

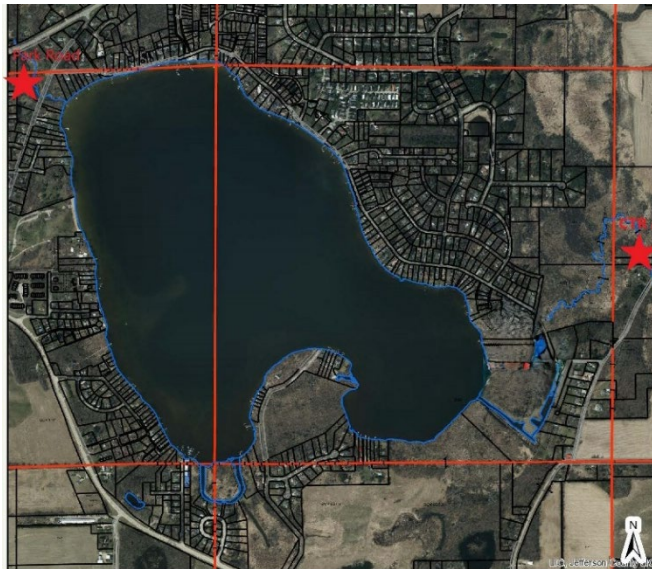
Macroinvertebrate Monitoring Summary Report 2025

Introduction

In 2025, the Lake Ripley Management District received a Surface Water grant from the Wisconsin Department of Natural Resources for “Lake Ripley Habitat Assessment”. One of the goals listed within the grant was to conduct biological monitoring surveys within our streams. This activity included monitoring macroinvertebrates in the inlet stream at two different locations to assess stream health. This activity fulfilled a comprehensive planning requirement of the District’s 10-year Lake Management Plan.

Aquatic macroinvertebrates are small animals without backbones. Their presence or absence can reflect a stream’s general conditions. Certain macroinvertebrates respond differently to the physical, chemical, and biological conditions within a stream. These animals are relatively immobile, so they cannot escape either short or long-term pollution exposure. This is important when assessing long-term pollution events within the stream¹.

Macroinvertebrate samples were collected at two different locations within Lake Ripley’s only inlet stream. The County Road A (CR A) site is upstream of the lake and is located just west of the Lake Ripley Management District (LRMD) Preserve parking lot. The Park Road site is located along Park Road, to the west of the culvert connecting the outlet to the Koshkonong Creek. These samples were collected twice throughout the year – once in spring and once in fall.



Picture 1: Map of macroinvertebrate sampling locations.

¹ 2015 University of Wisconsin. DNR PUB WT-755. This publication is part of a seven-series set, “Water Action Volunteers -Volunteer Stream Monitoring Factsheet Series”



Picture 3: County Road A sampling site.



Picture 2: Park Road sampling site.

Methods

Macroinvertebrates were collected in the spring and fall according to methods outlined in the Water Action Volunteers (WAV) Biotic Index (BI) Factsheet² using a D-frame kicknet. The specimens collected were identified to the taxonomic level of effort required to classify organisms according to the WAV BI field data sheet.

Each site was provided with a BI score rating based on the organisms collected and identified (Table 1).

Biotic Index Score Interpretation	
Rating	Score
Excellent	3.6 and up
Good	2.6-3.5
Fair	2.1-2.5
Poor	1.0-2.0

Table 1: Biotic Index Score Interpretation

Results and Discussion

April 24, 2025, Sampling Event

On April 24, 2025, the crew sampled County Road A and Park Road for macroinvertebrates. It was a partly sunny day with light rain. No flows were recorded at either site as the flow meter was not working during this sampling event.

At the County Road A site, the stream condition was normal. The air temperature was 21.8°C with the water temperature being recorded as 16.2°C. Dissolved oxygen parameters were measured with a Hach kit. Dissolved oxygen measured in at 10.11 mg/l, 104.9% saturation, with a pH of 7.3. Macroinvertebrates found at this site were caddisfly larva, mayfly larva, fingernail clams, amphipods/scuds, pouch snails and aquatic sowbugs/isopods. This site scored a 2.6, for a 'good' rating.

² 2015 University of Wisconsin. DNR PUB WT-755. This publication is part of a seven-series set, "Water Action Volunteers -Volunteer Stream Monitoring Factsheet Series"

At the Park Road site, the stream condition was normal. The air temperature was 20.6°C with the water temperature being recorded as 16.6°C. Dissolved oxygen parameters were measured with a Hach kit. Dissolved oxygen measured in at 11.18 mg/l, 116.5% saturation, with a pH of 8.3. Macroinvertebrates found at this site were caddisfly larva, mayfly larva, damselfly larva, fingernail clams, amphipods/scuds, orb or gilled snails, bloodworm midge larva, and aquatic sowbugs/isopods. This site scored 2.25, for a 'fair' rating.



Picture 4: Bluntnose minnow found at Park Road during the April sampling event.



Picture 5: Park Road during the April sampling event.



Picture 6: County Highway A site.

Station Info	WAV Station Number*:		Date*:	04 / 24 / 2025	Time*:	11:10	AM	PM
	WAV Station Name*:	Co Hwy A						
	Team Member Name(s)*:	Andrew Sabai						

Weather	Weather: Sunny ☐ Partly Sunny ☒ Cloudy ☐ Rain ☐ Snow ☐ Thunderstorms ☐						Sampling Date: Primary ☐ Safety ☐ Other ☐		
	Weather over past two days: <u>light rain</u>						(choose one) ☐ ☐ ☐		
	Current Stream Condition: Normal ☒ Flooding ☐ Dry ☐ Stagnant ☐ Frozen ☐ Other								
	Observations: _____								

Parameters Tested	Your Results				Units
Air Temperature	24.8				°C
Water Temperature	16.2				°C
Dissolved Oxygen (D.O.) Sampling Method	Choose One: Hach Kit ☒ LaMotte Kit ☐ YSI 550A Meter ☐ Other:				
D.O. mg/L	No. of Titration Drops:	No. of Plastic Measuring Tubes:	Dissolved Oxygen Content: 10.11		mg/L
D.O. % Saturation	104.9				%
pH	7.3				-
Transparency	Tube Length (select one)	Trial #1	Trial #2	Average	-
	60 cm ☐ 100 cm ☐ 120 cm ☐ 6.57 NTU				cm
Specific Conductance	ECTestr reading: 490 (choose units displayed) ms/cm ☐ µS/cm ☒				
Chloride Sample	Collected? Y ☐ N ☒	Point/Outfall Number:			
Total Phosphorus Sample	Collected? Y ☐ N ☒	Point/Outfall Number:			

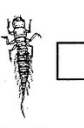
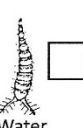
WAV Monitoring Parameters	Was streamflow monitored this sampling event? Yes ☐ No ☒								Length Assessed ft	
	If No, why not? Flow meter not working								Stream Width*: ft	
	Stream Depth Measurements									
	Point	Depth (10 th Feet)	Point	Depth (10 th Feet)	Depth Conversion Chart					
					Ft/in	10 th Ft	Ft/in	10 th Ft		
	1	0	11		¾-¾	0.05	6¾-6¾	0.55	Velocity Float Trials	
	2		12		1-1½	0.1	7-7¾	0.6	Trial Number	Time (Seconds)
	3		13		1¾-2	0.15	7½-8	0.65	1	
	4		14		2¾-2¾	0.2	8¾-8¾	0.7	2	
	5		15		2¾-3¾	0.25	8¾-9¾	0.75	3	
6		16		3¾-3¾	0.3	9¾-9¾	0.8	4		
7		17		4-4¾	0.35	10-10¾	0.85	Velocity Correction Factor		
8		18		4¾-5	0.4	10½-11	0.9	Choose the bottom type:		
9		19		5¾-5¾	0.45	11¾-11¾	0.95	Rough	0.8 ☐	
10		20		5¾-6¾	0.5	11¾-12	1.0	Smooth	0.9 ☐	

Monitoring Equipment Calibration	D.O. Meter: Yes ☒ No ☐ pH Meter: Yes ☒ No ☐ ECTestr: Yes ☒ No ☐
Equipment Cleaning and Disinfection	Boots/Waders/Footwear and other monitoring materials cleaned and disinfected? Yes ☐ No ☐

Expected Ranges for Parameters	
H2O Temperature:	12-30 °C
Dissolved Oxygen:	3-7 mg/L
D.O % Saturation:	90-110%
pH:	6.0-9.0
Transparency Tube:	≤120 cm

CO MWA

Thermistor	
Serial #:	Type: HOB0 (long grey) ☐ TIDBIT (yellow) ☐ TIDBIT V2 (orange) ☐
Activity Performed (choose one): Deployment ☐ Retrieval ☐ Monthly Check ☐	
Deployment/Retrieval Time: AM PM Monthly Check - thermistor submersed Yes ☐ No ☐	
Describe location of thermistor if you deployed it today, or action(s) taken if thermistor was not submersed:	

Biotic Index (monitored in May and late September/early October)	
**You may use the Key to Macroinvertebrate Life in the River to help you identify macroinvertebrates. Group 1: These are sensitive to pollutants. Select each animal found.  ☐ Stonefly Larva  ☐ Dobsonfly Larva  ☐ Alderfly Larva  ☐ Water Snipe Fly Larva No. of group 1 animals circled: 0 Relative Size Key  = larger than picture  = smaller than picture	
Group 2: These are semi-sensitive to pollutants. Select each animal found.  ☐  ☐  ☒  ☐ Caddisfly Larva (all caddisfly larva = 1)  ☐  ☐ Riffle Beetle Larva Riffle Beetle *All Riffle beetles = 1  ☐ Crane Fly Larva  ☐ Water Penny  ☒ Crawfish  ☐ Dragonfly Larva  ☒ Mayfly Larva  ☐ Damselfly Larva  ☒ Freshwater Mussel or Fingernail Clam No. of group 2 animals circled: 3	
Group 3: These are semi-tolerant of pollutants. Select each animal found.  ☐ Black Fly Larva  ☐ Non-Red Midge Larva  ☐  ☐ Snails: Orb or Gilled (right side opening) *All Snails = 1  ☒ Amphipod or Scud No. of group 3 animals circled: 1	
Group 4: These are tolerant of pollutants. Select each animal found.  ☒ Pouch Snail  ☒ Aquatic Sowbug or Isopod  ☐ Bloodworm Midge Larva (red)  ☐ Leech  ☐ Tubifex Worm No. of group 4 animals circled: 2	

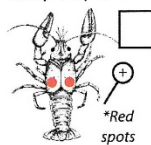
Key Aquatic

Invasive Species

(AIS)

Circle AIS shown below if you think you found any:

Rusty Crayfish



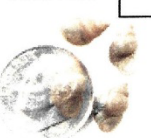
Asian Clam



New Zealand Mudsail



Faucet Snail



If found, collect voucher or photo and report to DNR or WAV Coordinator

Date data entered into SWIMS? / / Data Entry Volunteer Initials:

Download and print data sheets from www.wateractionvolunteers.org.
For more information, call (608) 331-0173, or email wav@extension.wisc.edu.



Water Action Volunteers Stream Monitoring Data Recording Form - Version 2015.1.4

Station Info	WAV Station Number*: _____	Date*: <u>4</u> / <u>24</u> / <u>2025</u>	Time*: <u>13:44</u> ☐ AM ☒ PM
	WAV Station Name*: <u>Park Rd.</u>		
	Team Member Name(s)*: <u>Andrew Sabas</u>		

Weather	Weather: (choose one) Sunny ☐ Partly Sunny ☐ Cloudy ☐ Rain ☐ Snow ☐ Thunderstorms ☐	Sampling Date: (choose one) Primary ☐ Safety ☐ Other ☐
	Weather over past two days: <u>Light Rain</u>	
	Current Stream Condition: (choose one) Normal ☒ Flooding ☐ Dry ☐ Stagnant ☐ Frozen ☐ Other	
Observations: _____		

WAV Monitoring Parameters	Parameters Tested	Your Results				Units	
	Air Temperature	<u>20.6</u>				°C	
	Water Temperature	<u>16.6</u>				°C	
	Dissolved Oxygen (D.O.) Sampling Method	Choose One:	Hach Kit ☐	LaMotte Kit ☒	YSI 550A Meter ☐	Other:	
	D.O. mg/L	No. of Titration Drops:	No. of Plastic Measuring Tubes:	Dissolved Oxygen Content: <u>11.18</u>		mg/L	
	D.O. % Saturation	<u>116.5</u>				%	
	pH	<u>8.3</u>				-	
	Transparency	Tube Length (select one)		Trial #1	Trial #2	Average	-
		60 cm ☐ 100 cm ☐ 120 cm ☐		<u>4.87</u>	<u>1174</u>		cm
	Specific Conductance	ECTestr reading: <u>420</u> (choose units displayed) ms/cm ☐ µS/cm ☒					
Chloride Sample	Collected? Y ☐ N ☒ Point/Outfall Number: _____						
Total Phosphorus Sample	Collected? Y ☐ N ☒ Point/Outfall Number: _____						

WAV Monitoring Parameters	Was streamflow monitored this sampling event? Yes ☐ No ☒ If No, why not? <u>Flow Meter Not Working</u>						Length Assessed: _____ ft Stream Width*: _____ ft *If stream ≤ 20 ft. wide, measure depth every foot across the width. If stream is > 20 ft. wide, measure depth at 20 equal intervals across the entire width	
	Stream Depth Measurements							
	Point	Depth (10 th Feet)	Point	Depth (10 th Feet)	Depth Conversion Chart			
					Ft/in	10 th Ft	Ft/in	10 th Ft
	1	0	11		¾-¾	0.05	6¾-6¾	0.55
	2		12		1-1½	0.1	7-7¾	0.6
	3		13		1¾-2	0.15	7¾-8	0.65
	4		14		2¾-2¾	0.2	8¾-8¾	0.7
	5		15		2¾-3¾	0.25	8¾-9¾	0.75
	6		16		3¾-3¾	0.3	9¾-9¾	0.8
7		17		4-4¾	0.35	10-10¾	0.85	
8		18		4¾-5	0.4	10¾-11	0.9	
9		19		5¾-5¾	0.45	11¾-11¾	0.95	
10		20		5¾-6¾	0.5	11¾-12	1.0	
Velocity Float Trials								
				Trial Number	Time (Seconds)			
				1				
				2				
				3				
				4				
Velocity Correction Factor								
Choose the bottom type:								
				Rough	0.8	☐		
				Smooth	0.9	☒		

Monitoring Equipment Calibration	D.O. Meter: Yes ☒ No ☐
	pH Meter: Yes ☒ No ☐
	ECTestr: Yes ☒ No ☐

Equipment Cleaning and Disinfection	Boots/Waders/Footwear and other monitoring materials cleaned and disinfected? Yes ☐ No ☐
--	--

Expected Ranges for Parameters	
H2O Temperature:	12-30 °C
Dissolved Oxygen:	3-7 mg/L
D.O. % Saturation:	90-110%
pH:	6.0-9.0
Transparency Tube:	≤120 cm

Thermistor

Serial #: Type: HOBO (long grey) ☐ TIDBIT (yellow) ☐ TIDBIT V2 (orange) ☐

Activity Performed (choose one): Deployment ☐ Retrieval ☐ Monthly Check ☐

Deployment/Retrieval Time: AM ☐ PM ☐ Monthly Check - thermistor submersed Yes ☐ No ☐

Describe location of thermistor if you deployed it today, or action(s) taken if thermistor was not submersed:

Biotic Index (monitored in May and late September/early October)

****You may use the Key to Macroinvertebrate Life in the River to help you identify macroinvertebrates.**

Group 1: These are sensitive to pollutants. Select each animal found.


☐

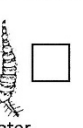
Stonefly Larva


☐

Dobsonfly Larva


☐

Alderfly Larva


☐

Water Snipe Fly Larva

No. of group 1 animals circled:

0

Relative Size Key

+ = larger than picture

- = smaller than picture

Group 2: These are semi-sensitive to pollutants. Select each animal found.


☐

Caddisfly Larva (all caddisfly larva = 1)


☐

Riffle Beetle Larva


☐

Riffle Beetle


☐

Crane Fly Larva

No. of group 2 animals circled:

4

*All Riffle beetles = 1

Group 3: These are semi-tolerant of pollutants. Select each animal found.


☐

Black Fly Larva


☐

Non-Red Midge Larva


☐

Snails: Orb or Gilled (right side opening)


☐

Amphipod or Scud

No. of group 3 animals circled:

2

*All Snails = 1

Group 4: These are tolerant of pollutants. Select each animal found.


☐

Pouch Snail


☐

Aquatic Sowbug or Isopod


☐

Bloodworm Midge Larva (red)


☐

Leech


☐

Tubifex Worm

No. of group 4 animals circled:

2

No. of group 1 animals circled:

0

No. of group 2 animals circled:

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No. of group 3 animals circled:

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No. of group 4 animals circled:

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No. of group 1 animals circled:

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No. of group 3 animals circled:

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No. of group 4 animals circled:

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No. of group 1 animals circled:

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No. of group 4 animals circled:

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No. of group 4 animals circled:

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No. of group 1 animals circled:

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No. of group 2 animals circled:

4

No. of group 3 animals circled:

2

No. of group 4 animals circled:

2

No. of group 1 animals circled:

0

No. of group 2 animals circled:

4

No. of group 3 animals circled:

2

No. of group 4 animals circled:

October 16, 2025, Sampling Event

On October 16, 2025, the crew sampled County Road A and Park Road for macroinvertebrates. It was a cloudy day. Flow was recorded at the County Road A site, but not for Park Road due to the water being backed up by decomposing macrophytes. This would have affected the flow reading significantly.

At the County Road A site, the stream condition was normal. The air temperature was 19.7°C with the water temperature being recorded as 13.7°C. Dissolved oxygen parameters were measured with a Hach kit. Dissolved oxygen measured in at 8.48 mg/l, 83.3% saturation, with a pH of 8.0. Macroinvertebrates found at this site were riffle beetles, caddisfly larva, damselfly larva, fingernail clams, and amphipods/scuds. This site scored a 2.8, for a 'good' rating.

At the Park Road site, the stream condition was normal. It began to lightly rain as the crew was sampling this site. The air temperature was 19.5°C with the water temperature being recorded as 17.1°C. Dissolved oxygen parameters were measured with a Hach kit. Dissolved oxygen measured in at 8.26 mg/l, 87.2% saturation, with a pH of 8.8. Macroinvertebrates found at this site were caddisfly larva, riffle beetles, damselfly larva, amphipods/scuds, orb or gilled snails, and non-red midge larva. This site scored 2.5, for a 'good' rating.



Picture 7: Amphipod found at County Road A site during October sampling event.



Picture 8: Damselfly found at County Road A site during October sampling event.



Picture 9: Caddisfly larva found at County Road A site during October sampling event.



Picture 10: Park Road site during October sampling event.

Station Info	WAV Station Number*:		Date*:	10/16/2025	Time*:	10:18	AM	PM
	WAV Station Name*:	Co A						
	Team Member Name(s)*:	Andrew Sabai						

Weather	Weather: Sunny Partly Sunny Cloudy Rain Snow Thunderstorms (choose one) ☐ ☐ ☒ ☐ ☐ ☐							Sampling Date: Primary Safety Other (choose one) ☒ ☐ ☐		
	Weather over past two days: <u>light rain</u>									
	Current Stream Condition: Normal ☒ Flooding ☐ Dry ☐ Stagnant ☐ Frozen ☐ Other									
	Observations: _____									

Parameters Tested	Your Results				Units
Air Temperature	19.7				°C
Water Temperature	13.7				°C
Dissolved Oxygen (D.O.) Sampling Method	Choose One:	Hach Kit ☐	LaMotte Kit ☐	YSI 550A Meter ☐	Other: <u>Hatch HQ</u>
D.O. mg/L	No. of Titration Drops: —	No. of Plastic Measuring Tubes: —	Dissolved Oxygen Content: 8.48		mg/L
D.O. % Saturation	83.3				%
pH	8.0				-
Transparency	Tube Length (select one)	Trial #1	Trial #2	Average	-
	60 cm ☐ 100 cm ☐ 120 cm ☒	78	75	79	cm
Specific Conductance	EC Testr reading: 200 (choose units displayed) ms/cm ☐ µS/cm ☒				
Chloride Sample	Collected? Y ☐ N ☒	Point/Outfall Number:			
Total Phosphorus Sample	Collected? Y ☐ N ☒	Point/Outfall Number:			

WAV Monitoring Parameters	Was streamflow monitored this sampling event? Yes ☐ No ☐								Length Assessed ft	
	If No, why not?								Stream Width*: ft	
	Stream Depth Measurements									
	Point	Depth (10 th Feet)	Point	Depth (10 th Feet)	Depth Conversion Chart					
					Ft/in	10 th Ft	Ft/in	10 th Ft		
	1	0	11	0.20	¾-¾	0.05	6%-6%	0.55	Velocity Float Trials	
	2.5	0.13	12		1-1½	0.1	7-7%	0.6		
	3'	0.8	13		1½-2	0.15	7½-8	0.65		
	4	0.25	14		2½-2½	0.2	8%-8%	0.7		
	5	0.21	15		2¾-3¾	0.25	8¾-9¾	0.75	1	
6	0.21	16		3¾-3¾	0.3	9¾-9¾	0.8	2		
7	0.20	17		4-4%	0.35	10-10%	0.85	3		
8	0.20	18		4½-5	0.4	10½-11	0.9	4		
9	0.20	19		5%-5%	0.45	11½-11½	0.95	Velocity Correction Factor		
10	0.22	20		5¾-6¾	0.5	11¾-12	1.0			
								Choose the bottom type:		
								Rough	0.8	☐
								Smooth	0.9	☒

Monitoring Equipment Calibration	D.O. Meter: Yes ☒ No ☐ pH Meter: Yes ☒ No ☐ EC Test: Yes ☒ No ☐
Equipment Cleaning and Disinfection	Boots/Waders/Footwear and other monitoring materials cleaned and disinfected? Yes ☐ No ☐

Expected Ranges for Parameters	
Water Temperature:	12-30 °C
Dissolved Oxygen:	5-10 mg/L
D.O % Saturation:	80-120%
pH:	6.0-9.0
Transparency Tube:	≤120 cm

Thermistor	
Serial #:	Type: HOBO (long grey) ☐ TIDBIT (yellow) ☐ TIDBIT V2 (orange) ☐
Activity Performed (choose one):	Deployment ☐ <u>No</u> Retrieval ☐ Monthly Check ☐
Deployment/Retrieval Time:	AM ☐ PM ☐ Monthly Check - thermistor submersed Yes ☐ No ☐
Describe location of thermistor if you <u>deployed it today</u> , or action(s) taken if <u>thermistor was not submersed</u> :	

Biotic Index (monitored in May and late September/early October)	
**You may use the Key to Macroinvertebrate Life in the River to help you identify macroinvertebrates. Group 1: These are sensitive to pollutants. Select each animal found. ☐ Stonefly Larva ☐ Dobsonfly Larva ☐ Alderfly Larva ☐ Water Snipe Fly Larva No. of group 1 animals circled: Relative Size Key = larger than picture = smaller than picture	
Group 2: These are semi-sensitive to pollutants. Select each animal found. ☐ Caddisfly Larva (all caddisfly larva = 1) ☐ Riffle Beetle Larva ☐ Riffle Beetle ☐ Crane Fly Larva ☐ Water Penny No. of group 2 animals circled: 	
Group 3: These are semi-tolerant of pollutants. Select each animal found. ☐ Black Fly Larva ☐ Non-Red Midge Larva ☐ Snails: Orb or Gilled (right side opening) ☐ Amphipod or Scud No. of group 3 animals circled: 	
Group 4: These are tolerant of pollutants. Select each animal found. ☐ Pouch Snail ☐ Aquatic Sowbug or Isopod ☐ Bloodworm Midge Larva (red) ☐ Leech ☐ Tubifex Worm No. of group 4 animals circled: 	

Key Aquatic Invasive Species (AIS)

Circle AIS shown below if you think you found any:

☐
 Rusty Crayfish

☐
 Asian Clam

☐
 New Zealand Mudsail

☐
 Faucet Snail

If found, collect a sample and detailed photos, and report to DNR or WAV.

Date data entered into SWIMS? / / Data Entry Volunteer Initials:

Download and print data sheets from www.wateractionvolunteers.org.
 For more information, call (608) 331-0173, or email wav@extension.wisc.edu.



Station Info WAV Station Number*: Date*: 10/16/2025 Time*: 12:08 AM PM
 WAV Station Name*: Park Rd Outlet
 Team Member Name(s)*: Andrew Saberi

Weather	Weather: Sunny Partly Sunny Cloudy Rain Snow Thunderstorms (choose one) ☐ ☐ ☒ ☐ ☐ ☐							Sampling Date: Primary Safety Other (choose one) ☐ ☐ ☐		
	Weather over past two days: _____									
	Current Stream Condition: Normal ☒ Flooding ☐ Dry ☐ Stagnant ☐ Frozen ☐ Other									
	Observations: <u>Water backed up by dead plants</u>									

Parameters Tested	Your Results				Units
Air Temperature					°C
Water Temperature	17.1				°C
Dissolved Oxygen (D.O.) Sampling Method	Choose One:	Hach Kit ☐	LaMotte Kit ☐	YSI 550A Meter ☐	Other: Hatch HO Meter ☐
D.O. mg/L	No. of Titration Drops:	No. of Plastic Measuring Tubes:	Dissolved Oxygen Content: 826		mg/L
D.O. % Saturation	87.2				%
pH	8.8				-
Transparency	Tube Length (select one) 60 cm ☐ 100 cm ☐ 120 cm ☒	Trial #1	Trial #2	Average	-
Specific Conductance	EC Test reading: 490 (choose units displayed) ms/cm ☐ μs/cm ☐				cm
Chloride Sample	Collected? Y ☐ N ☐	Point/Outfall Number:			
Total Phosphorus Sample	Collected? Y ☐ N ☒	Point/Outfall Number:			

Was streamflow measured this sampling event? Yes ☐ No ☐						Length Assessed ft	
If No, why not?						Stream Width* : ft	
Stream Depth Measurements							
Point	Depth (10 th Feet)	Point	Depth (10 th Feet)	Depth Conversion Chart			
				Ft/in	10 th Ft	Ft/in	10 th Ft
1	0	11		¾-¾	0.05	6¾-6¾	0.55
2		12		1-1½	0.1	7-7¾	0.6
3		13		1½-2	0.15	7½-8	0.65
4		14		2¼-2¾	0.2	8¾-8¾	0.7
5		15		2¾-3¼	0.25	8¾-9¾	0.75
6		16		3¾-3¾	0.3	9¾-9¾	0.8
7		17		4-4¾	0.35	10-10¾	0.85
8		18		4¾-5	0.4	10¾-11	0.9
9		19		5¾-5¾	0.45	11¾-11¾	0.95
10		20		5¾-6¼	0.5	11¾-12	1.0

*If stream ≤ 20 ft. wide, measure depth every foot across the width. If stream is > 20 ft. wide, measure depth at 20 equal intervals across the entire width.

Velocity Float Trials			
Trial Number	Time (Seconds)		
1			
2			
3			
4			

Velocity Correction Factor			
Choose the bottom type:			
Rough	0.8		☐
Smooth	0.9		☐

Monitoring Equipment Calibration	D.O. Meter:	Yes ☐	No ☐
	pH Meter:	Yes ☐	No ☐
	ECTestr:	Yes ☐	No ☐

Equipment Cleaning and Disinfection	Boots/Waders/Footwear and other monitoring materials cleaned and disinfected? Yes ☐ No ☐
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Expected Ranges for Parameters	
Water Temperature:	12-30 °C
Dissolved Oxygen:	5-10 mg/L
D.O % Saturation:	80-120%
pH:	6.0-9.0
Transparency Tube:	≤120 cm

Thermistor	
Serial #:	Type: HOBO (long grey) ☐ TIDBIT (yellow) ☐ TIDBIT V2 (orange) ☐
Activity Performed (choose one):	Deployment ☐ Retrieval ☐ Monthly Check ☐
Deployment/Retrieval Time:	AM PM Monthly Check - thermistor submersed Yes ☐ No ☐
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*Red spots

☐
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Results and Discussion

We have been studying the macroinvertebrates of the inlet creek since 2021 at three different sites: County Road A, Ripley Road (where it exits a large wetland before heading to the lake), and at Park Road. Table 2 summarizes the Biotic Index Scores on the inlet stream from 2021 through the end of 2025. The BI Scores varied from “poor” to “good” with the majority of the samples in the “fair” category. The Ripley Road site was sampled in years prior, but was not sampled in 2025.

<u>Biotic Index Scores on Inlet Creek 2021-2025</u>			
Date	Site	Biotic Index (BI) Score	BI Score Interpretation
3/31/2021	CR A	1.8	Poor
3/31/2021	Ripley Road	2.0	Poor
3/31/2021	Park Road	-	-
6/16/2021	CR A	2.3	Fair
6/16/2021	Ripley Road	2.25	Fair
6/16/2021	Park Road	2	Poor
6/15/2022	CR A	2.1	Fair
6/15/2022	Ripley Road	1.8	Poor
6/15/2022	Park Road	2.3	Fair
10/28/2022	CR A	3.0	Good
10/28/2022	Ripley Road	2.2	Poor
10/28/2022	Park Road	2.0	Poor
5/19/2023	CR A	2.2	Fair
5/19/2023	Ripley Road	2.4	Fair
5/19/2023	Park Road	2.1	Fair
10/08/2023	CR A	1.75	Poor
10/08/2023	Ripley Road	1	Poor
10/08/2023	Park Road	2.2	Fair
7/9/2024	Park Road	2.2	Fair
7/9/2024	CR A	2.75	Good
7/9/2024	Ripley Road	2.0	Poor

4/24/2025	CR A	2.6	Good
4/24/2025	Park Road	2.25	Fair
10/16/2025	CR A	2.8	Good
10/16/2025	Park Road	2.5	Good

Table 2: Biotic Index Scores for Lake Ripley watershed

Other observations at these sites show that stream flow increases rapidly during storm events which can dislodge aquatic macroinvertebrates and wash them downstream. Water quality is also an issue during storm events as suspended sediments reach high levels that can be damaging to aquatic life in general. Reducing the flashy nature of the stream, moderating flow events and reducing suspended solids would be beneficial to the aquatic macroinvertebrate community by increasing the amount of available instream habitat over time as existing sediments move downstream.

The District is currently working with a local engineering firm, Stantec, to help address the sediment and nutrient issues of the lake's only inlet stream. Future recommendations are to continue annual monitoring of the aquatic macroinvertebrate community in the spring and fall and to conduct annual WAV habitat assessments to track aquatic habitat quality.