

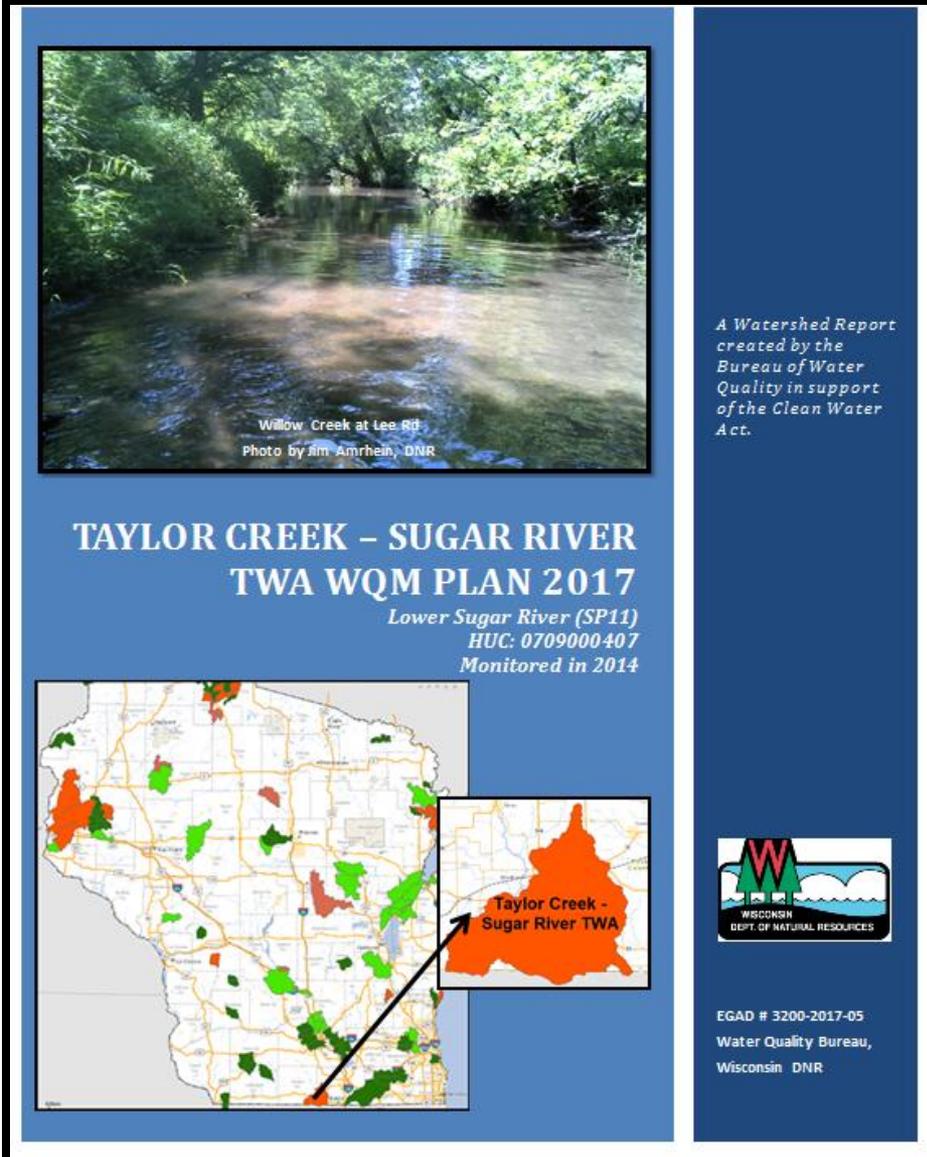
Taylor Creek – Sugar River TWA WQM Plan 2017

Lower Sugar River (SP11)



Jim Amrhein, DNR Stream Biologist

 Throughout the presentation when you see this symbol,  put your cursor over the box to read more detail.



Willow Creek at Lee Rd
Photo by Jim Amrhein, DNR

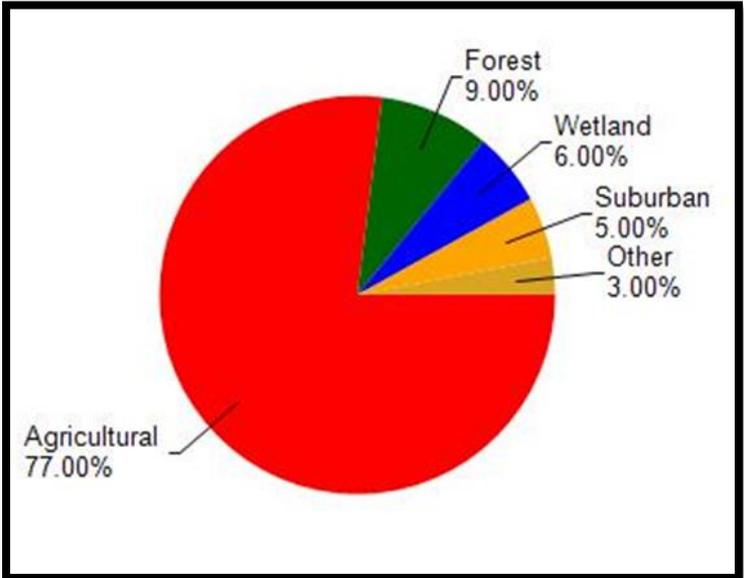
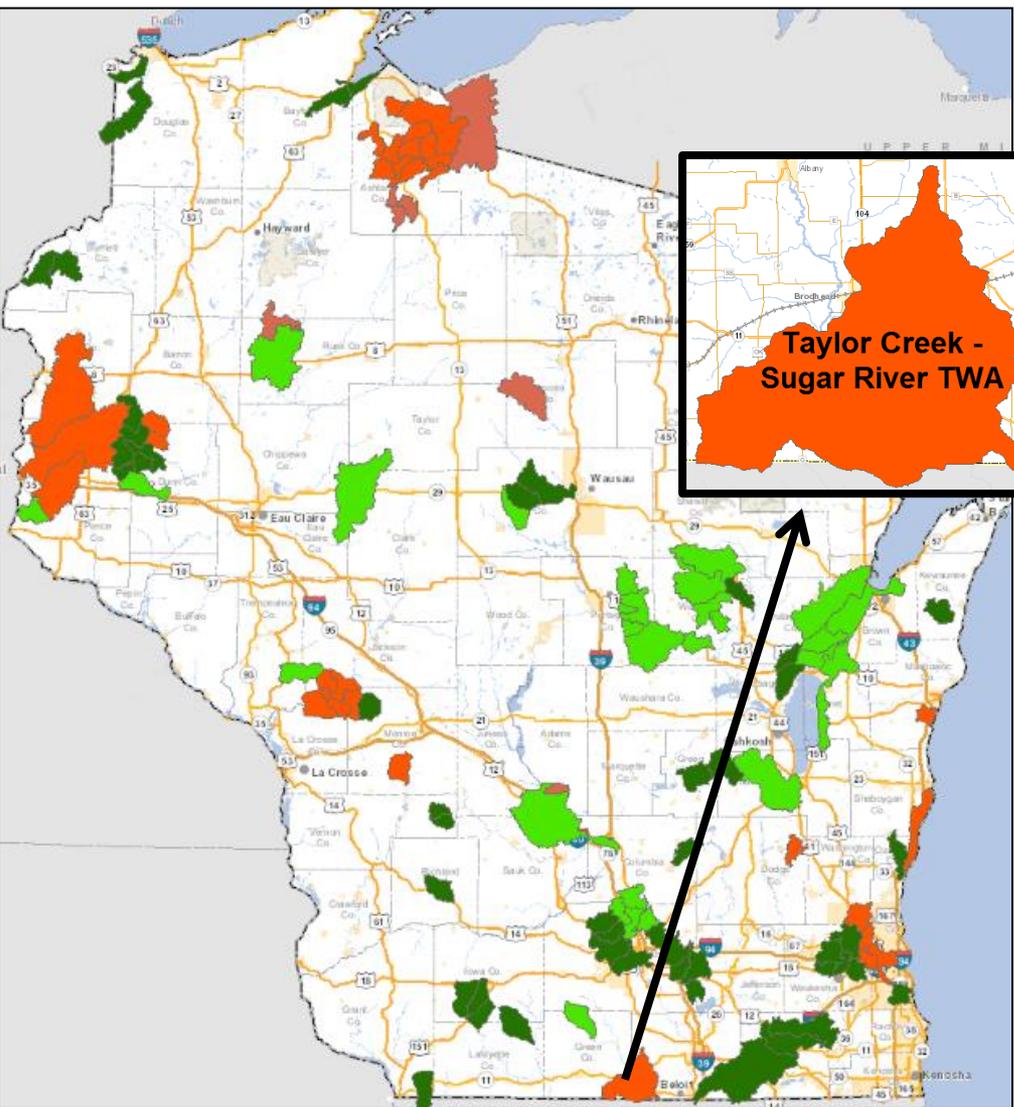
**TAYLOR CREEK – SUGAR RIVER
TWA WQM PLAN 2017**
*Lower Sugar River (SP11)
HUC: 0709000407
Monitored in 2014*


WISCONSIN
DEPT. OF NATURAL RESOURCES

EGAD # 3200-2017-05
Water Quality Bureau,
Wisconsin DNR

*A Watershed Report
created by the
Bureau of Water
Quality in support
of the Clean Water
Act.*

Project Location and Land Use



Land use in the Sugar River Watershed (the larger catchment) is dominated to a great extent by agricultural use. This intensive land use places a toll on the condition of resources in the area; yet, management actions are available to maintain and improve the conditions of streams in the area.



Purpose

- Determine if streams are achieving attainable uses.
 - List waters not meeting attainable use
- Determine contemporary status of Taylor Creek HUC 10 in the Lower Sugar River watershed. Document overall health of the watershed.
- Collect fish, habitat, macroinvertebrate, and water chemistry.
- Use information to guide management recommendations and decisions.



Study Results – Water Chemistry

	Detection Limit	WI Criteria or Guidance	Sample Count	% Non Detect	% Exceed Criteria	Min	Max	Mean
TP (mg/L)	0.075	262		0%	90%	0.0	27.7	0.4
TKN (mg/L)	0.014		262	0%		0.2	8.6	1.3
NH3 (mg/L)	0.015	19.89	262	8%	0%	0.0	1.5	0.1
NO ₃ NO ₂ -N (mg\l)	0.019		262	16%		0.0	5.2	0.5
BOD (mg\l)	no data		262	n/a		0.05	19.90	1.72
TSS (mg/L)	2.0		262	4%		1.00	152.00	10.61
Chloride (mg\l)	1.0	757	262	0%	0%	1.40	308.00	31.48
Chlorophyll-a (µg/L)	0.26		60	5%		0.13	104.00	10.25

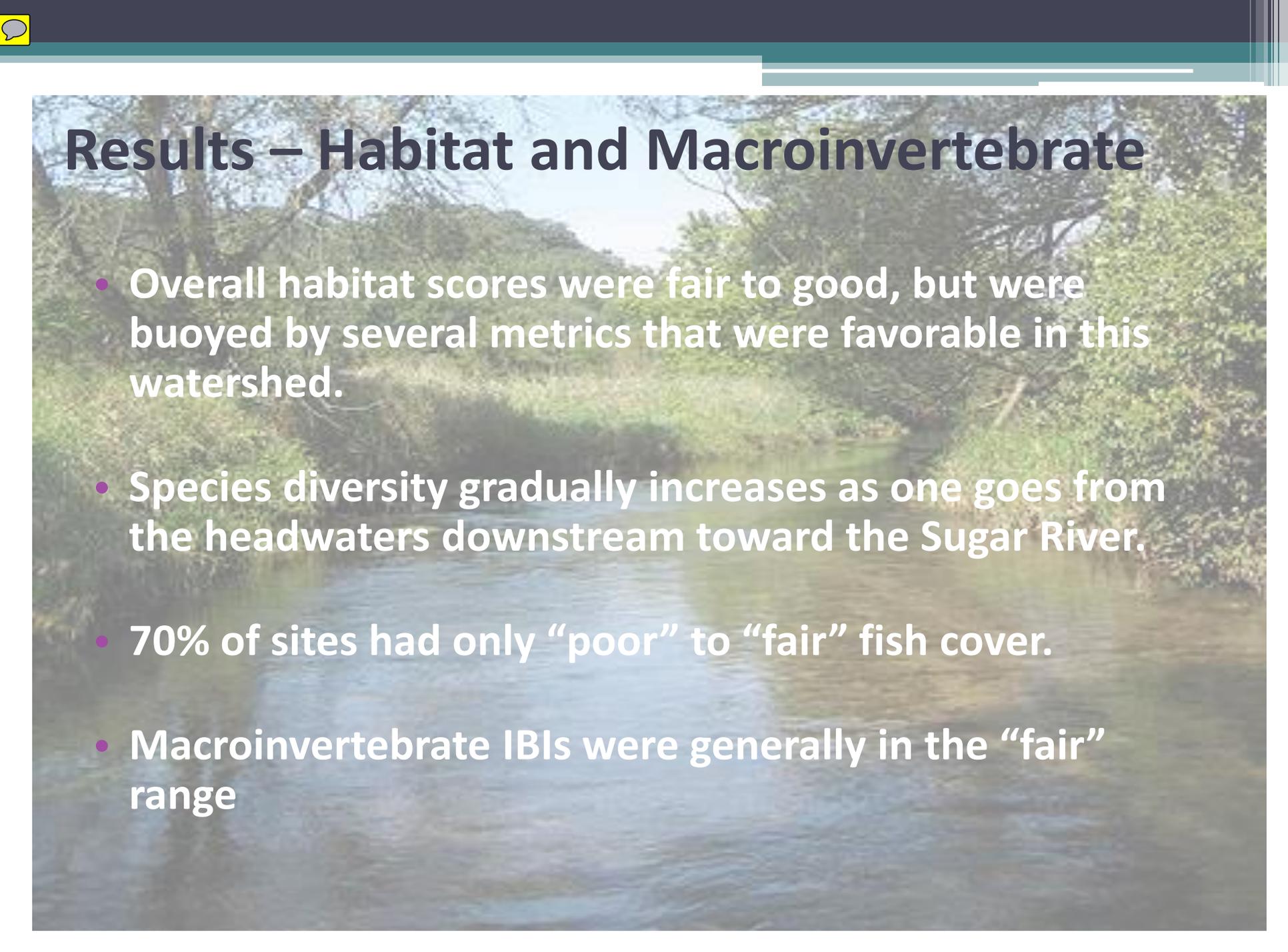
Study Results – Fish and Natural Community

- The great majority of the transitional species (brook stickleback, creek chubs, and white sucker) found in these streams are tolerant to low dissolved oxygen and/or disturbed habitat.
- The cool water IBIs (Lyons, 2012), when applied to the natural community indicated by the fishery assemblage, rates the fishery of most of these systems to be “good” to “excellent”, despite the prevalence of species that are tolerant to habitat disturbance and lower water quality.



Iowa Darter Photo by John Lyons

John Lyons



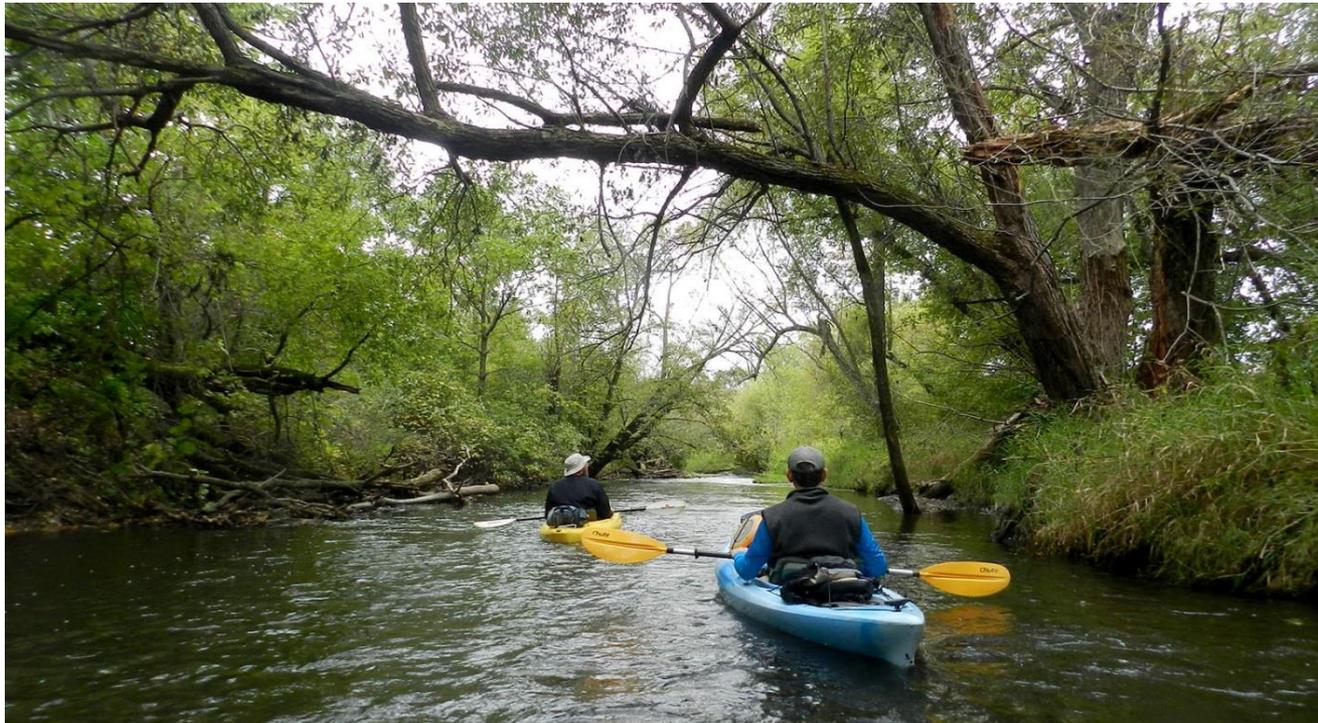
Results – Habitat and Macroinvertebrate

- Overall habitat scores were fair to good, but were buoyed by several metrics that were favorable in this watershed.
- Species diversity gradually increases as one goes from the headwaters downstream toward the Sugar River.
- 70% of sites had only “poor” to “fair” fish cover.
- Macroinvertebrate IBIs were generally in the “fair” range



Management Priorities

- Stream stabilization
- Enhancement and restoration of aquatic habitat
- Reduction of sediment and nutrient runoff
- Reduction of erosion
- Encourage and facilitate partnerships and education outreach





Recommendations

- Collaborate on outreach efforts with landowners in the watershed.
 - Environmental education programs in Juda and Brodhead school districts.
- Lower Sugar River Watershed Association should apply for DNR grants to engage with landowners.
- Apply for funds to create educational programs focused on woody debris in Spring Creek for fish habitat.

For more information:

Contact:

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- [Link to the TWA WQM Plans website](#)
- [Link to Draft Report](#)