

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM090-0003 **USGS Hydrologic Unit:** 051202070706
Stream Name: Vernon Fork Muscatatuck River **County:** Jackson
Description: CR 600 South **Latitude:** 38 47 36.72884 **Longitude:** -85 53 2.67155
Drainage: **Site Number:** 21T-001

SiteID: WEM090-0003 **Sample Date:** 5/12/2021 **IDEM Sample #:** AB47006
Water Flow Type Run **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	82.1 %		ASTM D888-09(C)
DO	8.38 mg/L		ASTM D888-09(C)
pH (Field)	7.67 SU		EPA 150.2
Specific Conductance (Field)	263 umho/cm		SM2510B
Temperature	14.4 °C		SM2550B(2)
Turbidity (Hach)	67.8 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	2 Lookup		Observation

<u>Lab ID #:</u> 500-199136-22	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	90 mg/L	5	SM2320B
Chloride	14 mg/L	1	EPA 300.0
Hardness (as CaCO3)	120 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	44 mg/L	5	SM2540D
Solids, Total (TS)	350 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	300 mg/L	10	SM2540C
Sulfate	11 mg/L	0.4	EPA 300.0
Calcium (Total)	34 mg/L	0.2	EPA 200.7
Magnesium (Total)	7.7 mg/L	0.1	EPA 200.7
COD	19 mg/L	10	SM5220C
Nitrogen, Ammonia	0.21 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.2 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.34 mg/L	0.05	SM4500P-E
TKN	1 mg/L	0.4	SM4500N(Org)-D
TOC	7.2 mg/L	1	SM5310C

<u>Lab ID #:</u> AB47006	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	410.6 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM090-0003

Sample Date: 6/9/2021

IDEM Sample #: AB47567

Water Flow Type Run

Water Appearance Brown

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments: water up

Lab ID #:	Result	Reporting Limit	Method
% Sat	67.7 %		ASTM D888-09(C)
DO	5.88 mg/L		ASTM D888-09(C)
pH (Field)	7.28 SU		EPA 150.2
Specific Conductance (Field)	239 umho/cm		SM2510B
Temperature	22.3 °C		SM2550B(2)
Turbidity (Hach)	153 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	5 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: 500-200713-22	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	75 mg/L	5	SM2320B
Chloride	10 mg/L	1	EPA 300.0
Hardness (as CaCO3)	110 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	140 mg/L	23	SM2540D
Solids, Total (TS)	320 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	180 mg/L	10	SM2540C
Sulfate	9.5 mg/L	1	EPA 300.0
Calcium (Total)	32 mg/L	0.2	EPA 200.7
Magnesium (Total)	7.6 mg/L	0.1	EPA 200.7
COD	24 mg/L	10	SM5220C
Nitrogen, Ammonia	0.38 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	3.1 mg/L	1	SM4500NO3-F
Phosphorus, Total	0.37 mg/L	0.05	SM4500P-E
TKN	1.5 mg/L	0.4	SM4500N(Org)-D
TOC	7 mg/L	1	SM5310C
Lab ID #: AB47567	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM090-0003

Sample Date: 7/7/2021

IDEM Sample #: AB47715

Water Flow Type Glide

Water Appearance Brown

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	67.8 %		ASTM D888-09(C)
DO	5.47 mg/L		ASTM D888-09(C)
pH (Field)	7.66 SU		EPA 150.2
Specific Conductance (Field)	366 umho/cm		SM2510B
Temperature	26.3 °C		SM2550B(2)
Turbidity (Hach)	25.2 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-202110-22	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	150 mg/L	5	SM2320B
Chloride	15 mg/L	1	EPA 300.0
Hardness (as CaCO3)	170 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	33 mg/L	5	SM2540D
Solids, Total (TS)	300 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	240 mg/L	10	SM2540C
Sulfate	14 mg/L	0.4	EPA 300.0
Calcium (Total)	51 mg/L	0.2	EPA 200.7
Magnesium (Total)	11 mg/L	0.1	EPA 200.7
COD	17 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.76 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.12 mg/L	0.05	SM4500P-E
TKN	0.52 mg/L	0.2	EPA 351.2
TOC	4 mg/L	1	SM5310C

Lab ID #: AB47715	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	48.8 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM090-0003 Sample Date: 7/14/2021 IDEM Sample #: AB47974
 Water Flow Type Run Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	69.3 %		ASTM D888-09(C)
DO	5.85 mg/L		ASTM D888-09(C)
pH (Field)	7.41 SU		EPA 150.2
Specific Conductance (Field)	252 umho/cm		SM2510B
Temperature	24 °C		SM2550B(2)
Turbidity (Hach)	44 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: AB47974	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	410.6 MPN/100mL	1	SM9223B

SiteID: WEM090-0003 Sample Date: 7/21/2021 IDEM Sample #: AB47999
 Water Flow Type Run Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	59.7 %		ASTM D888-09(C)
DO	4.96 mg/L		ASTM D888-09(C)
pH (Field)	7.24 SU		EPA 150.2
Specific Conductance (Field)	230 umho/cm		SM2510B
Temperature	24.7 °C		SM2550B(2)
Turbidity (Hach)	21.9 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: AB47999	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	131.4 MPN/100mL	1	SM9223B

Indiana Department of Environmental Management Office of Water Quality-Watershed Assessment and Planning Branch Surface Water Results Summary

SiteID: WEM090-0003

Sample Date: 7/28/2021

IDEM Sample #: AB48024

Water Flow Type Run

Water Appearance Murky

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	60 %		ASTM D888-09(C)
DO	4.89 mg/L		ASTM D888-09(C)
pH (Field)	7.46 SU		EPA 150.2
Specific Conductance (Field)	378 umho/cm		SM2510B
Temperature	25.9 °C		SM2550B(2)
Turbidity (Hach)	31.6 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB48024	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	67 MPN/100mL	1	SM9223B

Weather Code Definitions					
SC	WD	WS	AT		
Sky Conditions	Wind Direction	Wind Strength	Air Temp		
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
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Surface Water Results Summary**

SiteID: WEM-07-0010 USGS Hydrologic Unit: 051202070706
 Stream Name: Grassy Creek County: Jackson
 Description: CR 600 Latitude: 38 47 38.57330 Longitude: -85 52 9.53353
 Drainage: Site Number: 21T-002

SiteID: WEM-07-0010 Sample Date: 5/12/2021 IDEM Sample #: AB47007
 Water Flow Type: Glide Water Appearance: Brown Water Depth: Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed %: 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	44.1 %		ASTM D888-09(C)
DO	4.6 mg/L		ASTM D888-09(C)
pH (Field)	7.39 SU		EPA 150.2
Specific Conductance (Field)	530 umho/cm		SM2510B
Temperature	13.2 °C		SM2550B(2)
Turbidity (Hach)	23.5 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 500-199136-23	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	160 mg/L	5	SM2320B
Chloride	49 mg/L	2	EPA 300.0
Hardness (as CaCO3)	180 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	12 mg/L	5	SM2540D
Solids, Total (TS)	450 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	440 mg/L	10	SM2540C
Sulfate	19 mg/L	2	EPA 300.0
Calcium (Total)	52 mg/L	0.2	EPA 200.7
Magnesium (Total)	13 mg/L	0.1	EPA 200.7
COD	23 mg/L	10	SM5220C
Nitrogen, Ammonia	0.29 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.92 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	2.7 mg/L	0.25	SM4500P-E
TKN	1.1 mg/L	0.4	SM4500N(Org)-D
TOC	9.3 mg/L	1	SM5310C

Lab ID #: AB47007	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	58.1 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0010

Sample Date: 6/9/2021

IDEM Sample #: AB47568

Water Flow Type Run

Water Appearance Brown

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments: water up-recent rain

Lab ID #:	Result	Reporting Limit	Method
% Sat	55 %		ASTM D888-09(C)
DO	4.85 mg/L		ASTM D888-09(C)
pH (Field)	7.01 SU		EPA 150.2
Specific Conductance (Field)	155 umho/cm		SM2510B
Temperature	21.6 °C		SM2550B(2)
Turbidity (Hach)	71.5 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	5 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-200713-23	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	43 mg/L	5	SM2320B
Chloride	13 mg/L	1	EPA 300.0
Hardness (as CaCO3)	60 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	53 mg/L	13	SM2540D
Solids, Total (TS)	180 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	120 mg/L	10	SM2540C
Sulfate	5.8 mg/L	0.2	EPA 300.0
Calcium (Total)	17 mg/L	0.2	EPA 200.7
Magnesium (Total)	3.9 mg/L	0.1	EPA 200.7
COD	37 mg/L	10	SM5220C
Nitrogen, Ammonia	0.28 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.74 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.67 mg/L	0.05	SM4500P-E
TKN	1.5 mg/L	0.4	SM4500N(Org)-D
TOC	12 mg/L	1	SM5310C

Lab ID #: AB47568	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0010

Sample Date: 7/7/2021

IDEM Sample #: AB47716

Water Flow Type Stagnant

Water Appearance Murky

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	70.2 %		ASTM D888-09(C)
DO	6.27 mg/L		ASTM D888-09(C)
pH (Field)	7.86 SU		EPA 150.2
Specific Conductance (Field)	832 umho/cm		SM2510B
Temperature	20.9 °C		SM2550B(2)
Turbidity (Hach)	6.46 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-202110-23	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	300 mg/L	5	SM2320B
Chloride	54 mg/L	4	EPA 300.0
Hardness (as CaCO3)	350 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	5 mg/L	5	SM2540D
Solids, Total (TS)	710 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	590 mg/L	10	SM2540C
Sulfate	65 mg/L	4	EPA 300.0
Calcium (Total)	96 mg/L	0.2	EPA 200.7
Magnesium (Total)	26 mg/L	0.1	EPA 200.7
COD	9.1 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.7 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	2 mg/L	0.25	SM4500P-E
TKN	0.43 mg/L	0.2	EPA 351.2
TOC	2.6 mg/L	1	SM5310C

Lab ID #: AB47716	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	517.2 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0010 **Sample Date:** 7/14/2021 **IDEM Sample #:** AB47975
Water Flow Type Pool **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	58.2 %		ASTM D888-09(C)
DO	5.02 mg/L		ASTM D888-09(C)
pH (Field)	7.27 SU		EPA 150.2
Specific Conductance (Field)	289 umho/cm		SM2510B
Temperature	22.7 °C		SM2550B(2)
Turbidity (Hach)	19.8 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> AB47975	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	290.9 MPN/100mL	1	SM9223B

SiteID: WEM-07-0010 **Sample Date:** 7/21/2021 **IDEM Sample #:** AB48000
Water Flow Type Pool **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	49.4 %		ASTM D888-09(C)
DO	4.17 mg/L		ASTM D888-09(C)
pH (Field)	7.16 SU		EPA 150.2
Specific Conductance (Field)	224 umho/cm		SM2510B
Temperature	23.9 °C		SM2550B(2)
Turbidity (Hach)	19.3 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> AB48000	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	238.2 MPN/100mL	1	SM9223B

Indiana Department of Environmental Management Office of Water Quality-Watershed Assessment and Planning Branch Surface Water Results Summary

SiteID: WEM-07-0010

Sample Date: 7/28/2021

IDEM Sample #: AB48025

Water Flow Type Stagnant

Water Appearance Murky

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	54.4 %		ASTM D888-09(C)
DO	4.81 mg/L		ASTM D888-09(C)
pH (Field)	7.59 SU		EPA 150.2
Specific Conductance (Field)	776 umho/cm		SM2510B
Temperature	21.3 °C		SM2550B(2)
Turbidity (Hach)	6.61 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB48025	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	117.8 MPN/100mL	1	SM9223B

Weather Code Definitions							
SC Sky Conditions		WD Wind Direction		WS Wind Strength		AT Air Temp	
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32		
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45		
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60		
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75		
5 - Mist				4 - Mod./Strong	5 - 76-85		
6 - Fog				5 - Strong	6 - > 86		
7 - Shower				6 - Gale			

**Indiana Department of Environmental Management
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Surface Water Results Summary**

SiteID: WEM090-0008 **USGS Hydrologic Unit:** 051202070706
Stream Name: Vernon Fork Muscatatuck River **County:** Jackson
Description: CR 400 South **Latitude:** 38 49 19.42466 **Longitude:** -85 53 3.10163
Drainage: **Site Number:** 21T-003

SiteID: WEM090-0008 **Sample Date:** 5/12/2021 **IDEM Sample #:** AB47005
Water Flow Type Glide **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	48.5 %		ASTM D888-09(C)
DO	5.06 mg/L		ASTM D888-09(C)
pH (Field)	7.33 SU		EPA 150.2
Specific Conductance (Field)	294 umho/cm		SM2510B
Temperature	13.6 °C		SM2550B(2)
Turbidity (Hach)	28.7 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	2 Lookup		Observation

<u>Lab ID #:</u> 500-199136-21	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	100 mg/L	5	SM2320B
Chloride	17 mg/L	1	EPA 300.0
Hardness (as CaCO3)	130 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	9.5 mg/L	5	SM2540D
Solids, Total (TS)	300 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	290 mg/L	10	SM2540C
Sulfate	13 mg/L	0.4	EPA 300.0
Calcium (Total)	38 mg/L	0.2	EPA 200.7
Magnesium (Total)	8.7 mg/L	0.1	EPA 200.7
COD	14 mg/L	10	SM5220C
Nitrogen, Ammonia	0.3 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.2 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.22 mg/L	0.05	SM4500P-E
TKN	1 mg/L	0.4	SM4500N(Org)-D
TOC	6.5 mg/L	1	SM5310C

<u>Lab ID #:</u> AB47005	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	201.4 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
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Surface Water Results Summary**

SiteID: WEM090-0008

Sample Date: 6/9/2021

IDEM Sample #: AB47566

Water Flow Type Run

Water Appearance Brown

Water Depth Algae?

Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%

Sampler Comments: water up-rain yesterday and today

Lab ID #:	Result	Reporting Limit	Method
% Sat	52.9 %		ASTM D888-09(C)
DO	4.61 mg/L		ASTM D888-09(C)
pH (Field)	6.86 SU		EPA 150.2
Specific Conductance (Field)	198 umho/cm		SM2510B
Temperature	22 °C		SM2550B(2)
Turbidity (Hach)	80.8 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	5 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 500-200713-21	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	35 mg/L	5	SM2320B
Chloride	10 mg/L	1	EPA 300.0
Hardness (as CaCO3)	60 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	42 mg/L	13	SM2540D
Solids, Total (TS)	230 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	170 mg/L	10	SM2540C
Sulfate	7.3 mg/L	0.2	EPA 300.0
Calcium (Total)	17 mg/L	0.2	EPA 200.7
Magnesium (Total)	4.3 mg/L	0.1	EPA 200.7
COD	57 mg/L	10	SM5220C
Nitrogen, Ammonia	2.6 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	7.9 mg/L	1	SM4500NO3-F
Phosphorus, Total	1.1 mg/L	0.25	SM4500P-E
TKN	6.3 mg/L	2	SM4500N(Org)-D
TOC	17 mg/L	10	SM5310C

Lab ID #: AB47566	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM090-0008

Sample Date: 7/7/2021

IDEM Sample #: AB47714

Water Flow Type Stagnant

Water Appearance Black

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments: Very stagnant dark water with corn residue and oily sheen all over. Bad smell, took a picture.

Lab ID #:	Result	Reporting Limit	Method
% Sat	4 %		ASTM D888-09(C)
DO	0.35 mg/L		ASTM D888-09(C)
pH (Field)	6.75 SU		EPA 150.2
Specific Conductance (Field)	430 umho/cm		SM2510B
Temperature	23.7 °C		SM2550B(2)
Turbidity (Hach)	17.4 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-202110-21	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	160 mg/L	5	SM2320B
Chloride	28 mg/L	1	EPA 300.0
Hardness (as CaCO3)	160 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	10 mg/L	5	SM2540D
Solids, Total (TS)	360 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	270 mg/L	10	SM2540C
Sulfate	6.3 mg/L	0.2	EPA 300.0
Calcium (Total)	44 mg/L	0.2	EPA 200.7
Magnesium (Total)	12 mg/L	0.1	EPA 200.7
COD	73 mg/L	10	SM5220C
Nitrogen, Ammonia	1.2 mg/L	0.2	EPA 350.1
Nitrogen, Nitrate+Nitrite	< 0.1 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.71 mg/L	0.05	SM4500P-E
TKN	2.3 mg/L	0.2	EPA 351.2
TOC	23 mg/L	4	SM5310C

Lab ID #: AB47714	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	387.3 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM090-0008 Sample Date: 7/14/2021 IDEM Sample #: AB47973
 Water Flow Type Pool Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	57.8 %		ASTM D888-09(C)
DO	4.9 mg/L		ASTM D888-09(C)
pH (Field)	7.29 SU		EPA 150.2
Specific Conductance (Field)	244 umho/cm		SM2510B
Temperature	23.6 °C		SM2550B(2)
Turbidity (Hach)	21.4 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB47973	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	209.8 MPN/100mL	1	SM9223B

SiteID: WEM090-0008 Sample Date: 7/21/2021 IDEM Sample #: AB47998
 Water Flow Type Pool Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	48.8 %		ASTM D888-09(C)
DO	3.89 mg/L		ASTM D888-09(C)
pH (Field)	7 SU		EPA 150.2
Specific Conductance (Field)	169 umho/cm		SM2510B
Temperature	26.9 °C		SM2550B(2)
Turbidity (Hach)	14.5 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: AB47998	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	167 MPN/100mL	1	SM9223B

Indiana Department of Environmental Management

Office of Water Quality-Watershed Assessment and Planning Branch

Surface Water Results Summary

SiteID: WEM090-0008

Sample Date: 7/28/2021

IDEM Sample #: AB48023

Water Flow Type Stagnant

Water Appearance Black

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments: water is black and stagnant

Lab ID #:	Result	Reporting Limit	Method
% Sat	0.16 %		ASTM D888-09(C)
DO	2 mg/L		ASTM D888-09(C)
pH (Field)	6.74 SU		EPA 150.2
Specific Conductance (Field)	393 umho/cm		SM2510B
Temperature	24.5 °C		SM2550B(2)
Turbidity (Hach)	14.7 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB48023	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	42.4 MPN/100mL	1	SM9223B

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0015 **USGS Hydrologic Unit:** 051202070706
Stream Name: John McDonald Ditch **County:** Jackson
Description: CR 125 South **Latitude:** 38 51 46.92645 **Longitude:** -85 50 44.12462
Drainage: **Site Number:** 21T-005

SiteID: WEM-07-0015 **Sample Date:** 5/12/2021 **IDEM Sample #:** AB47004
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	62.7 %		ASTM D888-09(C)
DO	6.6 mg/L		ASTM D888-09(C)
pH (Field)	7.5 SU		EPA 150.2
Specific Conductance (Field)	356 umho/cm		SM2510B
Temperature	13.1 °C		SM2550B(2)
Turbidity (Hach)	15.8 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 500-199136-20	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	140 mg/L	5	SM2320B
Chloride	20 mg/L	1	EPA 300.0
Hardness (as CaCO3)	140 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	5.5 mg/L	5	SM2540D
Solids, Total (TS)	290 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	310 mg/L	10	SM2540C
Sulfate	10 mg/L	0.4	EPA 300.0
Calcium (Total)	38 mg/L	0.2	EPA 200.7
Magnesium (Total)	10 mg/L	0.1	EPA 200.7
COD	17 mg/L	10	SM5220C
Nitrogen, Ammonia	0.23 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.21 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.21 mg/L	0.05	SM4500P-E
TKN	0.92 mg/L	0.4	SM4500N(Org)-D
TOC	8.9 mg/L	1	SM5310C

<u>Lab ID #:</u> AB47004	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	172.3 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0015

Sample Date: 6/9/2021

IDEM Sample #: AB47565

Water Flow Type Flood

Water Appearance Brown

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments: Flooded

Lab ID #:	Result	Reporting Limit	Method
% Sat	59.9 %		ASTM D888-09(C)
DO	5.36 mg/L		ASTM D888-09(C)
pH (Field)	7.03 SU		EPA 150.2
Specific Conductance (Field)	156 umho/cm		SM2510B
Temperature	20.8 °C		SM2550B(2)
Turbidity (Hach)	92.1 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-200713-20	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	39 mg/L	5	SM2320B
Chloride	14 mg/L	0.4	EPA 300.0
Hardness (as CaCO3)	61 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	54 mg/L	13	SM2540D
Solids, Total (TS)	230 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	130 mg/L	10	SM2540C
Sulfate	7.5 mg/L	0.2	EPA 300.0
Calcium (Total)	18 mg/L	0.2	EPA 200.7
Magnesium (Total)	4.3 mg/L	0.1	EPA 200.7
COD	32 mg/L	10	SM5220C
Nitrogen, Ammonia	0.44 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	2.3 mg/L	0.5	SM4500NO3-F
Phosphorus, Total	0.25 mg/L	0.05	SM4500P-E
TKN	1.5 mg/L	0.4	SM4500N(Org)-D
TOC	11 mg/L	4	SM5310C

Lab ID #: AB47565	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0015 Sample Date: 7/7/2021 IDEM Sample #: AB47713
 Water Flow Type Stagnant Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: Wetland-like surroundings, low flow.

Lab ID #:	Result	Reporting Limit	Method
% Sat	31.9 %		ASTM D888-09(C)
DO	2.76 mg/L		ASTM D888-09(C)
pH (Field)	7.52 SU		EPA 150.2
Specific Conductance (Field)	454 umho/cm		SM2510B
Temperature	23.3 °C		SM2550B(2)
Turbidity (Hach)	6.37 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-202110-20	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	240 mg/L	5	SM2320B
Chloride	19 mg/L	1	EPA 300.0
Hardness (as CaCO3)	220 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	2.8 mg/L	5	SM2540D
Solids, Total (TS)	360 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	270 mg/L	10	SM2540C
Sulfate	14 mg/L	0.4	EPA 300.0
Calcium (Total)	62 mg/L	0.2	EPA 200.7
Magnesium (Total)	16 mg/L	0.1	EPA 200.7
COD	18 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.45 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.16 mg/L	0.05	SM4500P-E
TKN	0.35 mg/L	0.2	EPA 351.2
TOC	5.5 mg/L	1	SM5310C

Lab ID #: AB47713	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	60.9 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0015 Sample Date: 7/14/2021 IDEM Sample #: AB47972
 Water Flow Type Run Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	55.4 %		ASTM D888-09(C)
DO	4.87 mg/L		ASTM D888-09(C)
pH (Field)	7.17 SU		EPA 150.2
Specific Conductance (Field)	219 umho/cm		SM2510B
Temperature	21.8 °C		SM2550B(2)
Turbidity (Hach)	24 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: AB47972	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	145.5 MPN/100mL	1	SM9223B

SiteID: WEM-07-0015 Sample Date: 7/21/2021 IDEM Sample #: AB47997
 Water Flow Type Run Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	50.8 %		ASTM D888-09(C)
DO	4.46 mg/L		ASTM D888-09(C)
pH (Field)	7.1 SU		EPA 150.2
Specific Conductance (Field)	236 umho/cm		SM2510B
Temperature	21.8 °C		SM2550B(2)
Turbidity (Hach)	19.7 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: AB47997	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	579.4 MPN/100mL	1	SM9223B

Indiana Department of Environmental Management

Office of Water Quality-Watershed Assessment and Planning Branch

Surface Water Results Summary

SiteID: WEM-07-0015 **Sample Date:** 7/28/2021 **IDEM Sample #:** AB48022
Water Flow Type Pool **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: very low flow

Lab ID #:	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	31.5 %		ASTM D888-09(C)
DO	2.71 mg/L		ASTM D888-09(C)
pH (Field)	7.33 SU		EPA 150.2
Specific Conductance (Field)	453 umho/cm		SM2510B
Temperature	22.7 °C		SM2550B(2)
Turbidity (Hach)	7.71 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #:	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	261.3 MPN/100mL	1	SM9223B

Weather Code Definitions							
SC Sky Conditions		WD Wind Direction		WS Wind Strength		AT Air Temp	
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32		
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45		
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60		
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75		
5 - Mist				4 - Mod./Strong	5 - 76-85		
6 - Fog				5 - Strong	6 - > 86		
7 - Shower				6 - Gale			

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0021 **USGS Hydrologic Unit:** 051202070705
Stream Name: Tea Creek **County:** Jennings
Description: CR 650 South **Latitude:** 38 53 17.94956 **Longitude:** -85 4 20.64590
Drainage: **Site Number:** 21T-006

SiteID: WEM-07-0021 **Sample Date:** 5/11/2021 **IDEM Sample #:** AB46994
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	130.8 %		ASTM D888-09(C)
DO	13.47 mg/L		ASTM D888-09(C)
pH (Field)	8.53 SU		EPA 150.2
Specific Conductance (Field)	336 umho/cm		SM2510B
Temperature	13.9 °C		SM2550B(2)
Turbidity (Hach)	9.88 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 500-199136-11	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	140 mg/L	5	SM2320B
Chloride	15 mg/L	1	EPA 300.0
Hardness (as CaCO3)	140 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	2.5 mg/L	5	SM2540D
Solids, Total (TS)	280 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	250 mg/L	10	SM2540C
Sulfate	13 mg/L	0.4	EPA 300.0
Calcium (Total)	41 mg/L	0.2	EPA 200.7
Magnesium (Total)	10 mg/L	0.1	EPA 200.7
COD	17 mg/L	10	SM5220C
Nitrogen, Ammonia	0.17 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.33 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.094 mg/L	0.05	SM4500P-E
TKN	0.53 mg/L	0.4	SM4500N(Org)-D
TOC	5.5 mg/L	1	SM5310C

<u>Lab ID #:</u> AB46994	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	579.4 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0021

Sample Date: 6/8/2021

IDEM Sample #: AB47555

Water Flow Type Run

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	93.1 %		ASTM D888-09(C)
DO	8.26 mg/L		ASTM D888-09(C)
pH (Field)	7.89 SU		EPA 150.2
Specific Conductance (Field)	419 umho/cm		SM2510B
Temperature	21.1 °C		SM2550B(2)
Turbidity (Hach)	4.88 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	7 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 500-200713-11	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	150 mg/L	5	SM2320B
Chloride	26 mg/L	1	EPA 300.0
Hardness (as CaCO3)	200 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	3 mg/L	5	SM2540D
Solids, Total (TS)	340 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	220 mg/L	10	SM2540C
Sulfate	18 mg/L	1	EPA 300.0
Calcium (Total)	57 mg/L	0.2	EPA 200.7
Magnesium (Total)	13 mg/L	0.1	EPA 200.7
COD	18 mg/L	10	SM5220C
Nitrogen, Ammonia	0.18 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.088 mg/L	0.05	SM4500P-E
TKN	0.53 mg/L	0.4	SM4500N(Org)-D
TOC	5.8 mg/L	1	SM5310C

Lab ID #: AB47555	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1046.2 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0021

Sample Date: 7/6/2021

IDEM Sample #: AB47703

Water Flow Type Pool

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	120.5 %		ASTM D888-09(C)
DO	10 mg/L		ASTM D888-09(C)
pH (Field)	7.97 SU		EPA 150.2
Specific Conductance (Field)	381 umho/cm		SM2510B
Temperature	24.8 °C		SM2550B(2)
Turbidity (Hach)	3.54 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-202110-11	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	170 mg/L	5	SM2320B
Chloride	12 mg/L	1	EPA 300.0
Hardness (as CaCO3)	190 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	2.6 mg/L	5	SM2540D
Solids, Total (TS)	250 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	230 mg/L	10	SM2540C
Sulfate	12 mg/L	1	EPA 300.0
Calcium (Total)	57 mg/L	0.2	EPA 200.7
Magnesium (Total)	12 mg/L	0.1	EPA 200.7
COD	17 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	EPA 350.1
Nitrogen, Nitrate+Nitrite	2 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.045 mg/L	0.05	SM4500P-E
TKN	0.33 mg/L	0.2	EPA 351.2
TOC	3.5 mg/L	1	SM5310C

Lab ID #: AB47703	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1299.7 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0021 Sample Date: 7/14/2021 IDEM Sample #: AB47962
 Water Flow Type Riffle Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	96.9 %		ASTM D888-09(C)
DO	8.44 mg/L		ASTM D888-09(C)
pH (Field)	7.67 SU		EPA 150.2
Specific Conductance (Field)	276 umho/cm		SM2510B
Temperature	22.2 °C		SM2550B(2)
Turbidity (Hach)	11.8 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: AB47962	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1119.9 MPN/100mL	1	SM9223B

SiteID: WEM-07-0021 Sample Date: 7/20/2021 IDEM Sample #: AB47987
 Water Flow Type Riffle Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	104.8 %		ASTM D888-09(C)
DO	9.14 mg/L		ASTM D888-09(C)
pH (Field)	7.85 SU		EPA 150.2
Specific Conductance (Field)	292 umho/cm		SM2510B
Temperature	22.1 °C		SM2550B(2)
Turbidity (Hach)	7.96 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB47987	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	770.1 MPN/100mL	1	SM9223B

Indiana Department of Environmental Management

Office of Water Quality-Watershed Assessment and Planning Branch

Surface Water Results Summary

SiteID: WEM-07-0021

Sample Date: 7/27/2021

IDEM Sample #: AB48012

Water Flow Type Riffle

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	94.1 %		ASTM D888-09(C)
DO	8.12 mg/L		ASTM D888-09(C)
pH (Field)	7.82 SU		EPA 150.2
Specific Conductance (Field)	368 umho/cm		SM2510B
Temperature	22.6 °C		SM2550B(2)
Turbidity (Hach)	2.58 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB48012	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	461.1 MPN/100mL	1	SM9223B

Weather Code Definitions					
SC	WD	WS	AT		
Sky Conditions	Wind Direction	Wind Strength	Air Temp		
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

Indiana Department of Environmental Management

Office of Water Quality-Watershed Assessment and Planning Branch

Surface Water Results Summary

SiteID: WEM070-0029 **USGS Hydrologic Unit:** 051202070705
Stream Name: Tea Creek **County:** Jennings
Description: CR 650 West **Latitude:** 38 53 9.76552 **Longitude:** -85 43 52.69889
Drainage: 10.6 **Site Number:** 21T-007

SiteID: WEM070-0029 **Sample Date:** 5/11/2021 **IDEM Sample #:** AB46993
Water Flow Type: Run **Water Appearance:** Clear **Water Depth:** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %:** 0-20%
Sampler Comments: Truck went by spraying chemicals

Lab ID #:	Result	Reporting Limit	Method
% Sat	103.4 %		ASTM D888-09(C)
DO	10.76 mg/L		ASTM D888-09(C)
pH (Field)	7.88 SU		EPA 150.2
Specific Conductance (Field)	379 umho/cm		SM2510B
Temperature	13.5 °C		SM2550B(2)
Turbidity (Hach)	10.1 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: 500-199136-10	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	160 mg/L	5	SM2320B
Chloride	13 mg/L	1	EPA 300.0
Hardness (as CaCO3)	170 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	2 mg/L	5	SM2540D
Solids, Total (TS)	300 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	280 mg/L	10	SM2540C
Sulfate	15 mg/L	1	EPA 300.0
Calcium (Total)	49 mg/L	0.2	EPA 200.7
Magnesium (Total)	11 mg/L	0.1	EPA 200.7
COD	10 mg/L	10	SM5220C
Nitrogen, Ammonia	0.12 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.49 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.078 mg/L	0.05	SM4500P-E
TKN	0.49 mg/L	0.4	SM4500N(Org)-D
TOC	4.2 mg/L	1	SM5310C

Lab ID #: AB46993	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	579.4 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM070-0029

Sample Date: 6/8/2021

IDEM Sample #: AB47554

Water Flow Type Pool

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	74.7 %		ASTM D888-09(C)
DO	6.6 mg/L		ASTM D888-09(C)
pH (Field)	7.7 SU		EPA 150.2
Specific Conductance (Field)	442 umho/cm		SM2510B
Temperature	21.4 °C		SM2550B(2)
Turbidity (Hach)	7.8 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	7 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 500-200713-10	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	180 mg/L	5	SM2320B
Chloride	20 mg/L	1	EPA 300.0
Hardness (as CaCO3)	220 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	4.8 mg/L	10	SM2540D
Solids, Total (TS)	340 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	230 mg/L	10	SM2540C
Sulfate	18 mg/L	1	EPA 300.0
Calcium (Total)	65 mg/L	0.2	EPA 200.7
Magnesium (Total)	14 mg/L	0.1	EPA 200.7
COD	14 mg/L	10	SM5220C
Nitrogen, Ammonia	0.18 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.5 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.087 mg/L	0.05	SM4500P-E
TKN	0.45 mg/L	0.4	SM4500N(Org)-D
TOC	4.4 mg/L	1	SM5310C

Lab ID #: AB47554	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	307.6 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM070-0029

Sample Date: 7/6/2021

IDEM Sample #: AB47702

Water Flow Type Glide

Water Appearance Murky

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	53.4 %		ASTM D888-09(C)
DO	4.48 mg/L		ASTM D888-09(C)
pH (Field)	7.63 SU		EPA 150.2
Specific Conductance (Field)	418 umho/cm		SM2510B
Temperature	24.2 °C		SM2550B(2)
Turbidity (Hach)	9.28 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-202110-10	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	190 mg/L	5	SM2320B
Chloride	9.4 mg/L	1	EPA 300.0
Hardness (as CaCO3)	210 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	6.8 mg/L	5	SM2540D
Solids, Total (TS)	280 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	280 mg/L	10	SM2540C
Sulfate	13 mg/L	1	EPA 300.0
Calcium (Total)	64 mg/L	0.2	EPA 200.7
Magnesium (Total)	13 mg/L	0.1	EPA 200.7
COD	14 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.79 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.088 mg/L	0.05	SM4500P-E
TKN	0.37 mg/L	0.2	EPA 351.2
TOC	3.5 mg/L	1	SM5310C

Lab ID #: AB47702	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	613.1 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM070-0029 Sample Date: 7/14/2021 IDEM Sample #: AB47961
 Water Flow Type Riffle Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	89.1 %		ASTM D888-09(C)
DO	7.8 mg/L		ASTM D888-09(C)
pH (Field)	7.64 SU		EPA 150.2
Specific Conductance (Field)	319 umho/cm		SM2510B
Temperature	21.8 °C		SM2550B(2)
Turbidity (Hach)	14.8 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB47961	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	920.8 MPN/100mL	1	SM9223B

SiteID: WEM070-0029 Sample Date: 7/20/2021 IDEM Sample #: AB47986
 Water Flow Type Pool Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	85.2 %		ASTM D888-09(C)
DO	7.6 mg/L		ASTM D888-09(C)
pH (Field)	7.66 SU		EPA 150.2
Specific Conductance (Field)	376 umho/cm		SM2510B
Temperature	20.9 °C		SM2550B(2)
Turbidity (Hach)	9.84 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB47986	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	648.8 MPN/100mL	1	SM9223B

Indiana Department of Environmental Management

Office of Water Quality-Watershed Assessment and Planning Branch

Surface Water Results Summary

SiteID: WEM070-0029

Sample Date: 7/27/2021

IDEM Sample #: AB48011

Water Flow Type Pool

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	70.4 %		ASTM D888-09(C)
DO	5.95 mg/L		ASTM D888-09(C)
pH (Field)	7.66 SU		EPA 150.2
Specific Conductance (Field)	447 umho/cm		SM2510B
Temperature	23.7 °C		SM2550B(2)
Turbidity (Hach)	8.31 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB48011	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	235.9 MPN/100mL	1	SM9223B

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM070-0039 **USGS Hydrologic Unit:** 051202070705
Stream Name: Vernon Fork Muscatatuck River **County:** Jennings
Description: CR 500 South **Latitude:** 38 54 39.57440 **Longitude:** -85 43 48.30341
Drainage: 233.46 **Site Number:** 21T-008

SiteID: WEM070-0039 **Sample Date:** 5/11/2021 **IDEM Sample #:** AB47013
Water Flow Type Run **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	89.6 %		ASTM D888-09(C)
DO	9.41 mg/L		ASTM D888-09(C)
pH (Field)	7.77 SU		EPA 150.2
Specific Conductance (Field)	248 umho/cm		SM2510B
Temperature	13.2 °C		SM2550B(2)
Turbidity (Hach)	103 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	2 Lookup		Observation

<u>Lab ID #:</u> 500-199136-8	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	89 mg/L	5	SM2320B
Chloride	14 mg/L	0.4	EPA 300.0
Hardness (as CaCO3)	100 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	54 mg/L	5	SM2540D
Solids, Total (TS)	310 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	220 mg/L	10	SM2540C
Sulfate	9.6 mg/L	0.2	EPA 300.0
Calcium (Total)	30 mg/L	0.2	EPA 200.7
Magnesium (Total)	6.3 mg/L	0.1	EPA 200.7
COD	23 mg/L	10	SM5220C
Nitrogen, Ammonia	0.31 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.4 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.47 mg/L	0.05	SM4500P-E
TKN	0.98 mg/L	0.4	SM4500N(Org)-D
TOC	7.7 mg/L	1	SM5310C

<u>Lab ID #:</u> AB47013	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1986.3 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM070-0039

Sample Date: 6/8/2021

IDEM Sample #: AB47574

Water Flow Type Run

Water Appearance Murky

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	83 %		ASTM D888-09(C)
DO	7.13 mg/L		ASTM D888-09(C)
pH (Field)	7.72 SU		EPA 150.2
Specific Conductance (Field)	375 umho/cm		SM2510B
Temperature	22.8 °C		SM2550B(2)
Turbidity (Hach)	24.8 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: 500-200713-8	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	130 mg/L	5	SM2320B
Chloride	18 mg/L	1	EPA 300.0
Hardness (as CaCO3)	180 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	30 mg/L	10	SM2540D
Solids, Total (TS)	300 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	190 mg/L	10	SM2540C
Sulfate	15 mg/L	1	EPA 300.0
Calcium (Total)	54 mg/L	0.2	EPA 200.7
Magnesium (Total)	11 mg/L	0.1	EPA 200.7
COD	18 mg/L	10	SM5220C
Nitrogen, Ammonia	0.24 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	4.1 mg/L	1	SM4500NO3-F
Phosphorus, Total	0.17 mg/L	0.05	SM4500P-E
TKN	0.73 mg/L	0.4	SM4500N(Org)-D
TOC	5.2 mg/L	1	SM5310C
Lab ID #: AB47574	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	146.7 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM070-0039

Sample Date: 7/6/2021

IDEM Sample #: AB47722

Water Flow Type Run

Water Appearance Brown

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	76.3 %		ASTM D888-09(C)
DO	6.24 mg/L		ASTM D888-09(C)
pH (Field)	7.73 SU		EPA 150.2
Specific Conductance (Field)	334 umho/cm		SM2510B
Temperature	25.6 °C		SM2550B(2)
Turbidity (Hach)	19.7 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-202110-8	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	130 mg/L	5	SM2320B
Chloride	13 mg/L	0.4	EPA 300.0
Hardness (as CaCO3)	160 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	19 mg/L	5	SM2540D
Solids, Total (TS)	280 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	240 mg/L	10	SM2540C
Sulfate	13 mg/L	0.4	EPA 300.0
Calcium (Total)	49 mg/L	0.2	EPA 200.7
Magnesium (Total)	10 mg/L	0.1	EPA 200.7
COD	8.5 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.8 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.14 mg/L	0.05	SM4500P-E
TKN	0.45 mg/L	0.2	EPA 351.2
TOC	3.3 mg/L	1	SM5310C

Lab ID #: AB47722	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	186 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM070-0039 Sample Date: 7/13/2021 IDEM Sample #: AB47981
 Water Flow Type Run Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	85 %		ASTM D888-09(C)
DO	7.36 mg/L		ASTM D888-09(C)
pH (Field)	7.76 SU		EPA 150.2
Specific Conductance (Field)	254 umho/cm		SM2510B
Temperature	22.5 °C		SM2550B(2)
Turbidity (Hach)	80.7 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB47981	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1732.9 MPN/100mL	1	SM9223B

SiteID: WEM070-0039 Sample Date: 7/20/2021 IDEM Sample #: AB48006
 Water Flow Type Run Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	86.1 %		ASTM D888-09(C)
DO	7.42 mg/L		ASTM D888-09(C)
pH (Field)	7.55 SU		EPA 150.2
Specific Conductance (Field)	337 umho/cm		SM2510B
Temperature	22.7 °C		SM2550B(2)
Turbidity (Hach)	35.1 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: AB48006	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	307.6 MPN/100mL	1	SM9223B

Indiana Department of Environmental Management

Office of Water Quality-Watershed Assessment and Planning Branch

Surface Water Results Summary

SiteID: WEM070-0039

Sample Date: 7/27/2021

IDEM Sample #: AB48031

Water Flow Type Run

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	84.6 %		ASTM D888-09(C)
DO	6.97 mg/L		ASTM D888-09(C)
pH (Field)	7.69 SU		EPA 150.2
Specific Conductance (Field)	408 umho/cm		SM2510B
Temperature	25.1 °C		SM2550B(2)
Turbidity (Hach)	17.8 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB48031	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	65.7 MPN/100mL	1	SM9223B

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM070-0020 **USGS Hydrologic Unit:** 051202070705
Stream Name: Vernon Fork Muscatatuck River **County:** Jackson
Description: US 31 **Latitude:** 38 54 21.96418 **Longitude:** -85 49 15.82271
Drainage: 291.14 **Site Number:** 21T-009

SiteID: WEM070-0020 **Sample Date:** 5/12/2021 **IDEM Sample #:** AB47001
Water Flow Type Run **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	85.1 %		ASTM D888-09(C)
DO	8.83 mg/L		ASTM D888-09(C)
pH (Field)	7.68 SU		EPA 150.2
Specific Conductance (Field)	275 umho/cm		SM2510B
Temperature	13.8 °C		SM2550B(2)
Turbidity (Hach)	70.4 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	2 Lookup		Observation

<u>Lab ID #:</u> 500-199136-18	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	96 mg/L	5	SM2320B
Chloride	15 mg/L	0.4	EPA 300.0
Hardness (as CaCO3)	120 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	44 mg/L	5	SM2540D
Solids, Total (TS)	280 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	240 mg/L	10	SM2540C
Sulfate	11 mg/L	0.4	EPA 300.0
Calcium (Total)	35 mg/L	0.2	EPA 200.7
Magnesium (Total)	7.5 mg/L	0.1	EPA 200.7
COD	22 mg/L	10	SM5220C
Nitrogen, Ammonia	0.15 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.3 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.36 mg/L	0.05	SM4500P-E
TKN	1 mg/L	0.4	SM4500N(Org)-D
TOC	6.6 mg/L	1	SM5310C

<u>Lab ID #:</u> AB47001	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	547.5 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM070-0020

Sample Date: 6/9/2021

IDEM Sample #: AB47562

Water Flow Type Run

Water Appearance Brown

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	74.1 %		ASTM D888-09(C)
DO	6.49 mg/L		ASTM D888-09(C)
pH (Field)	7.32 SU		EPA 150.2
Specific Conductance (Field)	285 umho/cm		SM2510B
Temperature	21.9 °C		SM2550B(2)
Turbidity (Hach)	111 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-200713-18	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	92 mg/L	5	SM2320B
Chloride	16 mg/L	1	EPA 300.0
Hardness (as CaCO3)	130 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	100 mg/L	18	SM2540D
Solids, Total (TS)	390 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	170 mg/L	10	SM2540C
Sulfate	15 mg/L	0.4	EPA 300.0
Calcium (Total)	38 mg/L	0.2	EPA 200.7
Magnesium (Total)	8.6 mg/L	0.1	EPA 200.7
COD	26 mg/L	10	SM5220C
Nitrogen, Ammonia	0.23 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	3 mg/L	0.5	SM4500NO3-F
Phosphorus, Total	0.21 mg/L	0.05	SM4500P-E
TKN	0.87 mg/L	0.4	SM4500N(Org)-D
TOC	6.6 mg/L	1	SM5310C

Lab ID #: AB47562	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM070-0020

Sample Date: 7/7/2021

IDEM Sample #: AB47710

Water Flow Type Riffle

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	54.5 %		ASTM D888-09(C)
DO	4.42 mg/L		ASTM D888-09(C)
pH (Field)	7.45 SU		EPA 150.2
Specific Conductance (Field)	353 umho/cm		SM2510B
Temperature	26 °C		SM2550B(2)
Turbidity (Hach)	18.7 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: 500-202110-18	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	150 mg/L	5	SM2320B
Chloride	15 mg/L	0.4	EPA 300.0
Hardness (as CaCO3)	170 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	21 mg/L	5	SM2540D
Solids, Total (TS)	300 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	290 mg/L	10	SM2540C
Sulfate	14 mg/L	0.4	EPA 300.0
Calcium (Total)	52 mg/L	0.2	EPA 200.7
Magnesium (Total)	11 mg/L	0.1	EPA 200.7
COD	18 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.92 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.13 mg/L	0.05	SM4500P-E
TKN	0.49 mg/L	0.2	EPA 351.2
TOC	3.6 mg/L	1	SM5310C
Lab ID #: AB47710	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	31.8 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM070-0020 Sample Date: 7/14/2021 IDEM Sample #: AB47969
 Water Flow Type Run Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	73.8 %		ASTM D888-09(C)
DO	6.31 mg/L		ASTM D888-09(C)
pH (Field)	7.43 SU		EPA 150.2
Specific Conductance (Field)	266 umho/cm		SM2510B
Temperature	23.1 °C		SM2550B(2)
Turbidity (Hach)	50.8 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: AB47969	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	435.2 MPN/100mL	1	SM9223B

SiteID: WEM070-0020 Sample Date: 7/21/2021 IDEM Sample #: AB47994
 Water Flow Type Run Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	70.8 %		ASTM D888-09(C)
DO	6 mg/L		ASTM D888-09(C)
pH (Field)	7.26 SU		EPA 150.2
Specific Conductance (Field)	339 umho/cm		SM2510B
Temperature	23.7 °C		SM2550B(2)
Turbidity (Hach)	30.7 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: AB47994	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	218.7 MPN/100mL	1	SM9223B

Indiana Department of Environmental Management

Office of Water Quality-Watershed Assessment and Planning Branch

Surface Water Results Summary

SiteID: WEM070-0020

Sample Date: 7/28/2021

IDEM Sample #: AB48019

Water Flow Type Run

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments: turbidity data missing

Lab ID #:	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	59 %		ASTM D888-09(C)
DO	4.79 mg/L		ASTM D888-09(C)
pH (Field)	7.3 SU		EPA 150.2
Specific Conductance (Field)	405 umho/cm		SM2510B
Temperature	25.9 °C		SM2550B(2)
Turbidity (Hach)	NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB48019	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	32.3 MPN/100mL	1	SM9223B

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM090-0015 **USGS Hydrologic Unit:** 051202070706
Stream Name: Vernon Fork Muscatatuck River **County:** Jackson
Description: CR 50 North **Latitude:** 38 53 18.85460 **Longitude:** -85 51 6.07579
Drainage: 363.63 **Site Number:** 21T-010

SiteID: WEM090-0015 **Sample Date:** 5/12/2021 **IDEM Sample #:** AB47002
Water Flow Type Run **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	82.9 %		ASTM D888-09(C)
DO	8.55 mg/L		ASTM D888-09(C)
pH (Field)	7.85 SU		EPA 150.2
Specific Conductance (Field)	271 umho/cm		SM2510B
Temperature	13.9 °C		SM2550B(2)
Turbidity (Hach)	60.1 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	2 Lookup		Observation

<u>Lab ID #:</u> 500-199136-19	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	93 mg/L	5	SM2320B
Chloride	15 mg/L	1	EPA 300.0
Hardness (as CaCO3)	110 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	37 mg/L	5	SM2540D
Solids, Total (TS)	270 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	230 mg/L	10	SM2540C
Sulfate	13 mg/L	0.4	EPA 300.0
Calcium (Total)	32 mg/L	0.2	EPA 200.7
Magnesium (Total)	7.2 mg/L	0.1	EPA 200.7
COD	29 mg/L	10	SM5220C
Nitrogen, Ammonia	0.18 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.1 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.3 mg/L	0.05	SM4500P-E
TKN	1 mg/L	0.4	SM4500N(Org)-D
TOC	7.2 mg/L	1	SM5310C

<u>Lab ID #:</u> AB47002	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	547.5 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM090-0015

Sample Date: 6/9/2021

IDEM Sample #: AB47563

Water Flow Type Run

Water Appearance Brown

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments: water up-rain yesterday and today

Lab ID #:	Result	Reporting Limit	Method
% Sat	70.8 %		ASTM D888-09(C)
DO	6.16 mg/L		ASTM D888-09(C)
pH (Field)	7.43 SU		EPA 150.2
Specific Conductance (Field)	300 umho/cm		SM2510B
Temperature	22.3 °C		SM2550B(2)
Turbidity (Hach)	91.4 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-200713-19	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	100 mg/L	5	SM2320B
Chloride	17 mg/L	1	EPA 300.0
Hardness (as CaCO3)	140 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	93 mg/L	18	SM2540D
Solids, Total (TS)	390 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	170 mg/L	10	SM2540C
Sulfate	12 mg/L	1	EPA 300.0
Calcium (Total)	39 mg/L	0.2	EPA 200.7
Magnesium (Total)	9.3 mg/L	0.1	EPA 200.7
COD	26 mg/L	10	SM5220C
Nitrogen, Ammonia	0.32 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	2.7 mg/L	0.5	SM4500NO3-F
Phosphorus, Total	0.23 mg/L	0.05	SM4500P-E
TKN	1.2 mg/L	0.4	SM4500N(Org)-D
TOC	6.9 mg/L	1	SM5310C

Lab ID #: AB47563	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM090-0015

Sample Date: 7/7/2021

IDEM Sample #: AB47711

Water Flow Type Glide

Water Appearance Brown

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	60.5 %		ASTM D888-09(C)
DO	4.88 mg/L		ASTM D888-09(C)
pH (Field)	7.63 SU		EPA 150.2
Specific Conductance (Field)	361 umho/cm		SM2510B
Temperature	26.5 °C		SM2550B(2)
Turbidity (Hach)	17.4 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-202110-19	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	150 mg/L	5	SM2320B
Chloride	15 mg/L	1	EPA 300.0
Hardness (as CaCO3)	170 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	21 mg/L	5	SM2540D
Solids, Total (TS)	270 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	210 mg/L	10	SM2540C
Sulfate	14 mg/L	0.4	EPA 300.0
Calcium (Total)	51 mg/L	0.2	EPA 200.7
Magnesium (Total)	11 mg/L	0.1	EPA 200.7
COD	15 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.86 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.12 mg/L	0.05	SM4500P-E
TKN	0.88 mg/L	0.2	EPA 351.2
TOC	4.1 mg/L	1	SM5310C

Lab ID #: AB47711	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	48.8 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM090-0015 Sample Date: 7/14/2021 IDEM Sample #: AB47970
 Water Flow Type Run Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	67.6 %		ASTM D888-09(C)
DO	5.73 mg/L		ASTM D888-09(C)
pH (Field)	7.37 SU		EPA 150.2
Specific Conductance (Field)	259 umho/cm		SM2510B
Temperature	23.7 °C		SM2550B(2)
Turbidity (Hach)	36.8 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: AB47970	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	325.5 MPN/100mL	1	SM9223B

SiteID: WEM090-0015 Sample Date: 7/21/2021 IDEM Sample #: AB47995
 Water Flow Type Run Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	61.8 %		ASTM D888-09(C)
DO	5.22 mg/L		ASTM D888-09(C)
pH (Field)	7.27 SU		EPA 150.2
Specific Conductance (Field)	267 umho/cm		SM2510B
Temperature	23.8 °C		SM2550B(2)
Turbidity (Hach)	18.1 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: AB47995	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	129.6 MPN/100mL	1	SM9223B

Indiana Department of Environmental Management

Office of Water Quality-Watershed Assessment and Planning Branch

Surface Water Results Summary

SiteID: WEM090-0015

Sample Date: 7/28/2021

IDEM Sample #: AB48020

Water Flow Type Pool

Water Appearance Murky

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	61.6 %		ASTM D888-09(C)
DO	5.03 mg/L		ASTM D888-09(C)
pH (Field)	7.39 SU		EPA 150.2
Specific Conductance (Field)	383 umho/cm		SM2510B
Temperature	25.8 °C		SM2550B(2)
Turbidity (Hach)	19.5 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB48020	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	42.8 MPN/100mL	1	SM9223B

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0015 USGS Hydrologic Unit: 051202070704
 Stream Name: Sandy Branch County: Jackson
 Description: US 31 Latitude: 38 55 52.33966 Longitude: -85 50 2.43408
 Drainage: 7.89 Site Number: 21T-011

SiteID: WEM080-0015 Sample Date: 5/12/2021 IDEM Sample #: AB47000
 Water Flow Type: Run Water Appearance: Clear Water Depth: Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed %: 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	93.5 %		ASTM D888-09(C)
DO	10 mg/L		ASTM D888-09(C)
pH (Field)	7.94 SU		EPA 150.2
Specific Conductance (Field)	557 umho/cm		SM2510B
Temperature	12.3 °C		SM2550B(2)
Turbidity (Hach)	6.54 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 500-199136-17	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	190 mg/L	5	SM2320B
Chloride	42 mg/L	2	EPA 300.0
Hardness (as CaCO3)	230 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	< 5 mg/L	5	SM2540D
Solids, Total (TS)	420 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	370 mg/L	10	SM2540C
Sulfate	27 mg/L	1	EPA 300.0
Calcium (Total)	64 mg/L	0.2	EPA 200.7
Magnesium (Total)	17 mg/L	0.1	EPA 200.7
COD	< 10 mg/L	10	SM5220C
Nitrogen, Ammonia	0.27 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.2 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.085 mg/L	0.05	SM4500P-E
TKN	0.6 mg/L	0.4	SM4500N(Org)-D
TOC	2.9 mg/L	1	SM5310C

Lab ID #: AB47000	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	167 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0015

Sample Date: 6/9/2021

IDEM Sample #: AB47561

Water Flow Type Run

Water Appearance Brown

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments: Water up due to rain

Lab ID #:	Result	Reporting Limit	Method
% Sat	63.7 %		ASTM D888-09(C)
DO	5.64 mg/L		ASTM D888-09(C)
pH (Field)	7.13 SU		EPA 150.2
Specific Conductance (Field)	206 umho/cm		SM2510B
Temperature	21.3 °C		SM2550B(2)
Turbidity (Hach)	81.9 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-200713-17	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	60 mg/L	5	SM2320B
Chloride	18 mg/L	1	EPA 300.0
Hardness (as CaCO3)	85 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	95 mg/L	15	SM2540D
Solids, Total (TS)	310 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	110 mg/L	10	SM2540C
Sulfate	7.6 mg/L	1	EPA 300.0
Calcium (Total)	25 mg/L	0.2	EPA 200.7
Magnesium (Total)	5.6 mg/L	0.1	EPA 200.7
COD	24 mg/L	10	SM5220C
Nitrogen, Ammonia	0.36 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.99 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.34 mg/L	0.05	SM4500P-E
TKN	1.1 mg/L	0.4	SM4500N(Org)-D
TOC	6.8 mg/L	1	SM5310C

Lab ID #: AB47561	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0015

Sample Date: 7/7/2021

IDEM Sample #: AB47709

Water Flow Type Run

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	77.7 %		ASTM D888-09(C)
DO	6.61 mg/L		ASTM D888-09(C)
pH (Field)	7.72 SU		EPA 150.2
Specific Conductance (Field)	390 umho/cm		SM2510B
Temperature	23.4 °C		SM2550B(2)
Turbidity (Hach)	8.96 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: 500-202110-17	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	130 mg/L	5	SM2320B
Chloride	37 mg/L	2	EPA 300.0
Hardness (as CaCO3)	170 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	8.6 mg/L	5	SM2540D
Solids, Total (TS)	310 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	350 mg/L	10	SM2540C
Sulfate	18 mg/L	2	EPA 300.0
Calcium (Total)	47 mg/L	0.2	EPA 200.7
Magnesium (Total)	12 mg/L	0.1	EPA 200.7
COD	18 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.58 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.13 mg/L	0.05	SM4500P-E
TKN	0.37 mg/L	0.2	EPA 351.2
TOC	4.7 mg/L	1	SM5310C
Lab ID #: AB47709	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	2419.6 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0015 Sample Date: 7/14/2021 IDEM Sample #: AB47968
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	81.4 %		ASTM D888-09(C)
DO	7.18 mg/L		ASTM D888-09(C)
pH (Field)	7.68 SU		EPA 150.2
Specific Conductance (Field)	498 umho/cm		SM2510B
Temperature	21.5 °C		SM2550B(2)
Turbidity (Hach)	5.98 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: AB47968	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	272.3 MPN/100mL	1	SM9223B

SiteID: WEM080-0015 Sample Date: 7/21/2021 IDEM Sample #: AB47993
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	86.5 %		ASTM D888-09(C)
DO	7.74 mg/L		ASTM D888-09(C)
pH (Field)	7.78 SU		EPA 150.2
Specific Conductance (Field)	576 umho/cm		SM2510B
Temperature	20.8 °C		SM2550B(2)
Turbidity (Hach)	11.9 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: AB47993	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	307.6 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0015

Sample Date: 7/28/2021

IDEM Sample #: AB48018

Water Flow Type Pool

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	82 %		ASTM D888-09(C)
DO	7.27 mg/L		ASTM D888-09(C)
pH (Field)	7.76 SU		EPA 150.2
Specific Conductance (Field)	642 umho/cm		SM2510B
Temperature	21.2 °C		SM2550B(2)
Turbidity (Hach)	4.34 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB48018	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	224.7 MPN/100mL	1	SM9223B

Weather Code Definitions					
SC	WD	WS	AT		
Sky Conditions	Wind Direction	Wind Strength	Air Temp		
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0014 **USGS Hydrologic Unit:** 051202070704
Stream Name: Mutton Creek Ditch **County:** Jackson
Description: CR 400 North **Latitude:** 38 56 26.63883 **Longitude:** -85 48 56.24634
Drainage: 29.58 **Site Number:** 21T-012

SiteID: WEM080-0014 **Sample Date:** 5/12/2021 **IDEM Sample #:** AB46999
Water Flow Type: Glide **Water Appearance:** Brown **Water Depth:** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %:** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
	% Sat	70.1 %	ASTM D888-09(C)
	DO	7.32 mg/L	ASTM D888-09(C)
	pH (Field)	7.65 SU	EPA 150.2
	Specific Conductance (Field)	318 umho/cm	SM2510B
	Temperature	13.3 °C	SM2550B(2)
	Turbidity (Hach)	16.9 NTU	EPA 180.1
	Air Temp	3 Lookup	Observation
	Sky Conditions	1 Lookup	Observation
	Wind Direction	0 Lookup	Observation
	Wind Strength	2 Lookup	Observation

Lab ID #: 500-199136-16	Result	Reporting Limit	Method	
	Alkalinity (as CaCO3)	110 mg/L	5	SM2320B
	Chloride	17 mg/L	1	EPA 300.0
	Hardness (as CaCO3)	120 mg/L	0.91	SM2340B
	Solids, Suspended Total, (TSS)	12 mg/L	5	SM2540D
	Solids, Total (TS)	270 mg/L	10	SM2540B
	Solids, Total Dissolved (TDS)	220 mg/L	10	SM2540C
	Sulfate	15 mg/L	0.4	EPA 300.0
	Calcium (Total)	34 mg/L	0.2	EPA 200.7
	Magnesium (Total)	9.6 mg/L	0.1	EPA 200.7
	COD	11 mg/L	10	SM5220C
	Nitrogen, Ammonia	0.19 mg/L	0.2	SM4500NH3-G
	Nitrogen, Nitrate+Nitrite	1.1 mg/L	0.1	SM4500NO3-F
	Phosphorus, Total	0.17 mg/L	0.05	SM4500P-E
	TKN	0.77 mg/L	0.4	SM4500N(Org)-D
	TOC	6.4 mg/L	1	SM5310C

Lab ID #: AB46999	Result	Reporting Limit	Method	
	Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
	E. coli	196.8 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0014

Sample Date: 6/9/2021

IDEM Sample #: AB47560

Water Flow Type Run

Water Appearance Brown

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments: Water up

Lab ID #:	Result	Reporting Limit	Method
% Sat	72.7 %		ASTM D888-09(C)
DO	6.48 mg/L		ASTM D888-09(C)
pH (Field)	7.43 SU		EPA 150.2
Specific Conductance (Field)	340 umho/cm		SM2510B
Temperature	21 °C		SM2550B(2)
Turbidity (Hach)	84 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-200713-16	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	110 mg/L	5	SM2320B
Chloride	22 mg/L	1	EPA 300.0
Hardness (as CaCO3)	150 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	92 mg/L	16	SM2540D
Solids, Total (TS)	410 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	200 mg/L	10	SM2540C
Sulfate	16 mg/L	1	EPA 300.0
Calcium (Total)	41 mg/L	0.2	EPA 200.7
Magnesium (Total)	12 mg/L	0.1	EPA 200.7
COD	24 mg/L	10	SM5220C
Nitrogen, Ammonia	0.35 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	2.8 mg/L	0.5	SM4500NO3-F
Phosphorus, Total	0.26 mg/L	0.05	SM4500P-E
TKN	1.2 mg/L	0.4	SM4500N(Org)-D
TOC	7.1 mg/L	1	SM5310C

Lab ID #: AB47560	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0014

Sample Date: 7/7/2021

IDEM Sample #: AB47708

Water Flow Type Stagnant

Water Appearance Murky

Water Depth

Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	31.6 %		ASTM D888-09(C)
DO	2.64 mg/L		ASTM D888-09(C)
pH (Field)	7.29 SU		EPA 150.2
Specific Conductance (Field)	394 umho/cm		SM2510B
Temperature	24.6 °C		SM2550B(2)
Turbidity (Hach)	7.93 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: 500-202110-16	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	150 mg/L	5	SM2320B
Chloride	23 mg/L	1	EPA 300.0
Hardness (as CaCO3)	180 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	7.2 mg/L	5	SM2540D
Solids, Total (TS)	310 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	320 mg/L	10	SM2540C
Sulfate	16 mg/L	1	EPA 300.0
Calcium (Total)	50 mg/L	0.2	EPA 200.7
Magnesium (Total)	14 mg/L	0.1	EPA 200.7
COD	18 mg/L	10	SM5220C
Nitrogen, Ammonia	0.16 mg/L	0.2	EPA 350.1
Nitrogen, Nitrate+Nitrite	2 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.15 mg/L	0.05	SM4500P-E
TKN	0.61 mg/L	0.2	EPA 351.2
TOC	4.3 mg/L	1	SM5310C
Lab ID #: AB47708	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	148.3 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0014 Sample Date: 7/14/2021 IDEM Sample #: AB47967
 Water Flow Type Pool Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	64.1 %		ASTM D888-09(C)
DO	5.5 mg/L		ASTM D888-09(C)
pH (Field)	7.39 SU		EPA 150.2
Specific Conductance (Field)	303 umho/cm		SM2510B
Temperature	22.9 °C		SM2550B(2)
Turbidity (Hach)	26.1 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB47967	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1732.9 MPN/100mL	1	SM9223B

SiteID: WEM080-0014 Sample Date: 7/21/2021 IDEM Sample #: AB47992
 Water Flow Type Stagnant Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	56.6 %		ASTM D888-09(C)
DO	4.87 mg/L		ASTM D888-09(C)
pH (Field)	7.27 SU		EPA 150.2
Specific Conductance (Field)	304 umho/cm		SM2510B
Temperature	22.8 °C		SM2550B(2)
Turbidity (Hach)	13.6 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB47992	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	150 MPN/100mL	1	SM9223B

Indiana Department of Environmental Management

Office of Water Quality-Watershed Assessment and Planning Branch

Surface Water Results Summary

SiteID: WEM080-0014

Sample Date: 7/28/2021

IDEM Sample #: AB48017

Water Flow Type Pool

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	39.2 %		ASTM D888-09(C)
DO	3.25 mg/L		ASTM D888-09(C)
pH (Field)	7.24 SU		EPA 150.2
Specific Conductance (Field)	372 umho/cm		SM2510B
Temperature	24.8 °C		SM2550B(2)
Turbidity (Hach)	12.8 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB48017	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	84.2 MPN/100mL	1	SM9223B

Weather Code Definitions					
SC	WD	WS	AT		
Sky Conditions	Wind Direction	Wind Strength	Air Temp		
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

Indiana Department of Environmental Management

Office of Water Quality-Watershed Assessment and Planning Branch

Surface Water Results Summary

SiteID: WEM-07-0016 **USGS Hydrologic Unit:** 051202070704
Stream Name: Tributary of Mutton Creek **County:** Jackson
Description: CR 700 North **Latitude:** 38 59 2.20225 **Longitude:** -85 49 42.77626
Drainage: **Site Number:** 21T-013

SiteID: WEM-07-0016 **Sample Date:** 5/12/2021 **IDEM Sample #:** AB46995
Water Flow Type Riffle **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	101.6 %		ASTM D888-09(C)
DO	11.1 mg/L		ASTM D888-09(C)
pH (Field)	7.94 SU		EPA 150.2
Specific Conductance (Field)	389 umho/cm		SM2510B
Temperature	11.4 °C		SM2550B(2)
Turbidity (Hach)	8.29 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 500-199136-12	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	140 mg/L	5	SM2320B
Chloride	23 mg/L	1	EPA 300.0
Hardness (as CaCO3)	160 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	5.5 mg/L	5	SM2540D
Solids, Total (TS)	310 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	290 mg/L	10	SM2540C
Sulfate	17 mg/L	1	EPA 300.0
Calcium (Total)	43 mg/L	0.2	EPA 200.7
Magnesium (Total)	13 mg/L	0.1	EPA 200.7
COD	10 mg/L	10	SM5220C
Nitrogen, Ammonia	0.21 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	2.2 mg/L	0.5	SM4500NO3-F
Phosphorus, Total	0.076 mg/L	0.05	SM4500P-E
TKN	0.56 mg/L	0.4	SM4500N(Org)-D
TOC	3.3 mg/L	1	SM5310C

Lab ID #: AB46995	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	325.5 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0016

Sample Date: 6/9/2021

IDEM Sample #: AB47556

Water Flow Type Riffle

Water Appearance Brown

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments: Very high flow but in banks. Rain overnight

Lab ID #:	Result	Reporting Limit	Method
% Sat	79.2 %		ASTM D888-09(C)
DO	7.12 mg/L		ASTM D888-09(C)
pH (Field)	7.22 SU		EPA 150.2
Specific Conductance (Field)	222 umho/cm		SM2510B
Temperature	20.6 °C		SM2550B(2)
Turbidity (Hach)	253 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	5 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 500-200713-12	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	62 mg/L	5	SM2320B
Chloride	14 mg/L	1	EPA 300.0
Hardness (as CaCO3)	100 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	290 mg/L	36	SM2540D
Solids, Total (TS)	530 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	130 mg/L	10	SM2540C
Sulfate	10 mg/L	1	EPA 300.0
Calcium (Total)	28 mg/L	0.2	EPA 200.7
Magnesium (Total)	7.5 mg/L	0.1	EPA 200.7
COD	49 mg/L	10	SM5220C
Nitrogen, Ammonia	0.67 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	2.7 mg/L	1	SM4500NO3-F
Phosphorus, Total	0.85 mg/L	0.05	SM4500P-E
TKN	2.3 mg/L	0.4	SM4500N(Org)-D
TOC	19 mg/L	10	SM5310C

Lab ID #: AB47556	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0016

Sample Date: 7/7/2021

IDEM Sample #: AB47704

Water Flow Type Run

Water Appearance Brown

Water Depth

Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	90.4 %		ASTM D888-09(C)
DO	7.8 mg/L		ASTM D888-09(C)
pH (Field)	7.81 SU		EPA 150.2
Specific Conductance (Field)	302 umho/cm		SM2510B
Temperature	22.7 °C		SM2550B(2)
Turbidity (Hach)	34.2 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: 500-202110-12	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	110 mg/L	5	SM2320B
Chloride	16 mg/L	1	EPA 300.0
Hardness (as CaCO3)	140 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	24 mg/L	5	SM2540D
Solids, Total (TS)	260 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	220 mg/L	10	SM2540C
Sulfate	12 mg/L	1	EPA 300.0
Calcium (Total)	39 mg/L	0.2	EPA 200.7
Magnesium (Total)	11 mg/L	0.1	EPA 200.7
COD	28 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.7 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.33 mg/L	0.05	SM4500P-E
TKN	0.65 mg/L	0.2	EPA 351.2
TOC	6 mg/L	1	SM5310C
Lab ID #: AB47704	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	2419.6 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0016 **Sample Date:** 7/14/2021 **IDEM Sample #:** AB47963
Water Flow Type Riffle **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	88.2 %		ASTM D888-09(C)
DO	7.85 mg/L		ASTM D888-09(C)
pH (Field)	7.59 SU		EPA 150.2
Specific Conductance (Field)	275 umho/cm		SM2510B
Temperature	21 °C		SM2550B(2)
Turbidity (Hach)	10.1 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> AB47963	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	648.8 MPN/100mL	1	SM9223B

SiteID: WEM-07-0016 **Sample Date:** 7/21/2021 **IDEM Sample #:** AB47988
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	91.9 %		ASTM D888-09(C)
DO	8.17 mg/L		ASTM D888-09(C)
pH (Field)	7.6 SU		EPA 150.2
Specific Conductance (Field)	395 umho/cm		SM2510B
Temperature	21.1 °C		SM2550B(2)
Turbidity (Hach)	7.34 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> AB47988	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	816.4 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0016

Sample Date: 7/28/2021

IDEM Sample #: AB48013

Water Flow Type Riffle

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	73.8 %		ASTM D888-09(C)
DO	6.46 mg/L		ASTM D888-09(C)
pH (Field)	7.68 SU		EPA 150.2
Specific Conductance (Field)	416 umho/cm		SM2510B
Temperature	21.8 °C		SM2550B(2)
Turbidity (Hach)	6.04 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB48013	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	148.3 MPN/100mL	1	SM9223B

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0027 **USGS Hydrologic Unit:** 051202070704
Stream Name: Mutton Creek **County:** Jackson
Description: CR 800 North **Latitude:** 38 59 55.12075 **Longitude:** -85 48 22.97647
Drainage: 18.19 **Site Number:** 21T-014

SiteID: WEM080-0027 **Sample Date:** 5/11/2021 **IDEM Sample #:** AB46992
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	88.7 %		ASTM D888-09(C)
DO	9.48 mg/L		ASTM D888-09(C)
pH (Field)	7.46 SU		EPA 150.2
Specific Conductance (Field)	295 umho/cm		SM2510B
Temperature	12.3 °C		SM2550B(2)
Turbidity (Hach)	19.9 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 500-199136-1	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	100 mg/L	5	SM2320B
Chloride	15 mg/L	0.4	EPA 300.0
Hardness (as CaCO3)	120 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	9.5 mg/L	5	SM2540D
Solids, Total (TS)	300 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	240 mg/L	10	SM2540C
Sulfate	19 mg/L	0.4	EPA 300.0
Calcium (Total)	33 mg/L	0.2	EPA 200.7
Magnesium (Total)	9.3 mg/L	0.1	EPA 200.7
COD	19 mg/L	10	SM5220C
Nitrogen, Ammonia	0.12 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.3 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.13 mg/L	0.05	SM4500P-E
TKN	0.63 mg/L	0.4	SM4500N(Org)-D
TOC	6.1 mg/L	1	SM5310C

<u>Lab ID #:</u> AB46992	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	410.6 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0027

Sample Date: 6/8/2021

IDEM Sample #: AB47553

Water Flow Type Riffle

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	73.6 %		ASTM D888-09(C)
DO	6.52 mg/L		ASTM D888-09(C)
pH (Field)	7.54 SU		EPA 150.2
Specific Conductance (Field)	395 umho/cm		SM2510B
Temperature	21.2 °C		SM2550B(2)
Turbidity (Hach)	14.8 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: 500-200713-1	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	130 mg/L	5	SM2320B
Chloride	23 mg/L	2	EPA 300.0
Hardness (as CaCO3)	180 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	17 mg/L	10	SM2540D
Solids, Total (TS)	260 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	210 mg/L	10	SM2540C
Sulfate	25 mg/L	2	EPA 300.0
Calcium (Total)	50 mg/L	0.2	EPA 200.7
Magnesium (Total)	14 mg/L	0.1	EPA 200.7
COD	18 mg/L	10	SM5220C
Nitrogen, Ammonia	0.27 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	3.5 mg/L	1	SM4500NO3-F
Phosphorus, Total	0.14 mg/L	0.05	SM4500P-E
TKN	0.76 mg/L	0.4	SM4500N(Org)-D
TOC	5.6 mg/L	1	SM5310C
Lab ID #: AB47553	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0027

Sample Date: 7/6/2021

IDEM Sample #: AB47701

Water Flow Type Riffle

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	56.3 %		ASTM D888-09(C)
DO	4.78 mg/L		ASTM D888-09(C)
pH (Field)	7.5 SU		EPA 150.2
Specific Conductance (Field)	374 umho/cm		SM2510B
Temperature	23.5 °C		SM2550B(2)
Turbidity (Hach)	15.8 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-202110-1	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	150 mg/L	5	SM2320B
Chloride	26 mg/L	1	EPA 300.0
Hardness (as CaCO3)	170 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	13 mg/L	5	SM2540D
Solids, Total (TS)	250 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	240 mg/L	10	SM2540C
Sulfate	17 mg/L	1	EPA 300.0
Calcium (Total)	47 mg/L	0.2	EPA 200.7
Magnesium (Total)	14 mg/L	0.1	EPA 200.7
COD	16 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.55 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.084 mg/L	0.05	SM4500P-E
TKN	0.45 mg/L	0.2	EPA 351.2
TOC	4.6 mg/L	1	SM5310C

Lab ID #: AB47701	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1203.3 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0027 Sample Date: 7/13/2021 IDEM Sample #: AB47960
 Water Flow Type Riffle Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	81.2 %		ASTM D888-09(C)
DO	7.05 mg/L		ASTM D888-09(C)
pH (Field)	7.43 SU		EPA 150.2
Specific Conductance (Field)	241 umho/cm		SM2510B
Temperature	22.4 °C		SM2550B(2)
Turbidity (Hach)	52.5 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: AB47960	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

SiteID: WEM080-0027 Sample Date: 7/20/2021 IDEM Sample #: AB47985
 Water Flow Type Riffle Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	82.2 %		ASTM D888-09(C)
DO	7.16 mg/L		ASTM D888-09(C)
pH (Field)	7.53 SU		EPA 150.2
Specific Conductance (Field)	273 umho/cm		SM2510B
Temperature	22.1 °C		SM2550B(2)
Turbidity (Hach)	19.6 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: AB47985	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	488.4 MPN/100mL	1	SM9223B

Indiana Department of Environmental Management

Office of Water Quality-Watershed Assessment and Planning Branch

Surface Water Results Summary

SiteID: WEM080-0027

Sample Date: 7/27/2021

IDEM Sample #: AB48010

Water Flow Type Riffle

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	57.7 %		ASTM D888-09(C)
DO	4.92 mg/L		ASTM D888-09(C)
pH (Field)	7.49 SU		EPA 150.2
Specific Conductance (Field)	340 umho/cm		SM2510B
Temperature	23.2 °C		SM2550B(2)
Turbidity (Hach)	9.62 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB48010	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1413.6 MPN/100mL	1	SM9223B

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0025 **USGS Hydrologic Unit:** 051202070704
Stream Name: Mutton Creek **County:** Jennings
Description: CR 300 North **Latitude:** 39 1 40.68763 **Longitude:** -85 45 55.47689
Drainage: 8.3 **Site Number:** 21T-015

SiteID: WEM080-0025 **Sample Date:** 5/11/2021 **IDEM Sample #:** AB47003
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	101.7 %		ASTM D888-09(C)
DO	11.01 mg/L		ASTM D888-09(C)
pH (Field)	7.87 SU		EPA 150.2
Specific Conductance (Field)	308 umho/cm		SM2510B
Temperature	11.7 °C		SM2550B(2)
Turbidity (Hach)	10.2 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 500-199136-2	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	110 mg/L	5	SM2320B
Chloride	14 mg/L	0.4	EPA 300.0
Hardness (as CaCO3)	130 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	4.5 mg/L	5	SM2540D
Solids, Total (TS)	270 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	210 mg/L	10	SM2540C
Sulfate	14 mg/L	1	EPA 300.0
Calcium (Total)	37 mg/L	0.2	EPA 200.7
Magnesium (Total)	9 mg/L	0.1	EPA 200.7
COD	23 mg/L	10	SM5220C
Nitrogen, Ammonia	0.15 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.2 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.082 mg/L	0.05	SM4500P-E
TKN	0.64 mg/L	0.4	SM4500N(Org)-D
TOC	5.4 mg/L	1	SM5310C

<u>Lab ID #:</u> AB47003	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	435.2 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0025

Sample Date: 6/8/2021

IDEM Sample #: AB47564

Water Flow Type Run

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	74.2 %		ASTM D888-09(C)
DO	6.56 mg/L		ASTM D888-09(C)
pH (Field)	7.63 SU		EPA 150.2
Specific Conductance (Field)	414 umho/cm		SM2510B
Temperature	21.3 °C		SM2550B(2)
Turbidity (Hach)	5.27 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-200713-2	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	140 mg/L	5	SM2320B
Chloride	23 mg/L	1	EPA 300.0
Hardness (as CaCO3)	200 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	4.4 mg/L	10	SM2540D
Solids, Total (TS)	270 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	220 mg/L	10	SM2540C
Sulfate	28 mg/L	1	EPA 300.0
Calcium (Total)	58 mg/L	0.2	EPA 200.7
Magnesium (Total)	13 mg/L	0.1	EPA 200.7
COD	16 mg/L	10	SM5220C
Nitrogen, Ammonia	0.18 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	2.6 mg/L	0.5	SM4500NO3-F
Phosphorus, Total	0.075 mg/L	0.05	SM4500P-E
TKN	0.6 mg/L	0.4	SM4500N(Org)-D
TOC	4.8 mg/L	1	SM5310C

Lab ID #: AB47564	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	613.1 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0025

Sample Date: 7/6/2021

IDEM Sample #: AB47712

Water Flow Type Run

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	61.1 %		ASTM D888-09(C)
DO	5.12 mg/L		ASTM D888-09(C)
pH (Field)	7.62 SU		EPA 150.2
Specific Conductance (Field)	351 umho/cm		SM2510B
Temperature	24 °C		SM2550B(2)
Turbidity (Hach)	5.28 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-202110-2	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	130 mg/L	5	SM2320B
Chloride	15 mg/L	1	EPA 300.0
Hardness (as CaCO3)	170 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	3.4 mg/L	5	SM2540D
Solids, Total (TS)	250 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	230 mg/L	10	SM2540C
Sulfate	22 mg/L	1	EPA 300.0
Calcium (Total)	47 mg/L	0.2	EPA 200.7
Magnesium (Total)	12 mg/L	0.1	EPA 200.7
COD	11 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.95 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	< 0.05 mg/L	0.05	SM4500P-E
TKN	0.26 mg/L	0.2	EPA 351.2
TOC	3 mg/L	1	SM5310C

Lab ID #: AB47712	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	579.4 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0025 Sample Date: 7/13/2021 IDEM Sample #: AB47971
 Water Flow Type Run Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	88.9 %		ASTM D888-09(C)
DO	7.78 mg/L		ASTM D888-09(C)
pH (Field)	7.75 SU		EPA 150.2
Specific Conductance (Field)	293 umho/cm		SM2510B
Temperature	22 °C		SM2550B(2)
Turbidity (Hach)	15.9 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB47971	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	980.4 MPN/100mL	1	SM9223B

SiteID: WEM080-0025 Sample Date: 7/20/2021 IDEM Sample #: AB47996
 Water Flow Type Run Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	89.6 %		ASTM D888-09(C)
DO	7.97 mg/L		ASTM D888-09(C)
pH (Field)	7.68 SU		EPA 150.2
Specific Conductance (Field)	254 umho/cm		SM2510B
Temperature	21.1 °C		SM2550B(2)
Turbidity (Hach)	13.8 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB47996	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	387.3 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0025

Sample Date: 7/27/2021

IDEM Sample #: AB48021

Water Flow Type Run

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	62.7 %		ASTM D888-09(C)
DO	5.36 mg/L		ASTM D888-09(C)
pH (Field)	7.57 SU		EPA 150.2
Specific Conductance (Field)	265 umho/cm		SM2510B
Temperature	23.1 °C		SM2550B(2)
Turbidity (Hach)	6.75 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB48021	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	387.3 MPN/100mL	1	SM9223B

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0013 **USGS Hydrologic Unit:** 051202070703
Stream Name: Storm Creek Ditch **County:** Jackson
Description: CR 400 North **Latitude:** 38 56 25.99130 **Longitude:** -85 48 21.34228
Drainage: 18.19 **Site Number:** 21T-016

SiteID: WEM080-0013 **Sample Date:** 5/12/2021 **IDEM Sample #:** AB46998
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	68 %		ASTM D888-09(C)
DO	6.99 mg/L		ASTM D888-09(C)
pH (Field)	7.62 SU		EPA 150.2
Specific Conductance (Field)	276 umho/cm		SM2510B
Temperature	14 °C		SM2550B(2)
Turbidity (Hach)	12.6 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 500-199136-15	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	94 mg/L	5	SM2320B
Chloride	12 mg/L	0.4	EPA 300.0
Hardness (as CaCO3)	110 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	6.5 mg/L	5	SM2540D
Solids, Total (TS)	220 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	200 mg/L	10	SM2540C
Sulfate	10 mg/L	0.4	EPA 300.0
Calcium (Total)	29 mg/L	0.2	EPA 200.7
Magnesium (Total)	7.9 mg/L	0.1	EPA 200.7
COD	18 mg/L	10	SM5220C
Nitrogen, Ammonia	0.21 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.63 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.17 mg/L	0.05	SM4500P-E
TKN	0.88 mg/L	0.4	SM4500N(Org)-D
TOC	8.4 mg/L	1	SM5310C

<u>Lab ID #:</u> AB46998	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	172.3 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0013

Sample Date: 6/9/2021

IDEM Sample #: AB47559

Water Flow Type Run

Water Appearance Brown

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments: Water up-rain yesterday and today

Lab ID #:	Result	Reporting Limit	Method
% Sat	63.7 %		ASTM D888-09(C)
DO	5.71 mg/L		ASTM D888-09(C)
pH (Field)	7.22 SU		EPA 150.2
Specific Conductance (Field)	246 umho/cm		SM2510B
Temperature	20.8 °C		SM2550B(2)
Turbidity (Hach)	196 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	5 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-200713-15	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	75 mg/L	5	SM2320B
Chloride	12 mg/L	0.4	EPA 300.0
Hardness (as CaCO3)	110 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	240 mg/L	31	SM2540D
Solids, Total (TS)	510 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	170 mg/L	10	SM2540C
Sulfate	9.8 mg/L	0.4	EPA 300.0
Calcium (Total)	29 mg/L	0.2	EPA 200.7
Magnesium (Total)	8.3 mg/L	0.1	EPA 200.7
COD	54 mg/L	10	SM5220C
Nitrogen, Ammonia	0.51 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.9 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.67 mg/L	0.05	SM4500P-E
TKN	1.9 mg/L	0.4	SM4500N(Org)-D
TOC	12 mg/L	4	SM5310C

Lab ID #: AB47559	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0013

Sample Date: 7/7/2021

IDEM Sample #: AB47707

Water Flow Type Stagnant

Water Appearance Murky

Water Depth

Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	15.5 %		ASTM D888-09(C)
DO	1.34 mg/L		ASTM D888-09(C)
pH (Field)	7.2 SU		EPA 150.2
Specific Conductance (Field)	329 umho/cm		SM2510B
Temperature	23.5 °C		SM2550B(2)
Turbidity (Hach)	6.47 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: 500-202110-15	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	140 mg/L	5	SM2320B
Chloride	12 mg/L	1	EPA 300.0
Hardness (as CaCO3)	150 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	5.8 mg/L	5	SM2540D
Solids, Total (TS)	240 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	260 mg/L	10	SM2540C
Sulfate	9.3 mg/L	0.2	EPA 300.0
Calcium (Total)	42 mg/L	0.2	EPA 200.7
Magnesium (Total)	11 mg/L	0.1	EPA 200.7
COD	17 mg/L	10	SM5220C
Nitrogen, Ammonia	0.2 mg/L	0.2	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.27 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.15 mg/L	0.05	SM4500P-E
TKN	0.64 mg/L	0.2	EPA 351.2
TOC	6.1 mg/L	1	SM5310C
Lab ID #: AB47707	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	38.4 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0013 **Sample Date:** 7/14/2021 **IDEM Sample #:** AB47966
Water Flow Type Pool **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	39.5 %		ASTM D888-09(C)
DO	3.37 mg/L		ASTM D888-09(C)
pH (Field)	7.15 SU		EPA 150.2
Specific Conductance (Field)	247 umho/cm		SM2510B
Temperature	23.4 °C		SM2550B(2)
Turbidity (Hach)	12.6 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB47966	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	135.4 MPN/100mL	1	SM9223B

SiteID: WEM080-0013 **Sample Date:** 7/21/2021 **IDEM Sample #:** AB47991
Water Flow Type Stagnant **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	12.1 %		ASTM D888-09(C)
DO	1.03 mg/L		ASTM D888-09(C)
pH (Field)	6.69 SU		EPA 150.2
Specific Conductance (Field)	169 umho/cm		SM2510B
Temperature	23.3 °C		SM2550B(2)
Turbidity (Hach)	14 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB47991	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	104.6 MPN/100mL	1	SM9223B

Indiana Department of Environmental Management

Office of Water Quality-Watershed Assessment and Planning Branch

Surface Water Results Summary

SiteID: WEM080-0013

Sample Date: 7/28/2021

IDEM Sample #: AB48016

Water Flow Type Pool

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	7 %		ASTM D888-09(C)
DO	0.6 mg/L		ASTM D888-09(C)
pH (Field)	7.08 SU		EPA 150.2
Specific Conductance (Field)	330 umho/cm		SM2510B
Temperature	24.1 °C		SM2550B(2)
Turbidity (Hach)	5.76 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB48016	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	17.5 MPN/100mL	1	SM9223B

Weather Code Definitions					
SC	WD		WS	AT	
Sky Conditions	Wind Direction	Wind Strength	Wind Strength	Air Temp	
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

Indiana Department of Environmental Management

Office of Water Quality-Watershed Assessment and Planning Branch

Surface Water Results Summary

SiteID: WEM080-0005 **USGS Hydrologic Unit:** 051202070703
Stream Name: Tributary to Richart Lake **County:** Jennings
Description: CR 900 West **Latitude:** 38 58 10.31116 **Longitude:** -85 46 38.64888
Drainage: 1.6 **Site Number:** 21T-017

SiteID: WEM080-0005 **Sample Date:** 5/12/2021 **IDEM Sample #:** AB46997
Water Flow Type Riffle **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	86.6 %		ASTM D888-09(C)
DO	9.6 mg/L		ASTM D888-09(C)
pH (Field)	7.76 SU		EPA 150.2
Specific Conductance (Field)	423 umho/cm		SM2510B
Temperature	10.7 °C		SM2550B(2)
Turbidity (Hach)	11.2 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 500-199136-14	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	120 mg/L	5	SM2320B
Chloride	30 mg/L	1	EPA 300.0
Hardness (as CaCO3)	160 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	5.5 mg/L	5	SM2540D
Solids, Total (TS)	360 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	330 mg/L	10	SM2540C
Sulfate	41 mg/L	1	EPA 300.0
Calcium (Total)	40 mg/L	0.2	EPA 200.7
Magnesium (Total)	14 mg/L	0.1	EPA 200.7
COD	6.6 mg/L	10	SM5220C
Nitrogen, Ammonia	0.13 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.6 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.089 mg/L	0.05	SM4500P-E
TKN	0.37 mg/L	0.4	SM4500N(Org)-D
TOC	4.6 mg/L	1	SM5310C

Lab ID #: AB46997	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	142.1 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0005

Sample Date: 6/9/2021

IDEM Sample #: AB47558

Water Flow Type Riffle

Water Appearance Brown

Water Depth Algae?

Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%

Sampler Comments: Water high-rain overnight and today

Lab ID #:	Result	Reporting Limit	Method
% Sat	81.1 %		ASTM D888-09(C)
DO	7.21 mg/L		ASTM D888-09(C)
pH (Field)	7.37 SU		EPA 150.2
Specific Conductance (Field)	309 umho/cm		SM2510B
Temperature	21.1 °C		SM2550B(2)
Turbidity (Hach)	132 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	5 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-200713-14	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	51 mg/L	5	SM2320B
Chloride	18 mg/L	1	EPA 300.0
Hardness (as CaCO3)	84 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	120 mg/L	18	SM2540D
Solids, Total (TS)	370 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	170 mg/L	10	SM2540C
Sulfate	13 mg/L	0.4	EPA 300.0
Calcium (Total)	23 mg/L	0.2	EPA 200.7
Magnesium (Total)	6.5 mg/L	0.1	EPA 200.7
COD	44 mg/L	10	SM5220C
Nitrogen, Ammonia	0.26 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.9 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.4 mg/L	0.05	SM4500P-E
TKN	1.3 mg/L	0.4	SM4500N(Org)-D
TOC	17 mg/L	10	SM5310C

Lab ID #: AB47558	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0005

Sample Date: 7/7/2021

IDEM Sample #: AB47706

Water Flow Type Pool

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	53.5 %		ASTM D888-09(C)
DO	4.64 mg/L		ASTM D888-09(C)
pH (Field)	7.39 SU		EPA 150.2
Specific Conductance (Field)	533 umho/cm		SM2510B
Temperature	22.2 °C		SM2550B(2)
Turbidity (Hach)	10.5 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: 500-202110-14	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	160 mg/L	5	SM2320B
Chloride	36 mg/L	4	EPA 300.0
Hardness (as CaCO3)	230 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	9.6 mg/L	5	SM2540D
Solids, Total (TS)	430 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	460 mg/L	10	SM2540C
Sulfate	58 mg/L	4	EPA 300.0
Calcium (Total)	60 mg/L	0.2	EPA 200.7
Magnesium (Total)	19 mg/L	0.1	EPA 200.7
COD	16 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.41 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.11 mg/L	0.05	SM4500P-E
TKN	0.37 mg/L	0.2	EPA 351.2
TOC	4.6 mg/L	1	SM5310C
Lab ID #: AB47706	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	613.1 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0005 Sample Date: 7/14/2021 IDEM Sample #: AB47965
 Water Flow Type Riffle Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	81.8 %		ASTM D888-09(C)
DO	7.2 mg/L		ASTM D888-09(C)
pH (Field)	7.5 SU		EPA 150.2
Specific Conductance (Field)	392 umho/cm		SM2510B
Temperature	21.6 °C		SM2550B(2)
Turbidity (Hach)	14.5 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: AB47965	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	344.8 MPN/100mL	1	SM9223B

SiteID: WEM080-0005 Sample Date: 7/21/2021 IDEM Sample #: AB47990
 Water Flow Type Riffle Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	81.1 %		ASTM D888-09(C)
DO	7.16 mg/L		ASTM D888-09(C)
pH (Field)	7.37 SU		EPA 150.2
Specific Conductance (Field)	412 umho/cm		SM2510B
Temperature	21.5 °C		SM2550B(2)
Turbidity (Hach)	6.01 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: AB47990	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	410.6 MPN/100mL	1	SM9223B

Indiana Department of Environmental Management

Office of Water Quality-Watershed Assessment and Planning Branch

Surface Water Results Summary

SiteID: WEM080-0005

Sample Date: 7/28/2021

IDEM Sample #: AB48015

Water Flow Type Pool

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments: very low flow

Lab ID #:	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	59.4 %		ASTM D888-09(C)
DO	5.19 mg/L		ASTM D888-09(C)
pH (Field)	7.35 SU		EPA 150.2
Specific Conductance (Field)	501 umho/cm		SM2510B
Temperature	22 °C		SM2550B(2)
Turbidity (Hach)	4.4 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB48015	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	816.4 MPN/100mL	1	SM9223B

Weather Code Definitions							
SC Sky Conditions		WD Wind Direction		WS Wind Strength		AT Air Temp	
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32		
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45		
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60		
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75		
5 - Mist				4 - Mod./Strong	5 - 76-85		
6 - Fog				5 - Strong	6 - > 86		
7 - Shower				6 - Gale			

Indiana Department of Environmental Management

Office of Water Quality-Watershed Assessment and Planning Branch

Surface Water Results Summary

SiteID: WEM-07-0014 **USGS Hydrologic Unit:** 051202070703
Stream Name: Storm Creek **County:** Jennings
Description: Base Road **Latitude:** 38 58 59.52422 **Longitude:** -85 47 12.15271
Drainage: **Site Number:** 21T-018

SiteID: WEM-07-0014 **Sample Date:** 5/12/2021 **IDEM Sample #:** AB46996
Water Flow Type: Run **Water Appearance:** Clear **Water Depth:** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %:** 0-20%
Sampler Comments:

Lab ID #:	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	86.5 %		ASTM D888-09(C)
DO	9.53 mg/L		ASTM D888-09(C)
pH (Field)	7.94 SU		EPA 150.2
Specific Conductance (Field)	345 umho/cm		SM2510B
Temperature	10.9 °C		SM2550B(2)
Turbidity (Hach)	9.55 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 500-199136-13	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	130 mg/L	5	SM2320B
Chloride	14 mg/L	1	EPA 300.0
Hardness (as CaCO3)	150 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	6 mg/L	5	SM2540D
Solids, Total (TS)	270 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	270 mg/L	10	SM2540C
Sulfate	19 mg/L	1	EPA 300.0
Calcium (Total)	41 mg/L	0.2	EPA 200.7
Magnesium (Total)	11 mg/L	0.1	EPA 200.7
COD	6.1 mg/L	10	SM5220C
Nitrogen, Ammonia	0.15 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.3 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.08 mg/L	0.05	SM4500P-E
TKN	0.64 mg/L	0.4	SM4500N(Org)-D
TOC	4.7 mg/L	1	SM5310C

Lab ID #: AB46996	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	201.4 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0014

Sample Date: 6/9/2021

IDEM Sample #: AB47557

Water Flow Type Riffle

Water Appearance Brown

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments: Water high. Rain overnight

Lab ID #:	Result	Reporting Limit	Method
% Sat	80.7 %		ASTM D888-09(C)
DO	7.27 mg/L		ASTM D888-09(C)
pH (Field)	7.34 SU		EPA 150.2
Specific Conductance (Field)	272 umho/cm		SM2510B
Temperature	20.5 °C		SM2550B(2)
Turbidity (Hach)	195 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	5 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-200713-13	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	75 mg/L	5	SM2320B
Chloride	19 mg/L	1	EPA 300.0
Hardness (as CaCO3)	120 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	210 mg/L	36	SM2540D
Solids, Total (TS)	450 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	190 mg/L	10	SM2540C
Sulfate	19 mg/L	1	EPA 300.0
Calcium (Total)	34 mg/L	0.2	EPA 200.7
Magnesium (Total)	9 mg/L	0.1	EPA 200.7
COD	52 mg/L	10	SM5220C
Nitrogen, Ammonia	0.28 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	2.6 mg/L	1	SM4500NO3-F
Phosphorus, Total	0.7 mg/L	0.05	SM4500P-E
TKN	1.8 mg/L	0.4	SM4500N(Org)-D
TOC	14 mg/L	10	SM5310C

Lab ID #: AB47557	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0014

Sample Date: 7/7/2021

IDEM Sample #: AB47705

Water Flow Type Glide

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	66.5 %		ASTM D888-09(C)
DO	5.76 mg/L		ASTM D888-09(C)
pH (Field)	7.51 SU		EPA 150.2
Specific Conductance (Field)	429 umho/cm		SM2510B
Temperature	22.4 °C		SM2550B(2)
Turbidity (Hach)	3.66 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: 500-202110-13	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	180 mg/L	5	SM2320B
Chloride	17 mg/L	1	EPA 300.0
Hardness (as CaCO3)	200 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	2.2 mg/L	5	SM2540D
Solids, Total (TS)	270 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	290 mg/L	10	SM2540C
Sulfate	18 mg/L	0.4	EPA 300.0
Calcium (Total)	57 mg/L	0.2	EPA 200.7
Magnesium (Total)	15 mg/L	0.1	EPA 200.7
COD	13 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.65 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.07 mg/L	0.05	SM4500P-E
TKN	0.27 mg/L	0.2	EPA 351.2
TOC	3.3 mg/L	1	SM5310C
Lab ID #: AB47705	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	325.5 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0014 **Sample Date:** 7/14/2021 **IDEM Sample #:** AB47964
Water Flow Type Riffle **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	82.2 %		ASTM D888-09(C)
DO	7.26 mg/L		ASTM D888-09(C)
pH (Field)	7.6 SU		EPA 150.2
Specific Conductance (Field)	354 umho/cm		SM2510B
Temperature	21.5 °C		SM2550B(2)
Turbidity (Hach)	10.9 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> AB47964	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	579.4 MPN/100mL	1	SM9223B

SiteID: WEM-07-0014 **Sample Date:** 7/21/2021 **IDEM Sample #:** AB47989
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	78.4 %		ASTM D888-09(C)
DO	6.95 mg/L		ASTM D888-09(C)
pH (Field)	7.34 SU		EPA 150.2
Specific Conductance (Field)	350 umho/cm		SM2510B
Temperature	21.2 °C		SM2550B(2)
Turbidity (Hach)	7.44 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> AB47989	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	547.5 MPN/100mL	1	SM9223B

Indiana Department of Environmental Management

Office of Water Quality-Watershed Assessment and Planning Branch

Surface Water Results Summary

SiteID: WEM-07-0014

Sample Date: 7/28/2021

IDEM Sample #: AB48014

Water Flow Type Run

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	67.9 %		ASTM D888-09(C)
DO	5.91 mg/L		ASTM D888-09(C)
pH (Field)	7.37 SU		EPA 150.2
Specific Conductance (Field)	394 umho/cm		SM2510B
Temperature	22.2 °C		SM2550B(2)
Turbidity (Hach)	4.56 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB48014	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	435.2 MPN/100mL	1	SM9223B

Weather Code Definitions					
SC	WD	WS	AT		
Sky Conditions	Wind Direction	Wind Strength	Air Temp		
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0017 **USGS Hydrologic Unit:** 051202070702
Stream Name: Sixmile Creek **County:** Jennings
Description: CR 500 South **Latitude:** 38 54 40.15219 **Longitude:** -85 45 44.37870
Drainage: **Site Number:** 21T-019

SiteID: WEM-07-0017 **Sample Date:** 5/11/2021 **IDEM Sample #:** AB47014
Water Flow Type Riffle **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Strong bank erosion

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	106.8 %		ASTM D888-09(C)
DO	10.83 mg/L		ASTM D888-09(C)
pH (Field)	7.95 SU		EPA 150.2
Specific Conductance (Field)	329 umho/cm		SM2510B
Temperature	14.7 °C		SM2550B(2)
Turbidity (Hach)	25.8 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	2 Lookup		Observation

<u>Lab ID #:</u> 500-199136-9	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	94 mg/L	5	SM2320B
Chloride	27 mg/L	1	EPA 300.0
Hardness (as CaCO3)	120 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	28 mg/L	5	SM2540D
Solids, Total (TS)	290 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	240 mg/L	10	SM2540C
Sulfate	27 mg/L	1	EPA 300.0
Calcium (Total)	35 mg/L	0.2	EPA 200.7
Magnesium (Total)	8.4 mg/L	0.1	EPA 200.7
COD	20 mg/L	10	SM5220C
Nitrogen, Ammonia	0.14 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.53 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.21 mg/L	0.05	SM4500P-E
TKN	0.91 mg/L	0.4	SM4500N(Org)-D
TOC	6.3 mg/L	1	SM5310C

<u>Lab ID #:</u> AB47014	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	201.4 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0017

Sample Date: 6/8/2021

IDEM Sample #: AB47575

Water Flow Type Riffle

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	82.1 %		ASTM D888-09(C)
DO	7.03 mg/L		ASTM D888-09(C)
pH (Field)	7.7 SU		EPA 150.2
Specific Conductance (Field)	430 umho/cm		SM2510B
Temperature	23 °C		SM2550B(2)
Turbidity (Hach)	12.7 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	7 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 500-200713-9	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	120 mg/L	5	SM2320B
Chloride	31 mg/L	1	EPA 300.0
Hardness (as CaCO3)	190 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	12 mg/L	10	SM2540D
Solids, Total (TS)	340 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	250 mg/L	10	SM2540C
Sulfate	49 mg/L	1	EPA 300.0
Calcium (Total)	52 mg/L	0.2	EPA 200.7
Magnesium (Total)	14 mg/L	0.1	EPA 200.7
COD	17 mg/L	10	SM5220C
Nitrogen, Ammonia	0.17 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.5 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.16 mg/L	0.05	SM4500P-E
TKN	0.61 mg/L	0.4	SM4500N(Org)-D
TOC	5.3 mg/L	1	SM5310C

Lab ID #: AB47575	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	260.3 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0017

Sample Date: 7/6/2021

IDEM Sample #: AB47723

Water Flow Type Riffle

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	113.4 %		ASTM D888-09(C)
DO	8.8 mg/L		ASTM D888-09(C)
pH (Field)	8.05 SU		EPA 150.2
Specific Conductance (Field)	377 umho/cm		SM2510B
Temperature	28.4 °C		SM2550B(2)
Turbidity (Hach)	14.9 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-202110-9	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	110 mg/L	5	SM2320B
Chloride	24 mg/L	1	EPA 300.0
Hardness (as CaCO3)	160 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	12 mg/L	5	SM2540D
Solids, Total (TS)	290 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	250 mg/L	10	SM2540C
Sulfate	42 mg/L	1	EPA 300.0
Calcium (Total)	45 mg/L	0.2	EPA 200.7
Magnesium (Total)	11 mg/L	0.1	EPA 200.7
COD	21 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.4 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.18 mg/L	0.05	SM4500P-E
TKN	0.79 mg/L	0.2	EPA 351.2
TOC	5.2 mg/L	1	SM5310C

Lab ID #: AB47723	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	231 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0017 Sample Date: 7/13/2021 IDEM Sample #: AB47982
 Water Flow Type Run Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	90.4 %		ASTM D888-09(C)
DO	7.68 mg/L		ASTM D888-09(C)
pH (Field)	7.54 SU		EPA 150.2
Specific Conductance (Field)	255 umho/cm		SM2510B
Temperature	23.5 °C		SM2550B(2)
Turbidity (Hach)	39.6 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	2 Lookup		Observation
Lab ID #: AB47982	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1046.2 MPN/100mL	1	SM9223B

SiteID: WEM-07-0017 Sample Date: 7/20/2021 IDEM Sample #: AB48007
 Water Flow Type Run Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	95.8 %		ASTM D888-09(C)
DO	8.15 mg/L		ASTM D888-09(C)
pH (Field)	7.55 SU		EPA 150.2
Specific Conductance (Field)	291 umho/cm		SM2510B
Temperature	23.4 °C		SM2550B(2)
Turbidity (Hach)	34.4 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB48007	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	461.1 MPN/100mL	1	SM9223B

Indiana Department of Environmental Management

Office of Water Quality-Watershed Assessment and Planning Branch

Surface Water Results Summary

SiteID: WEM-07-0017

Sample Date: 7/27/2021

IDEM Sample #: AB48032

Water Flow Type Run

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	84.8 %		ASTM D888-09(C)
DO	6.82 mg/L		ASTM D888-09(C)
pH (Field)	7.67 SU		EPA 150.2
Specific Conductance (Field)	349 umho/cm		SM2510B
Temperature	26.4 °C		SM2550B(2)
Turbidity (Hach)	14.3 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB48032	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	248.1 MPN/100mL	1	SM9223B

Weather Code Definitions					
SC	WD	WS	AT		
Sky Conditions	Wind Direction	Wind Strength	Air Temp		
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0018 **USGS Hydrologic Unit:** 051202070702
Stream Name: Sixmile Creek **County:** Jennings
Description: CR 200 South **Latitude:** 38 57 15.78425 **Longitude:** -85 43 55.69768
Drainage: **Site Number:** 21T-020

SiteID: WEM-07-0018 **Sample Date:** 5/11/2021 **IDEM Sample #:** AB47012
Water Flow Type Riffle **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	105.6 %		ASTM D888-09(C)
DO	10.81 mg/L		ASTM D888-09(C)
pH (Field)	8.07 SU		EPA 150.2
Specific Conductance (Field)	356 umho/cm		SM2510B
Temperature	14.2 °C		SM2550B(2)
Turbidity (Hach)	16.6 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 500-199136-7	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	98 mg/L	5	SM2320B
Chloride	27 mg/L	1	EPA 300.0
Hardness (as CaCO3)	140 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	13 mg/L	5	SM2540D
Solids, Total (TS)	330 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	270 mg/L	10	SM2540C
Sulfate	35 mg/L	1	EPA 300.0
Calcium (Total)	39 mg/L	0.2	EPA 200.7
Magnesium (Total)	9.5 mg/L	0.1	EPA 200.7
COD	26 mg/L	10	SM5220C
Nitrogen, Ammonia	0.17 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.45 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.17 mg/L	0.05	SM4500P-E
TKN	0.9 mg/L	0.4	SM4500N(Org)-D
TOC	6.4 mg/L	1	SM5310C

<u>Lab ID #:</u> AB47012	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	410.6 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0018

Sample Date: 6/8/2021

IDEM Sample #: AB47573

Water Flow Type Run

Water Appearance Murky

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	83.2 %		ASTM D888-09(C)
DO	7.21 mg/L		ASTM D888-09(C)
pH (Field)	7.77 SU		EPA 150.2
Specific Conductance (Field)	420 umho/cm		SM2510B
Temperature	22.5 °C		SM2550B(2)
Turbidity (Hach)	11.4 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 500-200713-7	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	120 mg/L	5	SM2320B
Chloride	33 mg/L	1	EPA 300.0
Hardness (as CaCO3)	170 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	8.4 mg/L	10	SM2540D
Solids, Total (TS)	290 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	220 mg/L	10	SM2540C
Sulfate	36 mg/L	1	EPA 300.0
Calcium (Total)	48 mg/L	0.2	EPA 200.7
Magnesium (Total)	12 mg/L	0.1	EPA 200.7
COD	21 mg/L	10	SM5220C
Nitrogen, Ammonia	0.23 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.1 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.29 mg/L	0.05	SM4500P-E
TKN	0.65 mg/L	0.4	SM4500N(Org)-D
TOC	6.1 mg/L	1	SM5310C

Lab ID #: AB47573	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	365.4 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0018

Sample Date: 7/6/2021

IDEM Sample #: AB47721

Water Flow Type Riffle

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	91 %		ASTM D888-09(C)
DO	7.51 mg/L		ASTM D888-09(C)
pH (Field)	7.94 SU		EPA 150.2
Specific Conductance (Field)	455 umho/cm		SM2510B
Temperature	25 °C		SM2550B(2)
Turbidity (Hach)	10.4 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-202110-7	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	120 mg/L	5	SM2320B
Chloride	28 mg/L	1	EPA 300.0
Hardness (as CaCO3)	190 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	8 mg/L	5	SM2540D
Solids, Total (TS)	360 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	320 mg/L	10	SM2540C
Sulfate	76 mg/L	2	EPA 300.0
Calcium (Total)	53 mg/L	0.2	EPA 200.7
Magnesium (Total)	14 mg/L	0.1	EPA 200.7
COD	23 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.1 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.26 mg/L	0.05	SM4500P-E
TKN	0.68 mg/L	0.2	EPA 351.2
TOC	5.2 mg/L	1	SM5310C

Lab ID #: AB47721	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	648.8 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0018 Sample Date: 7/13/2021 IDEM Sample #: AB47980
 Water Flow Type Eddy Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	95.3 %		ASTM D888-09(C)
DO	8.09 mg/L		ASTM D888-09(C)
pH (Field)	7.88 SU		EPA 150.2
Specific Conductance (Field)	268 umho/cm		SM2510B
Temperature	23.5 °C		SM2550B(2)
Turbidity (Hach)	31.7 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB47980	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	613.1 MPN/100mL	1	SM9223B

SiteID: WEM-07-0018 Sample Date: 7/20/2021 IDEM Sample #: AB48005
 Water Flow Type Run Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	91.6 %		ASTM D888-09(C)
DO	7.93 mg/L		ASTM D888-09(C)
pH (Field)	7.71 SU		EPA 150.2
Specific Conductance (Field)	320 umho/cm		SM2510B
Temperature	22.5 °C		SM2550B(2)
Turbidity (Hach)	22 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: AB48005	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	307.6 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0018

Sample Date: 7/27/2021

IDEM Sample #: AB48030

Water Flow Type Run

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	82 %		ASTM D888-09(C)
DO	6.88 mg/L		ASTM D888-09(C)
pH (Field)	7.79 SU		EPA 150.2
Specific Conductance (Field)	419 umho/cm		SM2510B
Temperature	24.1 °C		SM2550B(2)
Turbidity (Hach)	11.1 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB48030	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	298.7 MPN/100mL	1	SM9223B

Weather Code Definitions					
SC	WD	WS	AT		
Sky Conditions	Wind Direction	Wind Strength	Air Temp		
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0019 USGS Hydrologic Unit: 051202070702
 Stream Name: Sixmile Creek County: Jennings
 Description: CR 175 North Latitude: 39 0 36.34528 Longitude: -85 42 17.91439
 Drainage: Site Number: 21T-021

SiteID: WEM-07-0019 Sample Date: 5/11/2021 IDEM Sample #: AB47008
 Water Flow Type Water Appearance Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	93.9 %		ASTM D888-09(C)
DO	9.45 mg/L		ASTM D888-09(C)
pH (Field)	7.93 SU		EPA 150.2
Specific Conductance (Field)	331 umho/cm		SM2510B
Temperature	15 °C		SM2550B(2)
Turbidity (Hach)	18.7 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: 500-199136-3	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	92 mg/L	5	SM2320B
Chloride	28 mg/L	1	EPA 300.0
Hardness (as CaCO3)	120 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	15 mg/L	5	SM2540D
Solids, Total (TS)	290 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	250 mg/L	10	SM2540C
Sulfate	22 mg/L	1	EPA 300.0
Calcium (Total)	34 mg/L	0.2	EPA 200.7
Magnesium (Total)	7.7 mg/L	0.1	EPA 200.7
COD	31 mg/L	10	SM5220C
Nitrogen, Ammonia	0.17 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.48 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.25 mg/L	0.05	SM4500P-E
TKN	0.67 mg/L	0.4	SM4500N(Org)-D
TOC	7.7 mg/L	1	SM5310C

Lab ID #: AB47008	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	261.3 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0019

Sample Date: 6/8/2021

IDEM Sample #: AB47569

Water Flow Type Run

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	69.8 %		ASTM D888-09(C)
DO	6.27 mg/L		ASTM D888-09(C)
pH (Field)	7.61 SU		EPA 150.2
Specific Conductance (Field)	521 umho/cm		SM2510B
Temperature	20.6 °C		SM2550B(2)
Turbidity (Hach)	6.21 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: 500-200713-3	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	120 mg/L	5	SM2320B
Chloride	42 mg/L	2	EPA 300.0
Hardness (as CaCO3)	170 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	4.4 mg/L	10	SM2540D
Solids, Total (TS)	280 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	210 mg/L	10	SM2540C
Sulfate	30 mg/L	2	EPA 300.0
Calcium (Total)	49 mg/L	0.2	EPA 200.7
Magnesium (Total)	11 mg/L	0.1	EPA 200.7
COD	27 mg/L	10	SM5220C
Nitrogen, Ammonia	0.21 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.5 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.47 mg/L	0.05	SM4500P-E
TKN	0.88 mg/L	0.4	SM4500N(Org)-D
TOC	7.5 mg/L	1	SM5310C
Lab ID #: AB47569	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	209.8 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0019

Sample Date: 7/6/2021

IDEM Sample #: AB47717

Water Flow Type Run

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	71 %		ASTM D888-09(C)
DO	6.01 mg/L		ASTM D888-09(C)
pH (Field)	7.65 SU		EPA 150.2
Specific Conductance (Field)	289 umho/cm		SM2510B
Temperature	23.8 °C		SM2550B(2)
Turbidity (Hach)	7.56 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-202110-3	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	89 mg/L	5	SM2320B
Chloride	21 mg/L	1	EPA 300.0
Hardness (as CaCO3)	120 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	5.8 mg/L	5	SM2540D
Solids, Total (TS)	210 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	200 mg/L	10	SM2540C
Sulfate	19 mg/L	1	EPA 300.0
Calcium (Total)	34 mg/L	0.2	EPA 200.7
Magnesium (Total)	8 mg/L	0.1	EPA 200.7
COD	17 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.42 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.19 mg/L	0.05	SM4500P-E
TKN	0.84 mg/L	0.2	EPA 351.2
TOC	6.3 mg/L	1	SM5310C

Lab ID #: AB47717	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	313 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0019 Sample Date: 7/13/2021 IDEM Sample #: AB47976
 Water Flow Type Run Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	83.5 %		ASTM D888-09(C)
DO	7.05 mg/L		ASTM D888-09(C)
pH (Field)	7.56 SU		EPA 150.2
Specific Conductance (Field)	246 umho/cm		SM2510B
Temperature	23.8 °C		SM2550B(2)
Turbidity (Hach)	21.2 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB47976	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	193.5 MPN/100mL	1	SM9223B

SiteID: WEM-07-0019 Sample Date: 7/20/2021 IDEM Sample #: AB48001
 Water Flow Type Run Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	76.3 %		ASTM D888-09(C)
DO	6.52 mg/L		ASTM D888-09(C)
pH (Field)	7.56 SU		EPA 150.2
Specific Conductance (Field)	23.1 umho/cm		SM2510B
Temperature	23.1 °C		SM2550B(2)
Turbidity (Hach)	16.8 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: AB48001	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	104.6 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0019

Sample Date: 7/27/2021

IDEM Sample #: AB48026

Water Flow Type Run

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	75.2 %		ASTM D888-09(C)
DO	6.52 mg/L		ASTM D888-09(C)
pH (Field)	7.61 SU		EPA 150.2
Specific Conductance (Field)	250 umho/cm		SM2510B
Temperature	22.4 °C		SM2550B(2)
Turbidity (Hach)	7.59 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB48026	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	186 MPN/100mL	1	SM9223B

Weather Code Definitions					
SC	WD	WS	AT		
Sky Conditions	Wind Direction	Wind Strength	Air Temp		
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0020 **USGS Hydrologic Unit:** 051202070702
Stream Name: Sixmile Creek **County:** Jennings
Description: CR 415 North **Latitude:** 39 2 44.73366 **Longitude:** -85 40 35.18964
Drainage: **Site Number:** 21T-022

SiteID: WEM-07-0020 **Sample Date:** 5/11/2021 **IDEM Sample #:** AB47009
Water Flow Type Run **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	92 %		ASTM D888-09(C)
DO	9.95 mg/L		ASTM D888-09(C)
pH (Field)	7.58 SU		EPA 150.2
Specific Conductance (Field)	449 umho/cm		SM2510B
Temperature	11.8 °C		SM2550B(2)
Turbidity (Hach)	18.8 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 500-199136-4	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	140 mg/L	5	SM2320B
Chloride	33 mg/L	2	EPA 300.0
Hardness (as CaCO3)	160 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	6.5 mg/L	5	SM2540D
Solids, Total (TS)	380 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	340 mg/L	10	SM2540C
Sulfate	31 mg/L	2	EPA 300.0
Calcium (Total)	47 mg/L	0.2	EPA 200.7
Magnesium (Total)	11 mg/L	0.1	EPA 200.7
COD	18 mg/L	10	SM5220C
Nitrogen, Ammonia	0.12 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.3 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.11 mg/L	0.05	SM4500P-E
TKN	0.87 mg/L	0.4	SM4500N(Org)-D
TOC	6.4 mg/L	1	SM5310C

<u>Lab ID #:</u> AB47009	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	547.5 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0020

Sample Date: 6/8/2021

IDEM Sample #: AB47570

Water Flow Type Pool

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	75.3 %		ASTM D888-09(C)
DO	6.82 mg/L		ASTM D888-09(C)
pH (Field)	7.65 SU		EPA 150.2
Specific Conductance (Field)	619 umho/cm		SM2510B
Temperature	19.8 °C		SM2550B(2)
Turbidity (Hach)	5.66 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 500-200713-4	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	130 mg/L	5	SM2320B
Chloride	85 mg/L	5	EPA 300.0
Hardness (as CaCO3)	200 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	4 mg/L	5	SM2540D
Solids, Total (TS)	390 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	360 mg/L	10	SM2540C
Sulfate	42 mg/L	5	EPA 300.0
Calcium (Total)	57 mg/L	0.2	EPA 200.7
Magnesium (Total)	14 mg/L	0.1	EPA 200.7
COD	16 mg/L	10	SM5220C
Nitrogen, Ammonia	0.21 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.4 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.1 mg/L	0.05	SM4500P-E
TKN	0.53 mg/L	0.4	SM4500N(Org)-D
TOC	5.4 mg/L	1	SM5310C

Lab ID #: AB47570	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1553.1 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0020

Sample Date: 7/6/2021

IDEM Sample #: AB47718

Water Flow Type Glide

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	34.9 %		ASTM D888-09(C)
DO	3.24 mg/L		ASTM D888-09(C)
pH (Field)	7.18 SU		EPA 150.2
Specific Conductance (Field)	590 umho/cm		SM2510B
Temperature	18 °C		SM2550B(2)
Turbidity (Hach)	3.33 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: 500-202110-4	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	170 mg/L	5	SM2320B
Chloride	59 mg/L	4	EPA 300.0
Hardness (as CaCO3)	240 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	2.2 mg/L	5	SM2540D
Solids, Total (TS)	430 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	420 mg/L	10	SM2540C
Sulfate	52 mg/L	4	EPA 300.0
Calcium (Total)	68 mg/L	0.2	EPA 200.7
Magnesium (Total)	17 mg/L	0.1	EPA 200.7
COD	10 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.89 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.092 mg/L	0.05	SM4500P-E
TKN	0.32 mg/L	0.2	EPA 351.2
TOC	3.4 mg/L	1	SM5310C
Lab ID #: AB47718	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0020 Sample Date: 7/13/2021 IDEM Sample #: AB47977
 Water Flow Type Run Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	86.3 %		ASTM D888-09(C)
DO	7.59 mg/L		ASTM D888-09(C)
pH (Field)	7.55 SU		EPA 150.2
Specific Conductance (Field)	296 umho/cm		SM2510B
Temperature	21.6 °C		SM2550B(2)
Turbidity (Hach)	32 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB47977	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1986.3 MPN/100mL	1	SM9223B

SiteID: WEM-07-0020 Sample Date: 7/20/2021 IDEM Sample #: AB48002
 Water Flow Type Run Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	69.3 %		ASTM D888-09(C)
DO	6.42 mg/L		ASTM D888-09(C)
pH (Field)	7.38 SU		EPA 150.2
Specific Conductance (Field)	461 umho/cm		SM2510B
Temperature	19 °C		SM2550B(2)
Turbidity (Hach)	9.55 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: AB48002	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1732.9 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0020

Sample Date: 7/27/2021

IDEM Sample #: AB48027

Water Flow Type Pool

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments: low flow

Lab ID #:	Result	Reporting Limit	Method
% Sat	28.3 %		ASTM D888-09(C)
DO	2.63 mg/L		ASTM D888-09(C)
pH (Field)	7.23 SU		EPA 150.2
Specific Conductance (Field)	553 umho/cm		SM2510B
Temperature	19 °C		SM2550B(2)
Turbidity (Hach)	2.69 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB48027	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM070-0036 **USGS Hydrologic Unit:** 051202070701
Stream Name: Vernon Fork Muscatatuck River **County:** Jennings
Description: CR 400 West **Latitude:** 38 57 15.46163 **Longitude:** -85 41 5.94729
Drainage: 219.11 **Site Number:** 21T-023

SiteID: WEM070-0036 **Sample Date:** 5/11/2021 **IDEM Sample #:** AB47011
Water Flow Type Run **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	90.4 %		ASTM D888-09(C)
DO	9.55 mg/L		ASTM D888-09(C)
pH (Field)	7.79 SU		EPA 150.2
Specific Conductance (Field)	248 umho/cm		SM2510B
Temperature	12.8 °C		SM2550B(2)
Turbidity (Hach)	119 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	2 Lookup		Observation

<u>Lab ID #:</u> 500-199136-6	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	85 mg/L	5	SM2320B
Chloride	14 mg/L	0.4	EPA 300.0
Hardness (as CaCO3)	110 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	60 mg/L	5	SM2540D
Solids, Total (TS)	320 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	210 mg/L	10	SM2540C
Sulfate	8.9 mg/L	0.4	EPA 300.0
Calcium (Total)	32 mg/L	0.2	EPA 200.7
Magnesium (Total)	6.8 mg/L	0.1	EPA 200.7
COD	27 mg/L	10	SM5220C
Nitrogen, Ammonia	0.23 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.4 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.49 mg/L	0.05	SM4500P-E
TKN	1.1 mg/L	0.4	SM4500N(Org)-D
TOC	8 mg/L	1	SM5310C

<u>Lab ID #:</u> AB47011	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1203.3 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM070-0036

Sample Date: 6/8/2021

IDEM Sample #: AB47572

Water Flow Type Run

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	81.7 %		ASTM D888-09(C)
DO	7.01 mg/L		ASTM D888-09(C)
pH (Field)	7.76 SU		EPA 150.2
Specific Conductance (Field)	375 umho/cm		SM2510B
Temperature	22.8 °C		SM2550B(2)
Turbidity (Hach)	20.2 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: 500-200713-6	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	130 mg/L	5	SM2320B
Chloride	18 mg/L	1	EPA 300.0
Hardness (as CaCO3)	180 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	22 mg/L	10	SM2540D
Solids, Total (TS)	280 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	220 mg/L	10	SM2540C
Sulfate	16 mg/L	1	EPA 300.0
Calcium (Total)	54 mg/L	0.2	EPA 200.7
Magnesium (Total)	12 mg/L	0.1	EPA 200.7
COD	18 mg/L	10	SM5220C
Nitrogen, Ammonia	0.19 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	4.3 mg/L	1	SM4500NO3-F
Phosphorus, Total	0.17 mg/L	0.05	SM4500P-E
TKN	0.76 mg/L	0.4	SM4500N(Org)-D
TOC	5.2 mg/L	1	SM5310C
Lab ID #: AB47572	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	166.4 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM070-0036

Sample Date: 7/6/2021

IDEM Sample #: AB47720

Water Flow Type Run

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	86 %		ASTM D888-09(C)
DO	6.85 mg/L		ASTM D888-09(C)
pH (Field)	7.78 SU		EPA 150.2
Specific Conductance (Field)	311 umho/cm		SM2510B
Temperature	26.5 °C		SM2550B(2)
Turbidity (Hach)	20 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: 500-202110-6	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	120 mg/L	5	SM2320B
Chloride	12 mg/L	0.4	EPA 300.0
Hardness (as CaCO3)	150 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	19 mg/L	5	SM2540D
Solids, Total (TS)	240 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	210 mg/L	10	SM2540C
Sulfate	13 mg/L	0.4	EPA 300.0
Calcium (Total)	44 mg/L	0.2	EPA 200.7
Magnesium (Total)	9.2 mg/L	0.1	EPA 200.7
COD	18 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.6 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.15 mg/L	0.05	SM4500P-E
TKN	0.48 mg/L	0.2	EPA 351.2
TOC	3.5 mg/L	1	SM5310C
Lab ID #: AB47720	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	104.6 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM070-0036 Sample Date: 7/13/2021 IDEM Sample #: AB47979
 Water Flow Type Eddy Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	86.1 %		ASTM D888-09(C)
DO	7.46 mg/L		ASTM D888-09(C)
pH (Field)	7.74 SU		EPA 150.2
Specific Conductance (Field)	268 umho/cm		SM2510B
Temperature	22.4 °C		SM2550B(2)
Turbidity (Hach)	72.6 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB47979	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1986.3 MPN/100mL	1	SM9223B

SiteID: WEM070-0036 Sample Date: 7/20/2021 IDEM Sample #: AB48004
 Water Flow Type Eddy Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	88.6 %		ASTM D888-09(C)
DO	7.57 mg/L		ASTM D888-09(C)
pH (Field)	7.71 SU		EPA 150.2
Specific Conductance (Field)	332 umho/cm		SM2510B
Temperature	22.8 °C		SM2550B(2)
Turbidity (Hach)	22.3 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: AB48004	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	224.7 MPN/100mL	1	SM9223B

Indiana Department of Environmental Management

Office of Water Quality-Watershed Assessment and Planning Branch

Surface Water Results Summary

SiteID: WEM070-0036

Sample Date: 7/27/2021

IDEM Sample #: AB48029

Water Flow Type Riffle

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	111.2 %		ASTM D888-09(C)
DO	9 mg/L		ASTM D888-09(C)
pH (Field)	8.01 SU		EPA 150.2
Specific Conductance (Field)	397 umho/cm		SM2510B
Temperature	26.1 °C		SM2550B(2)
Turbidity (Hach)	21 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB48029	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	35.9 MPN/100mL	1	SM9223B

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

Indiana Department of Environmental Management

Office of Water Quality-Watershed Assessment and Planning Branch

Surface Water Results Summary

SiteID: WEM070-0001 **USGS Hydrologic Unit:** 051202070701
Stream Name: Vernon Fork Muscatatuck River **County:** Jennings
Description: CR 60 South, Vernon **Latitude:** 38 58 34.90130 **Longitude:** -85 37 11.37519
Drainage: 198 **Site Number:** 21T-025

SiteID: WEM070-0001 **Sample Date:** 5/11/2021 **IDEM Sample #:** AB47010
Water Flow Type Run **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	95.1 %		ASTM D888-09(C)
DO	10.06 mg/L		ASTM D888-09(C)
pH (Field)	7.93 SU		EPA 150.2
Specific Conductance (Field)	257 umho/cm		SM2510B
Temperature	12.8 °C		SM2550B(2)
Turbidity (Hach)	73 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: 500-199136-5	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	90 mg/L	5	SM2320B
Chloride	14 mg/L	0.4	EPA 300.0
Hardness (as CaCO3)	110 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	26 mg/L	5	SM2540D
Solids, Total (TS)	280 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	210 mg/L	10	SM2540C
Sulfate	9.2 mg/L	0.4	EPA 300.0
Calcium (Total)	32 mg/L	0.2	EPA 200.7
Magnesium (Total)	6.8 mg/L	0.1	EPA 200.7
COD	23 mg/L	10	SM5220C
Nitrogen, Ammonia	0.21 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.6 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.4 mg/L	0.05	SM4500P-E
TKN	0.88 mg/L	0.4	SM4500N(Org)-D
TOC	7.5 mg/L	1	SM5310C

Lab ID #: AB47010	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	980.4 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM070-0001

Sample Date: 6/8/2021

IDEM Sample #: AB47571

Water Flow Type Run

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	94.3 %		ASTM D888-09(C)
DO	8.18 mg/L		ASTM D888-09(C)
pH (Field)	8.03 SU		EPA 150.2
Specific Conductance (Field)	392 umho/cm		SM2510B
Temperature	22.4 °C		SM2550B(2)
Turbidity (Hach)	8.66 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 500-200713-5	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	130 mg/L	5	SM2320B
Chloride	21 mg/L	1	EPA 300.0
Hardness (as CaCO3)	190 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	8.4 mg/L	5	SM2540D
Solids, Total (TS)	270 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	240 mg/L	10	SM2540C
Sulfate	19 mg/L	1	EPA 300.0
Calcium (Total)	55 mg/L	0.2	EPA 200.7
Magnesium (Total)	12 mg/L	0.1	EPA 200.7
COD	15 mg/L	10	SM5220C
Nitrogen, Ammonia	0.21 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	4.6 mg/L	1	SM4500NO3-F
Phosphorus, Total	0.17 mg/L	0.05	SM4500P-E
TKN	0.76 mg/L	0.4	SM4500N(Org)-D
TOC	5 mg/L	1	SM5310C

Lab ID #: AB47571	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	77.6 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM070-0001

Sample Date: 7/6/2021

IDEM Sample #: AB47719

Water Flow Type Run

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	88.5 %		ASTM D888-09(C)
DO	7.29 mg/L		ASTM D888-09(C)
pH (Field)	8.07 SU		EPA 150.2
Specific Conductance (Field)	292 umho/cm		SM2510B
Temperature	25.2 °C		SM2550B(2)
Turbidity (Hach)	8.36 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-202110-5	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	110 mg/L	5	SM2320B
Chloride	12 mg/L	1	EPA 300.0
Hardness (as CaCO3)	140 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	6.2 mg/L	5	SM2540D
Solids, Total (TS)	220 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	200 mg/L	10	SM2540C
Sulfate	14 mg/L	1	EPA 300.0
Calcium (Total)	40 mg/L	0.2	EPA 200.7
Magnesium (Total)	8.6 mg/L	0.1	EPA 200.7
COD	16 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.4 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.16 mg/L	0.05	SM4500P-E
TKN	0.28 mg/L	0.2	EPA 351.2
TOC	4.2 mg/L	1	SM5310C

Lab ID #: AB47719	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	57.3 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM070-0001 Sample Date: 7/13/2021 IDEM Sample #: AB47978
 Water Flow Type Eddy Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	90.6 %		ASTM D888-09(C)
DO	7.87 mg/L		ASTM D888-09(C)
pH (Field)	7.8 SU		EPA 150.2
Specific Conductance (Field)	257 umho/cm		SM2510B
Temperature	22.3 °C		SM2550B(2)
Turbidity (Hach)	61.1 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB47978	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1986.3 MPN/100mL	1	SM9223B

SiteID: WEM070-0001 Sample Date: 7/20/2021 IDEM Sample #: AB48003
 Water Flow Type Eddy Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	94.8 %		ASTM D888-09(C)
DO	7.99 mg/L		ASTM D888-09(C)
pH (Field)	8.29 SU		EPA 150.2
Specific Conductance (Field)	343 umho/cm		SM2510B
Temperature	21.9 °C		SM2550B(2)
Turbidity (Hach)	12 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: AB48003	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	149.7 MPN/100mL	1	SM9223B

Indiana Department of Environmental Management

Office of Water Quality-Watershed Assessment and Planning Branch

Surface Water Results Summary

SiteID: WEM070-0001

Sample Date: 7/27/2021

IDEM Sample #: AB48028

Water Flow Type Run

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	78.6 %		ASTM D888-09(C)
DO	6.54 mg/L		ASTM D888-09(C)
pH (Field)	8.04 SU		EPA 150.2
Specific Conductance (Field)	406 umho/cm		SM2510B
Temperature	24.6 °C		SM2550B(2)
Turbidity (Hach)	5.75 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB48028	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	47.1 MPN/100mL	1	SM9223B

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	