over 1,000 acres of wetland and adjacent uplands protected through conservation easements
- About 100 acres of wetland restored through US Fish and Wildlife and USDA NRCS

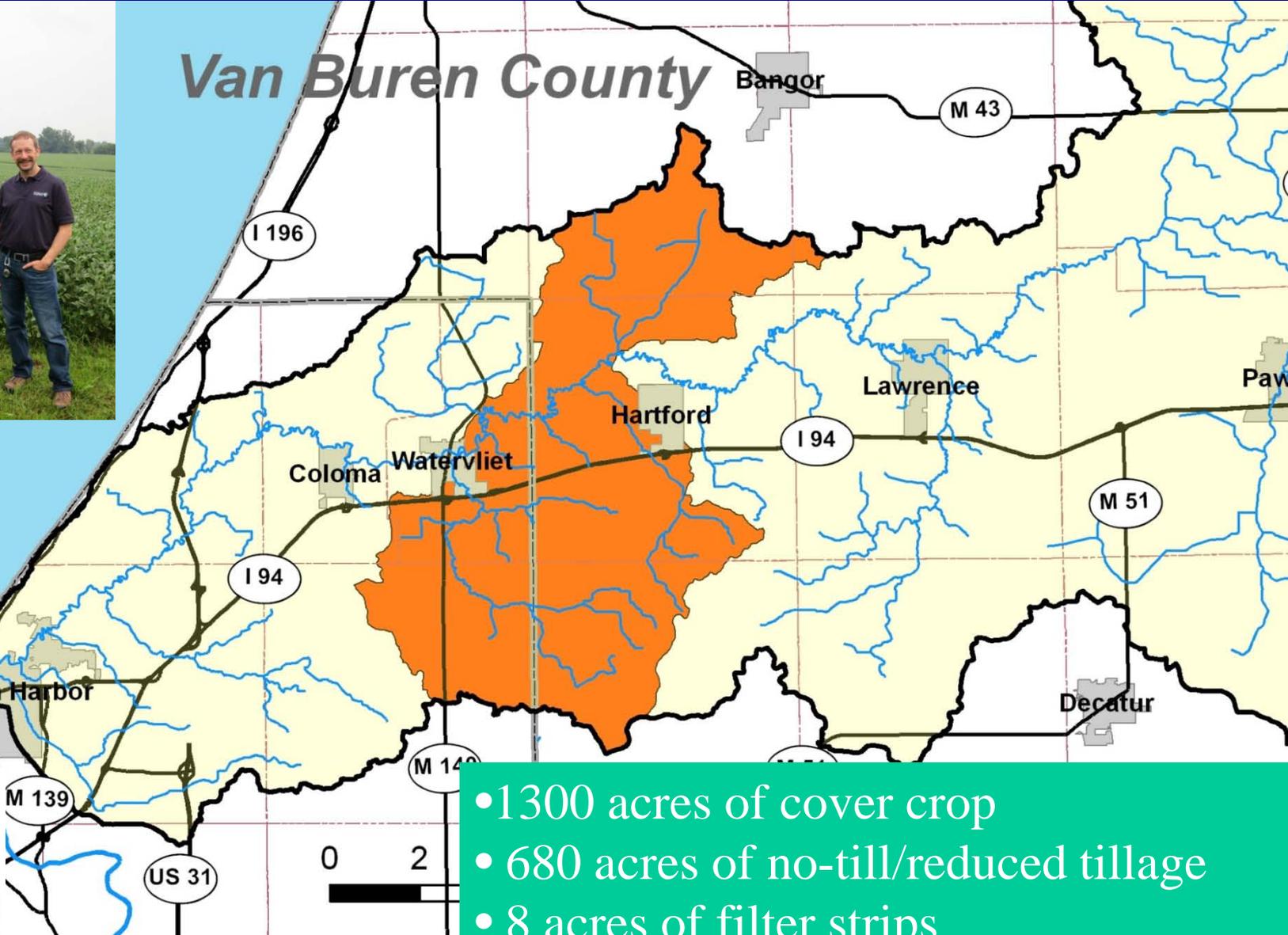
Rank	Potential Landowner	Wetland Acres
1	NELSON FAMILY TRUST	232
2	COUNTY OF CASS, MI	193
3	WESTPHAL, CHARLES R	219
4	LARF LLC	141
5	STATE OF MICHIGAN DNR	148
6	WARREN, DWAIN K & CYNTHIA J	80
7	MC KENZIE, DARLENE J TRUST	132
8	BRANCALEON, TEENA	75
9	SPARKS CEDARLEE FARM	81
10	PAPANDREA, STEPHEN	65

Agriculture >70%



Source: USGS National Land Cover Dataset.

BMP Auction – Bidding for Conservation



- 1300 acres of cover crop
 - 680 acres of no-till/reduced tillage
 - 8 acres of filter strips
- Erosion reduced **1,400 tons**

Regional Conservation Partnership Program

\$6.8 million for cost
share for farmers
over next 5 years

70,000 tons of
sediment reduced



Reducing Sediment in the Harbor



Better agricultural practices



Wetland Restoration and Protection



**Road Stream/
Crossing Repair**
Berrien & Van Buren Co



Dam Removals

**Better Development
(Low Impact Development)**

