

## Wisconsin Department of Natural Resources SWIMS Project Summary

### General Project Information

<b>Project ID:</b>	East_TWA_6_2017
<b>Name:</b>	Bear Lake TWA, Waupaca County
<b>Type:</b>	Targeted Watershed Approach
<b>Subtype:</b>	Effectiveness (BMP, Other)
<b>Status:</b>	COMPLETE
<b>Start Date:</b>	3/1/2017
<b>End Date:</b>	6/30/2018
<b>Purpose:</b>	This project will evaluate water quality improvement efforts made in the Bear Lake sub-watershed of the Lower Little Wolf River 319 Watershed by Waupaca County LWCD and NRCS.[TWA HUC12-040302021704]. This is a Section 319 project.
<b>Objective:</b>	The Bear Lake sub-watershed was selected as a National Water Quality Initiative Pilot Project (NRCS EQIP funds) for 2017 to reduce the impact of non-point source pollutants. The sub-watershed was also one of the highest P loads in the Upper Fox-Wolf TMDL preliminary modeling. This TWA will provide baseline water quality data in support of NRCS's and Waupaca County's efforts. [TWA HUC 12-040302021704]  This project will collect TP and TSS samples six times (twice in May and June, once in July and October) at 9 locations in the watershed in 2017. Fish and aquatic macroinvertebrate IBI surveys will be conducted at 6 locations. Quantitative habitat assessments will be conducted at 6 locations as well. Monitoring will occur in 5 WBICs: 5018549, 5018179, 280700, 280800, & 280100.  <b>Comments:</b> This is a continuation of the Lower Little Wolf River 319 TWA project in 2015. This is a one-year project.  <b>Outcome:</b> Water quality monitoring will be conducted at 9 locations and final report written by 12/31/2018.  Aquatic macroinvertebrates will be collected at 6 locations in October 2017. One day of sampling and 1 day to preserve and transport to UWSP. All data will be entered into SWIMS database by UWSP staff by 12/30/2018. Quantitative Habitat surveys will be conducted at 6 locations in FY18. Three sampling days in FY18 are needed to complete this monitoring and 1 day to enter the data into database. All data will be entered into FMDB by Water Resources staff by 12/31/2017. Fish surveys will be conducted at 5 locations in FY18. Two days of sampling will be completed for the field surveys from July through September 2017. All fish data will be entered into the FMDB by Water Resources staff by 12/31/2017. Thermistors will be deployed at 6 locations from May to October 2017 to collect temperature data. Two sampling days will occur to deploy and retrieve the thermistors. All data will be uploaded into SWIMS by Water Resources staff by 12/31/2017. Inorganic chemistry (TP and TSS) monitoring will be conducted at 9 locations. Sampling will occur twice per month May and June 2017 and once per month in July and October 2017 by Water Resources Staff. All samples will be sent to Wisconsin State Lab of Hygiene for analysis and will be entered by the lab into SWIMS by 12/31/2017. A final report will be written and attached to this project by 12/31/2018.  <b>Study Design:</b> Water quality monitoring will be conducted at 9 locations Aquatic macroinvertebrates 6 locations in October 2017. Quantitative Habitat surveys will be conducted at 6 locations in FY18. Fish surveys will be conducted at 5 locations in FY18. Two days of sampling will be completed for the field surveys from July through September 2017. thermistors will be deployed at 6 locations from May to October 2017 to collect temperature data. Two sampling days will occur to deploy and retrieve the thermistors. Inorganic chemistry (TP and TSS) monitoring will be conducted at 9 locations.  <b>QA Measures:</b> Standard SOPs will be followed throughout the project.

### People

Name	Role	Status	Start Date	End Date	Organization	Comments
BOLHA, DAVID A	COORDINATOR	ACTIVE	3/1/2017	6/30/2020	Wisconsin DNR	
Helmuth, Lisa D	COORDINATOR	INACTIVE	3/1/2017	6/30/2020	Wisconsin DNR	
Kleeman, ZACHARY K	TEAM_MEMBER	COMPLETE	3/1/2017	6/30/2018	Wisconsin DNR	

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### Project Statuses

Date	Reported By	Status	Comments
1/12/2017	DAVID BOLHA	Proposed	
12/12/2017	DAVID BOLHA	Progress: 75-100% Complete	Monitoring completed in 2017. Monitoring results will not be complete until summer 2018. Following the return of monitoring results, a project report will be completed by 12/31/2018.
12/20/2018	DAVID BOLHA	Complete	
9/11/2019	Lisa Helmuth	Final Report Needed	<p>Lisa to assign EGAD Numbers to :</p> <ol style="list-style-type: none"> <li>1. Priority Watershed Water Quality Evaluation for the Lower Little Wolf River.</li> <li>2. Bear Lake Targeted Watershed Assessment Report, Bear Lake HUC 12 Watershed is part of the Little Wolf River HUC 10.</li> <li>3. Package reports (add text, etc.) for USEPA certification.</li> </ol>
9/11/2019	Lisa Helmuth	Public Comment Period	<p>Bear Lake TWA</p> <p>SWIMS Station ID Site Name Fish IBI Score Condition Category            Natural Community            693151 Little Wolf River at Cth C 100 Excellent Cool-Warm Mainstem            693147 Little Wolf River at Hwy 22 Near Symco 90 Excellent Cool-Warm Mainstem            693141 Little Wolf River at Cth BB 90 Excellent Cool-Warm Mainstem            693128 Whitcomb Creek – US Cth E 70 Good Coldwater            10016223 Whitcomb Creek – Cth OO 90 Excellent Cool-Warm Mainstem            693154 North Fork Blake Creek – US Cth E 80 Good Coldwater            10013573 South Fork Blake Creek – US Cth E 100 Excellent Cool-Cold Mainstem            693129 Blake Creek at SH 22 90 Excellent Cool-Warm Mainstem            693143 Thiel Creek at Swan Rd 20 Poor Cool-Warm Mainstem            693142 Spiegelberg Creek at Sh22 Wayside and Cemetery Rd 30 Fair Cool-Warm Mainstem            693130 Spaulding Creek at Cth G 50 Fair Coldwater            693145 Little Creek at Cth O 20 Poor Cool-Warm Mainstem            693131 Shaw Creek at Cth O 20 Poor Cool-Warm Mainstem            Table 14: Fish Survey Results in the Lower Little Wolf River Watershed Conducted in July through September 2015.</p>

# Wisconsin Department of Natural Resources

## SWIMS Project Summary

### Project Status Detail

Answer Set: DEFAULT

Question	Answer
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1. Number of Sample Sites (Enter the station IDs if you know them).

2. Number of Sample Events (Indicate how many trips into the field you anticipate for this project).

3. Proposed Dates for Sample Collection

4. List applicable databases and who will enter data?

5. Did you receive competitive projects funding in the previous year?

6. If yes to question 5, did you complete the projects including data entry and reports as necessary? If not, why not?

7. Reviewer Notes: Identify questions or issues with project (use during review period)

8. Reviewer Decision: Is this project recommended for funding?

### Actions

Action	Detailed Description	Start Date	End Date	Status
Grant Awarded	This project will evaluate water quality improvement efforts made in the Bear Lake sub-watershed of the Lower Little Wolf River 319 Watershed by Waupaca County LWCD and NRCS.[TWA HUC12-040302021704]. This is a Section 319 project.	3/1/2017	6/30/2018	COMPLETE
Water Quality Planning	The monitoring in 2017 demonstrates water quality in the Bear Lake Watershed ranges from poor to fair, indicating significant impacts from environmental degradation. Some of the land use characteristics observed during the 2017 monitoring project that can have a negative impact to the water quality of the streams in the Bear Lake Watershed were limited buffer protection along the stream corridors, eroding streambanks, wetland drainage, cropland erosion, channelization, tile drainage, presence of aquatic invasive species, and sedimentation of fish and aquatic life habitat (Photo 1-4). There are opportunities to install practices to lower the nutrients and sediment reaching the Little Wolf River. Efforts should be made to continue to work with landowners, farmers, municipalities, the County LWCD and NRCS staff to promote protection and restoration of the streams and wetlands by practices including, but not limited to, streambank and buffer protection, cover crops, nutrient management planning, reduced tillage, wetland restoration, and water and sediment control basins	3/1/2017	6/30/2025	IN_PROGRESS
Monitor Targeted Watershed Area (TWA)	This project will evaluate water quality improvement efforts made in the Bear Lake sub-watershed of the Lower Little Wolf River 319 Watershed by Waupaca County LWCD and NRCS.[TWA HUC12-040302021704]. This is a Section 319 project.	3/1/2017	6/30/2018	COMPLETE

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Best Management Practices, Implement	Efforts should be made to continue to work with landowners, farmers, municipalities, the County LWCD and NRCS staff to promote protection and restoration of the streams and wetlands by practices including, but not limited to, streambank and buffer protection, cover crops, nutrient management planning, reduced tillage, wetland restoration, and water and sediment control basins	3/1/2017	6/30/2018	PROPOSED
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Details: Parameter	Value/Amount	Units	Comments
BMP Implementation			
I & E Activities			
PCBs			
Permit Modification			
Products Developed: Stormwater Plan			
Report Writeup			
Stormwater Goals Addressed: Reduce TSS			
Streambank & Shoreline Protection: Pollutant load reduction			
Total Nitrogen			
Total Phosphorus			
Total Suspended Solids			
Watershed Outreach, Planning			

Monitor Water Quality or Sediment	This project will evaluate water quality improvement efforts made in the Bear Lake sub-watershed of the Lower Little Wolf River 319 Watershed by Waupaca County LWCD and NRCS.[TWA HUC12-040302021704]. This is a Section 319 project.	3/1/2017	6/30/2018	COMPLETE
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Details: Parameter	Value/Amount	Units	Comments
Total Nitrogen			
Total Phosphorus			
Total Suspended Solids			

### Monitoring Stations

Station ID	Name	Comments
10048066	Fountain Creek US Symco Rd	
10048065	Little Creek at Cattle Crossing 3200m US County O	
693145	Little Creek at Cth O	
10048063	Thiel Creek US County N	
10048062	Thiel Creek US North Rail Rd	
693143	Thiel Creek at Swan Road	
10048064	Unnamed Trib (WBIC 5018179) to Little Wolf River US County O	

10048067	Unnamed Trib (WBIC 5018549) to Little Wolf River US County N	
10048061	Unnamed wetland ditch to Spiegelberg Cr US Cemetery Rd	

Assessment Units

WBIC	Segment	Local Name	Official Name
279700	1	Bear Lake	Bear Lake
280100	1	Thiel Creek	Thiel Creek
280700	1	Little Creek	Little Creek
280800	1	Fountain Creek	Fountain Creek
5018179	1	Unnamed Stream	Unnamed
5018549	1	Unnamed Stream	Unnamed

Lab Account Codes

Account Code	Description	Start Date	End Date
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Forms

Form Code	Form Name
FIELD CHEMISTRY FORM	Field Chemistry Form
INORGANIC	Inorganic Lab - Field Data
INTEGRITY_OF_LOCAL	Local Factors Impacting Water Integrity
MACROINVERT_BASIC	Macroinvertebrate Survey Basic Form

Methods

Method Code	Method Description
FISH SURVEY BASELINE PROTOCOLS	Fish Survey Baseline Protocols 2004
MACROINVERTEBRATE BASELINE PROTOCOLS	Macroinvertebrate Baseline D-frame Kick Net 2004
GRAB SAMPLE	Water Grab Sample Guidelines and Procedures 2005

Fieldwork Events

Start Date	Status	Field ID	Station ID	Station Name
5/10/2017 13:40	COMPLETE	NA	693145	Little Creek at Cth O
5/10/2017 14:00	COMPLETE	NA	10048066	Fountain Creek US Symco Rd
5/10/2017 15:15	COMPLETE	NA	10048065	Little Creek at Cattle Crossing 3200m US County O
5/10/2017 15:56	COMPLETE	NA	693143	Thiel Creek at Swan Road
5/10/2017 16:15	COMPLETE	NA	10048062	Thiel Creek US North Rail Rd
5/10/2017 16:30	COMPLETE	NA	10048063	Thiel Creek US County N
5/10/2017 17:00	COMPLETE	NA	10048061	Unnamed wetland ditch to Spiegelberg Cr US Cemetery Rd

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5/10/2017 17:20	COMPLETE	NA	10048067	Unnamed Trib (WBIC 5018549) to Little Wolf River US County N
5/10/2017 17:30	COMPLETE	NA	10048064	Unnamed Trib (WBIC 5018179) to Little Wolf River US County O
5/22/2017 11:45	COMPLETE	145141019	693145	Little Creek at Cth O
5/22/2017 12:40	COMPLETE	145141011	10048066	Fountain Creek US Symco Rd
5/22/2017 13:15	COMPLETE	145141015	10048065	Little Creek at Cattle Crossing 3200m US County O
5/22/2017 13:50	COMPLETE	145141035	10048064	Unnamed Trib (WBIC 5018179) to Little Wolf River US County O
5/22/2017 14:20	COMPLETE	145141039	10048067	Unnamed Trib (WBIC 5018549) to Little Wolf River US County N
5/22/2017 15:15	COMPLETE	145141043	10048061	Unnamed wetland ditch to Spiegelberg Cr US Cemetery Rd
5/22/2017 15:45	COMPLETE	145141031	693143	Thiel Creek at Swan Road
5/22/2017 16:10	COMPLETE	145141027	10048062	Thiel Creek US North Rail Rd
5/22/2017 16:35	COMPLETE	145141023	10048063	Thiel Creek US County N
6/5/2017 10:00	COMPLETE	145419106	10048066	Fountain Creek US Symco Rd
6/6/2017 10:25	COMPLETE	145419114	693145	Little Creek at Cth O
6/6/2017 11:00	COMPLETE	145419110	10048065	Little Creek at Cattle Crossing 3200m US County O
6/6/2017 11:40	COMPLETE	145419130	10048064	Unnamed Trib (WBIC 5018179) to Little Wolf River US County O
6/6/2017 11:55	COMPLETE	145419134	10048067	Unnamed Trib (WBIC 5018549) to Little Wolf River US County N
6/6/2017 13:09	COMPLETE	145419138	10048061	Unnamed wetland ditch to Spiegelberg Cr US Cemetery Rd
6/6/2017 13:30	COMPLETE	145419126	693143	Thiel Creek at Swan Road
6/6/2017 13:45	COMPLETE	145419122	10048062	Thiel Creek US North Rail Rd
6/6/2017 14:00	COMPLETE	145419118	10048063	Thiel Creek US County N
6/20/2017 10:00	COMPLETE	NA	10048066	Fountain Creek US Symco Rd
6/20/2017 10:45	COMPLETE	NA	693145	Little Creek at Cth O
6/20/2017 11:20	COMPLETE	NA	10048065	Little Creek at Cattle Crossing 3200m US County O
6/20/2017 12:45	COMPLETE	NA	10048062	Thiel Creek US North Rail Rd
6/20/2017 13:30	COMPLETE	NA	10048063	Thiel Creek US County N
6/20/2017 14:00	COMPLETE	NA	693143	Thiel Creek at Swan Road
6/20/2017 14:30	COMPLETE	NA	10048061	Unnamed wetland ditch to Spiegelberg Cr US Cemetery Rd
6/20/2017 15:15	COMPLETE	NA	10048064	Unnamed Trib (WBIC 5018179) to Little Wolf River US County O
6/20/2017 15:50	COMPLETE	NA	10048067	Unnamed Trib (WBIC 5018549) to Little Wolf River US County N
7/12/2017 10:15	COMPLETE	NA	10048066	Fountain Creek US Symco Rd
7/12/2017 11:05	COMPLETE	NA	10048065	Little Creek at Cattle Crossing 3200m US County O
7/12/2017 11:45	COMPLETE	NA	693145	Little Creek at Cth O

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7/12/2017 12:05	COMPLETE	NA	10048064	Unnamed Trib (WBIC 5018179) to Little Wolf River US County O
7/12/2017 12:40	COMPLETE	NA	10048067	Unnamed Trib (WBIC 5018549) to Little Wolf River US County N
7/12/2017 13:50	COMPLETE	NA	10048063	Thiel Creek US County N
7/12/2017 14:20	COMPLETE	NA	10048062	Thiel Creek US North Rail Rd
7/12/2017 15:00	COMPLETE	NA	693143	Thiel Creek at Swan Road
7/12/2017 15:30	COMPLETE	NA	10048061	Unnamed wetland ditch to Spiegelberg Cr US Cemetery Rd
10/11/2017	COMPLETE		10048067	Unnamed Trib (WBIC 5018549) to Little Wolf River US County N
10/11/2017	COMPLETE		10048064	Unnamed Trib (WBIC 5018179) to Little Wolf River US County O
10/11/2017	COMPLETE		10048062	Thiel Creek US North Rail Rd
10/11/2017	COMPLETE		10048066	Fountain Creek US Symco Rd
10/11/2017 9:25	COMPLETE	FOUNTAIN CREEK US SY	10048066	Fountain Creek US Symco Rd
10/11/2017 10:20	COMPLETE	LITTLE CREEK AT CTH	693145	Little Creek at Cth O
10/11/2017 11:30	COMPLETE	LITTLE CREEK AT CATT	10048065	Little Creek at Cattle Crossing 3200m US County O
10/11/2017 12:00	COMPLETE	UNNAMED TRIB (WBIC50	10048064	Unnamed Trib (WBIC 5018179) to Little Wolf River US County O
10/11/2017 14:10	COMPLETE	UNNAMED WETLAND DITC	10048061	Unnamed wetland ditch to Spiegelberg Cr US Cemetery Rd
10/11/2017 14:38	COMPLETE	THEIL CREEK AT SWAN	693143	Thiel Creek at Swan Road
10/11/2017 14:38	COMPLETE	UNNAMED TRIB (WBIC	10048067	Unnamed Trib (WBIC 5018549) to Little Wolf River US County N
10/11/2017 15:10	COMPLETE	THEIL CREEK US NORTH	10048062	Thiel Creek US North Rail Rd
10/11/2017 15:45	COMPLETE	THEIL CREEK US COUNT	10048063	Thiel Creek US County N
10/12/2017	COMPLETE		10048065	Little Creek at Cattle Crossing 3200m US County O
	RECEIVED		10048063	Thiel Creek US County N

### Documents

Title	Description	Author	Published	Comments
Bear Lake Sub-Watershed 9 Key Element Report	9KE for the Bear Lake sub-watershed of the Little Wolf River HUC 10 Watershed. Approved by DNR and EPA in 2018	Waupaca County LWCD	1/1/2018	
Bear Lake TWA Plan Online		Bolha, Dave	7/28/2020	
Bear Lake, Waupaca County				
Targeted Watershed Assessment of the Bear Lake Watershed, Waupaca County, Wisconsin	Report of results from 2017 monitoring within the Bear Lake Sub-watershed of the Little Wolf River Watershed.	David Bolha, Wisconsin DNR	6/23/2020	

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Budget					
Budget Description: FY2017			Start Date: 7/1/2016		End Date: 6/30/2017
Code	Description	Quantity	Units	Unit Cost	Total Cost Comments
FTE	FTE Hours	140	Hours	\$0.00	\$0.00
LTE SAL	LTE Salary	130	Hours	\$14.25	\$1,852.50
LTE FR	LTE Fringe				\$457.57
LTE IND	LTE Indirect				\$373.54
LTE TOT	LTE Total Cost				\$2,683.61
SUPPLY	Supplies	1		\$300.00	\$300.00 Alcohol, Shipping cost, ice
EQUIP	Equipment				\$0.00
MILEAGE	Mileage	1250	Miles	\$0.64	\$800.00
MEAL	Meals	24	Meals	\$10.00	\$240.00
LODGE	Lodging				\$0.00
TRAVEL	Travel Total				\$1,040.00
BUG	Bug Contracts	5		\$65.00	\$325.00
OTHER	Other Contracts				\$0.00
USGS	USGS Costs				\$0.00
TOTAL	Total Cost (excludes SLOH)				\$4,348.61

Total WSLH Lab Costs: \$0.00  
Total Budget: \$4,348.61



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Budget Description: FY2018			Start Date: 7/1/2017	End Date: 6/30/2018
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Code	Description	Quantity	Units	Unit Cost	Total Cost	Comments
FTE	FTE Hours	60	Hours	\$0.00	\$0.00	
LTE SAL	LTE Salary	100	Hours	\$14.25	\$1,425.00	
LTE FR	LTE Fringe				\$351.98	
LTE IND	LTE Indirect				\$287.34	
LTE TOT	LTE Total Cost				\$2,064.31	
SUPPLY	Supplies	1		\$100.00	\$100.00	Shipping cost, ice, batteries
EQUIP	Equipment				\$0.00	
MILEAGE	Mileage	500	Miles	\$0.64	\$320.00	
MEAL	Meals	7	Meals	\$10.00	\$70.00	
LODGE	Lodging				\$0.00	
TRAVEL	Travel Total				\$390.00	
BUG	Bug Contracts	6		\$65.00	\$390.00	
OTHER	Other Contracts	1		\$200.00	\$200.00	DPI
USGS	USGS Costs				\$0.00	
TOTAL	Total Cost (excludes SLOH)				\$3,144.31	

Total WSLH Lab Costs: \$0.00

Total Budget: \$3,144.31

Combined Budgets: \$7,492.92

Combined WSLH: \$0.00

Combined Total: \$7,492.92

Funding					
Organization	Source	Type	Amount	Start Date	End Date