

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

SiteID: WL190-0010 **USGS Hydrologic Unit:** 051201081504
Stream Name: Big Raccoon Creek **County:** Parke
Description: CR 600 West **Latitude:** 39 45 34.24778 **Longitude:** -87 21 3.83528
Drainage: **Site Number:** 23T-001

SiteID: WL190-0010 **Sample Date:** 2/7/2023 **IDEM Sample #:** AB82878
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	97.2 %		ASTM D888-09(C)
DO	11.94 mg/L		ASTM D888-09(C)
pH (Field)	8.01 SU		EPA 150.2
Specific Conductance (Field)	552 umho/cm		SM2510B
Temperature	6.4 °C		SM2550B(2)
Turbidity (Hach)	6.74 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	2 Lookup		Observation

<u>Lab ID #:</u> 50336923003	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	232 mg/L	10	SM2320B
Chloride	19.3 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	270 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	6.4 mg/L	2.5	SM2540D
Solids, Total (TS)	326 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	314 mg/L	10	SM2540C
Sulfate	26.6 mg/L	2.5	EPA 300.0
Calcium (Total)	70100 ug/L	1000	EPA 200.7
Magnesium (Total)	23000 ug/L	1000	EPA 200.7
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.8 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.05 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.6 mg/L	1	SM5310C

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

SiteID: WLV190-0010

Sample Date: 3/7/2023

IDEM Sample #: AC00236

Water Flow Type Run

Water Appearance Brown

Water Depth **Algae?**

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments: Flooded. Used meter 55 for pH. P3 read 7.50.

Lab ID #:	Result	Reporting Limit	Method
% Sat	86.1 %		ASTM D888-09(C)
DO	9.83 mg/L		ASTM D888-09(C)
pH (Field)	7.85 SU		EPA 150.2
Specific Conductance (Field)	387.1 umho/cm		SM2510B
Temperature	9.5 °C		SM2550B(2)
Turbidity (Hach)	157 NTU		EPA 180.1
Air Temp	2 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: 50339082003	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	156 mg/L	10	SM2320B
Chloride	12.6 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	198 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	97.1 mg/L	9.1	SM2540D
Solids, Total (TS)	340 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	245 mg/L	10	SM2540C
Sulfate	18.8 mg/L	0.25	EPA 300.0
Calcium (Total)	52600 ug/L	1000	EPA 200.7
Magnesium (Total)	16300 ug/L	1000	EPA 200.7
COD	15.4 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.6 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.26 mg/L	0.12	EPA 365.1
TKN	0.95 mg/L	0.5	EPA 351.2
TOC	4 mg/L	1	SM5310C

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

SiteID: WLV190-0010

Sample Date: 4/12/2023

IDEM Sample #: AC02343

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	97.6 %		ASTM D888-09(C)
DO	9.86 mg/L		ASTM D888-09(C)
pH (Field)	8.23 SU		EPA 150.2
Specific Conductance (Field)	435.7 umho/cm		SM2510B
Temperature	14.9 °C		SM2550B(2)
Turbidity (Hach)	27 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 50342075011	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	179 mg/L	10	SM2320B
Chloride	16.3 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	235 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	52 mg/L	3.6	SM2540D
Solids, Total (TS)	315 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	229 mg/L	10	SM2540C
Sulfate	18.3 mg/L	0.25	EPA 300.0
Calcium (Total)	62100 ug/L	1000	EPA 200.7
Magnesium (Total)	19500 ug/L	1000	EPA 200.7
COD	20.3 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.3 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.1 mg/L	0.1	EPA 365.4
TKN	0.91 mg/L	0.5	EPA 351.2
TOC	4.3 mg/L	1	SM5310C

Lab ID #: AC02343	Result	Reporting Limit	Method
Coliforms (Total)	2419.6 MPN/100mL	1	SM9223B(Colilert-18)
E. coli	49.6 MPN/100mL	1	SM9223B(Colilert-18)

Weather Code Definitions			
SC Sky Conditions	WD Wind Direction	WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	2 - Mod./Light	3 - 46-60
4 - Cloudy		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: WLV-15-0004 **USGS Hydrologic Unit:** 051201081504
Stream Name: Tributary of Big Raccoon Creek **County:** Parke
Description: McAdams Road **Latitude:** 39 44 4.92319 **Longitude:** -87 19 28.05978
Drainage: **Site Number:** 23T-002

SiteID: WLV-15-0004 **Sample Date:** 4/12/2023 **IDEM Sample #:** AC02342
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	104.2 %		ASTM D888-09(C)
DO	11.07 mg/L		ASTM D888-09(C)
pH (Field)	8.32 SU		EPA 150.2
Specific Conductance (Field)	533 umho/cm		SM2510B
Temperature	12.6 °C		SM2550B(2)
Turbidity (Hach)	1.86 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #: 50342075010</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	234 mg/L	10	SM2320B
Chloride	10.4 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	278 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	307 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	297 mg/L	10	SM2540C
Sulfate	43 mg/L	0.25	EPA 300.0
Calcium (Total)	66300 ug/L	1000	EPA 200.7
Magnesium (Total)	27400 ug/L	1000	EPA 200.7
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.1 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.1 mg/L	0.1	EPA 365.4
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.7 mg/L	1	SM5310C

<u>Lab ID #: AC02342</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	1732.9 MPN/100mL	1	SM9223B(Colilert-18)
E. coli	22.8 MPN/100mL	1	SM9223B(Colilert-18)

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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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SiteID: WL190-0012 **USGS Hydrologic Unit:** 051201081504
Stream Name: Big Raccoon Creek **County:** Parke
Description: Wabash Street, Mecca **Latitude:** 39 43 45.26869 **Longitude:** -87 19 28.69273
Drainage: **Site Number:** 23T-003

SiteID: WL190-0012 **Sample Date:** 4/12/2023 **IDEM Sample #:** AC02341
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	96.6 %		ASTM D888-09(C)
DO	10.07 mg/L		ASTM D888-09(C)
pH (Field)	8.21 SU		EPA 150.2
Specific Conductance (Field)	421.9 umho/cm		SM2510B
Temperature	13.5 °C		SM2550B(2)
Turbidity (Hach)	24.5 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #: 50342075020</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	176 mg/L	10	SM2320B
Chloride	16.3 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	225 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	38 mg/L	4.2	SM2540D
Solids, Total (TS)	304 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	225 mg/L	10	SM2540C
Sulfate	17.7 mg/L	0.25	EPA 300.0
Calcium (Total)	60000 ug/L	1000	EPA 200.7
Magnesium (Total)	18200 ug/L	1000	EPA 200.7
COD	16.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.3 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.1 mg/L	0.1	EPA 365.4
TKN	0.62 mg/L	0.5	EPA 351.2
TOC	3.4 mg/L	1	SM5310C

<u>Lab ID #: AC02341</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	1413.6 MPN/100mL	1	SM9223B(Colilert-18)
E. coli	52 MPN/100mL	1	SM9223B(Colilert-18)

**Indiana Department of Environmental Management
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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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SiteID: WLV-15-0017 **USGS Hydrologic Unit:** 051201081504
Stream Name: Big Raccoon Creek **County:** Parke
Description: Unnamed Farm Lane **Latitude:** 39 42 4.40920 **Longitude:** -87 19 2.54514
Drainage: **Site Number:** 23T-005

SiteID: WLV-15-0017 **Sample Date:** 4/12/2023 **IDEM Sample #:** AC02340
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	92.5 %		ASTM D888-09(C)
DO	9.83 mg/L		ASTM D888-09(C)
pH (Field)	8.17 SU		EPA 150.2
Specific Conductance (Field)	419.4 umho/cm		SM2510B
Temperature	12.6 °C		SM2550B(2)
Turbidity (Hach)	26.7 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #: 50342075009</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	174 mg/L	10	SM2320B
Chloride	16.2 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	226 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	36.6 mg/L	2.8	SM2540D
Solids, Total (TS)	308 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	227 mg/L	10	SM2540C
Sulfate	17.5 mg/L	0.25	EPA 300.0
Calcium (Total)	59900 ug/L	1000	EPA 200.7
Magnesium (Total)	18600 ug/L	1000	EPA 200.7
COD	12.4 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.3 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.1 mg/L	0.1	EPA 365.4
TKN	1 mg/L	0.5	EPA 351.2
TOC	3.2 mg/L	1	SM5310C

<u>Lab ID #: AC02340</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	770.1 MPN/100mL	1	3M9223B(Colilert-18)
E. coli	60.9 MPN/100mL	1	3M9223B(Colilert-18)

**Indiana Department of Environmental Management
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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: WL190-0003 **USGS Hydrologic Unit:** 051201081503
Stream Name: Big Raccoon Creek **County:** Parke
Description: CR 325 West **Latitude:** 39 39 9.00000 **Longitude:** -87 17 38.00000
Drainage: 448 **Site Number:** 23T-006

SiteID: WL190-0003 **Sample Date:** 2/7/2023 **IDEM Sample #:** AB82877
Water Flow Type Run **Water Appearance** Green **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	95.4 %		ASTM D888-09(C)
DO	12.07 mg/L		ASTM D888-09(C)
pH (Field)	8.1 SU		EPA 150.2
Specific Conductance (Field)	521 umho/cm		SM2510B
Temperature	5.3 °C		SM2550B(2)
Turbidity (Hach)	5.2 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	2 Lookup		Observation

<u>Lab ID #:</u> 50336923002	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	225 mg/L	10	SM2320B
Chloride	19.1 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	240 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	7.7 mg/L	2.5	SM2540D
Solids, Total (TS)	319 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	309 mg/L	10	SM2540C
Sulfate	24.4 mg/L	2.5	EPA 300.0
Calcium (Total)	62600 ug/L	1000	EPA 200.7
Magnesium (Total)	20400 ug/L	1000	EPA 200.7
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.9 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.05 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.7 mg/L	1	SM5310C

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

SiteID: WLV190-0003

Sample Date: 3/7/2023

IDEM Sample #: AC00235

Water Flow Type Run

Water Appearance Brown

Water Depth

Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments: Stream was flooded. Used meter 55 for pH. P3 read 7.72.

Lab ID #:	Result	Reporting Limit	Method
% Sat	89.5 %		ASTM D888-09(C)
DO	10.38 mg/L		ASTM D888-09(C)
pH (Field)	7.95 SU		EPA 150.2
Specific Conductance (Field)	362.1 umho/cm		SM2510B
Temperature	8.8 °C		SM2550B(2)
Turbidity (Hach)	246 NTU		EPA 180.1
Air Temp	2 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: 50339082002	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	148 mg/L	10	SM2320B
Chloride	12 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	210 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	209 mg/L	14.3	SM2540D
Solids, Total (TS)	417 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	237 mg/L	10	SM2540C
Sulfate	17.2 mg/L	0.25	EPA 300.0
Calcium (Total)	55600 ug/L	1000	EPA 200.7
Magnesium (Total)	17200 ug/L	1000	EPA 200.7
COD	16.6 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.12 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.6 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.34 mg/L	0.12	EPA 365.1
TKN	1.3 mg/L	0.5	EPA 351.2
TOC	4 mg/L	1	SM5310C

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SiteID: WLV190-0003

Sample Date: 4/12/2023

IDEM Sample #: AC02356

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	92.2 %		ASTM D888-09(C)
DO	10.07 mg/L		ASTM D888-09(C)
pH (Field)	8.09 SU		EPA 150.2
Specific Conductance (Field)	416.8 umho/cm		SM2510B
Temperature	11.3 °C		SM2550B(2)
Turbidity (Hach)	27.4 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 50342075008	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	172 mg/L	10	SM2320B
Chloride	16.4 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	217 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	35.6 mg/L	2.5	SM2540D
Solids, Total (TS)	303 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	220 mg/L	10	SM2540C
Sulfate	16.9 mg/L	0.25	EPA 300.0
Calcium (Total)	57500 ug/L	1000	EPA 200.7
Magnesium (Total)	17800 ug/L	1000	EPA 200.7
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.4 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.1 mg/L	0.1	EPA 365.4
TKN	0.84 mg/L	0.5	EPA 351.2
TOC	3.2 mg/L	1	SM5310C

Lab ID #: AC02356	Result	Reporting Limit	Method
Coliforms (Total)	1986.3 MPN/100mL	1	SM9223B(Colilert-18)
E. coli	65.7 MPN/100mL	1	SM9223B(Colilert-18)

Weather Code Definitions			
SC Sky Conditions	WD Wind Direction	WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	2 - Mod./Light	3 - 46-60
4 - Cloudy		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: WLV-15-0006 **USGS Hydrologic Unit:** 051201081503
Stream Name: Rock Run **County:** Parke
Description: CR 325 West **Latitude:** 39 39 43.35924 **Longitude:** -87 17 40.75221
Drainage: **Site Number:** 23T-007

SiteID: WLV-15-0006 **Sample Date:** 2/7/2023 **IDEM Sample #:** AB82876
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	96.1 %		ASTM D888-09(C)
DO	12.98 mg/L		ASTM D888-09(C)
pH (Field)	8.47 SU		EPA 150.2
Specific Conductance (Field)	565 umho/cm		SM2510B
Temperature	2.8 °C		SM2550B(2)
Turbidity (Hach)	4.61 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	7 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	2 Lookup		Observation

<u>Lab ID #:</u> 50336923001	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	228 mg/L	10	SM2320B
Chloride	26.6 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	250 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	330 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	322 mg/L	10	SM2540C
Sulfate	36.2 mg/L	2.5	EPA 300.0
Calcium (Total)	60700 ug/L	1000	EPA 200.7
Magnesium (Total)	23900 ug/L	1000	EPA 200.7
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.2 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.05 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2 mg/L	1	SM5310C

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

SiteID: WLW-15-0006 **Sample Date:** 3/7/2023 **IDEM Sample #:** AC00234
Water Flow Type Run **Water Appearance** Green **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Used meter 55 for pH. P3 read 7.96.

Lab ID #:	Result	Reporting Limit	Method
% Sat	90.2 %		ASTM D888-09(C)
DO	10.45 mg/L		ASTM D888-09(C)
pH (Field)	8.1 SU		EPA 150.2
Specific Conductance (Field)	525 umho/cm		SM2510B
Temperature	8.8 °C		SM2550B(2)
Turbidity (Hach)	32.6 NTU		EPA 180.1
Air Temp	2 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: 50339082001	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	219 mg/L	10	SM2320B
Chloride	18.3 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	275 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	31.6 mg/L	3	SM2540D
Solids, Total (TS)	344 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	287 mg/L	10	SM2540C
Sulfate	27.4 mg/L	2.5	EPA 300.0
Calcium (Total)	69200 ug/L	1000	EPA 200.7
Magnesium (Total)	24700 ug/L	1000	EPA 200.7
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	3.3 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.18 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.7 mg/L	1	SM5310C

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

SiteID: WLV-15-0006

Sample Date: 4/12/2023

IDEM Sample #: AC02355

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	94.4 %		ASTM D888-09(C)
DO	10.04 mg/L		ASTM D888-09(C)
pH (Field)	8.05 SU		EPA 150.2
Specific Conductance (Field)	498.6 umho/cm		SM2510B
Temperature	12.5 °C		SM2550B(2)
Turbidity (Hach)	2.64 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 50342075007	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	215 mg/L	10	SM2320B
Chloride	18.7 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	261 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	288 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	261 mg/L	10	SM2540C
Sulfate	27.4 mg/L	0.25	EPA 300.0
Calcium (Total)	61200 ug/L	1000	EPA 200.7
Magnesium (Total)	26300 ug/L	1000	EPA 200.7
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.84 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.1 mg/L	0.1	EPA 365.4
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.7 mg/L	1	SM5310C

Lab ID #: AC02355	Result	Reporting Limit	Method
Coliforms (Total)	1203.3 MPN/100mL	1	SM9223B(Colilert-18)
E. coli	71.7 MPN/100mL	1	SM9223B(Colilert-18)

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
2 - Scattered	9 - Snow	1 - East (90 Degrees)	1 - Light
3 - Partly	10 - Sleet	2 - South (180 Degrees)	2 - Mod./Light
4 - Cloudy		3 - West (270 Degrees)	3 - Moderate
5 - Mist			4 - Mod./Strong
6 - Fog			5 - 76-85
7 - Shower			6 - Strong
			6 - > 86

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

SiteID: WL190-0017 **USGS Hydrologic Unit:** 051201081503
Stream Name: Tributary of Rock Run **County:** Parke
Description: Cooke Road **Latitude:** 39 44 23.88365 **Longitude:** -87 16 41.07069
Drainage: 4 **Site Number:** 23T-009

SiteID: WL190-0017 **Sample Date:** 4/12/2023 **IDEM Sample #:** AC02344
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	133.1 %		ASTM D888-09(C)
DO	12.91 mg/L		ASTM D888-09(C)
pH (Field)	8.46 SU		EPA 150.2
Specific Conductance (Field)	523 umho/cm		SM2510B
Temperature	16.7 °C		SM2550B(2)
Turbidity (Hach)	3.33 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> 50342075012	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	219 mg/L	10	SM2320B
Chloride	26.5 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	258 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	300 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	274 mg/L	10	SM2540C
Sulfate	23.3 mg/L	0.25	EPA 300.0
Calcium (Total)	60400 ug/L	1000	EPA 200.7
Magnesium (Total)	26100 ug/L	1000	EPA 200.7
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.6 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.1 mg/L	0.1	EPA 365.4
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	3 mg/L	1	SM5310C

<u>Lab ID #:</u> AC02344	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	1732.9 MPN/100mL	1	SM9223B(Colilert-18)
E. coli	45.7 MPN/100mL	1	SM9223B(Colilert-18)

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

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: WL190-0016 **USGS Hydrologic Unit:** 051201081503
Stream Name: Rock Run **County:** Parke
Description: CR 100 South **Latitude:** 39 45 18.05741 **Longitude:** -87 17 6.48382
Drainage: 4 **Site Number:** 23T-010

SiteID: WL190-0016 **Sample Date:** 4/12/2023 **IDEM Sample #:** AC02345
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	137.4 %		ASTM D888-09(C)
DO	12.11 mg/L		ASTM D888-09(C)
pH (Field)	8.42 SU		EPA 150.2
Specific Conductance (Field)	525 umho/cm		SM2510B
Temperature	17.5 °C		SM2550B(2)
Turbidity (Hach)	2.49 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #: 50342075013</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	217 mg/L	10	SM2320B
Chloride	22.4 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	280 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	312 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	275 mg/L	10	SM2540C
Sulfate	25.4 mg/L	0.25	EPA 300.0
Calcium (Total)	62400 ug/L	1000	EPA 200.7
Magnesium (Total)	30200 ug/L	1000	EPA 200.7
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.6 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.1 mg/L	0.1	EPA 365.4
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.8 mg/L	1	SM5310C

<u>Lab ID #: AC02345</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	2419.6 MPN/100mL	1	SM9223B(Colilert-18)
E. coli	686.7 MPN/100mL	1	SM9223B(Colilert-18)

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

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: WLV-15-0007 **USGS Hydrologic Unit:** 051201081502
Stream Name: Rocky Run **County:** Parke
Description: Arabia Road **Latitude:** 39 46 19.80264 **Longitude:** -87 19 20.42222
Drainage: **Site Number:** 23T-011

SiteID: WLV-15-0007 **Sample Date:** 2/7/2023 **IDEM Sample #:** AB82880
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	108.7 %		ASTM D888-09(C)
DO	12.96 mg/L		ASTM D888-09(C)
pH (Field)	8.16 SU		EPA 150.2
Specific Conductance (Field)	622 umho/cm		SM2510B
Temperature	7.7 °C		SM2550B(2)
Turbidity (Hach)	0.66 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 50336923005	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	271 mg/L	10	SM2320B
Chloride	21.1 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	301 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	360 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	371 mg/L	10	SM2540C
Sulfate	43.3 mg/L	2.5	EPA 300.0
Calcium (Total)	74400 ug/L	1000	EPA 200.7
Magnesium (Total)	27800 ug/L	1000	EPA 200.7
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.37 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.45 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.05 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	1.2 mg/L	1	SM5310C

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

SiteID: WLW-15-0007 **Sample Date:** 3/7/2023 **IDEM Sample #:** AC00238
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Meter 55 for pH. P3 read 7.84.

Lab ID #:	Result	Reporting Limit	Method
% Sat	98.2 %		ASTM D888-09(C)
DO	11.03 mg/L		ASTM D888-09(C)
pH (Field)	8.15 SU		EPA 150.2
Specific Conductance (Field)	578 umho/cm		SM2510B
Temperature	10.2 °C		SM2550B(2)
Turbidity (Hach)	3.13 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	3 Lookup		Observation

Lab ID #: 50339082005	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	255 mg/L	10	SM2320B
Chloride	17 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	315 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	357 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	322 mg/L	10	SM2540C
Sulfate	35.6 mg/L	2.5	EPA 300.0
Calcium (Total)	79700 ug/L	1000	EPA 200.7
Magnesium (Total)	28300 ug/L	1000	EPA 200.7
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.6 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.05 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.3 mg/L	1	SM5310C

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

SiteID: WLV-15-0007

Sample Date: 4/11/2023

IDEM Sample #: AC02339

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	117.3 %		ASTM D888-09(C)
DO	12.72 mg/L		ASTM D888-09(C)
pH (Field)	8.36 SU		EPA 150.2
Specific Conductance (Field)	576 umho/cm		SM2510B
Temperature	12.3 °C		SM2550B(2)
Turbidity (Hach)	0.9 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 50342075001	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	259 mg/L	10	SM2320B
Chloride	19.8 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	317 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	343 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	313 mg/L	10	SM2540C
Sulfate	35.4 mg/L	0.25	EPA 300.0
Calcium (Total)	76000 ug/L	1000	EPA 200.7
Magnesium (Total)	30800 ug/L	1000	EPA 200.7
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.58 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.1 mg/L	0.1	EPA 365.4
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	1.9 mg/L	1	SM5310C

Lab ID #: AC02339	Result	Reporting Limit	Method
Coliforms (Total)	1732.9 MPN/100mL	1	SM9223B(Colilert-18)
E. coli	37.9 MPN/100mL	1	SM9223B(Colilert-18)

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
2 - Scattered	9 - Snow	1 - East (90 Degrees)	1 - Light
3 - Partly	10 - Sleet	2 - South (180 Degrees)	2 - Mod./Light
4 - Cloudy		3 - West (270 Degrees)	3 - Moderate
5 - Mist			4 - Mod./Strong
6 - Fog			5 - Strong
7 - Shower			6 - > 86
			6 - Gale

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

SiteID: WLV-15-0008 **USGS Hydrologic Unit:** 051201081502
Stream Name: Leatherwood Creek **County:** Parke
Description: CR 40 North **Latitude:** 39 46 24.41280 **Longitude:** -87 19 51.98520
Drainage: **Site Number:** 23T-012

SiteID: WLV-15-0008 **Sample Date:** 2/7/2023 **IDEM Sample #:** AB82879
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	101.2 %		ASTM D888-09(C)
DO	12.58 mg/L		ASTM D888-09(C)
pH (Field)	8.18 SU		EPA 150.2
Specific Conductance (Field)	616 umho/cm		SM2510B
Temperature	6 °C		SM2550B(2)
Turbidity (Hach)	1.32 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: 50336923004	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	270 mg/L	10	SM2320B
Chloride	20.4 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	308 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	370 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	364 mg/L	10	SM2540C
Sulfate	39.5 mg/L	2.5	EPA 300.0
Calcium (Total)	74700 ug/L	1000	EPA 200.7
Magnesium (Total)	29500 ug/L	1000	EPA 200.7
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.9 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.05 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	1.5 mg/L	1	SM5310C

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

SiteID: WLW-15-0008 Sample Date: 3/7/2023 IDEM Sample #: AC00237
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: pH read with meter 55. P3 read 7.93.

Lab ID #:	Result	Reporting Limit	Method
% Sat	96.5 %		ASTM D888-09(C)
DO	10.96 mg/L		ASTM D888-09(C)
pH (Field)	8.25 SU		EPA 150.2
Specific Conductance (Field)	583 umho/cm		SM2510B
Temperature	9.7 °C		SM2550B(2)
Turbidity (Hach)	9.81 NTU		EPA 180.1
Air Temp	2 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: 50339082004	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	245 mg/L	10	SM2320B
Chloride	19.1 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	316 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	7.9 mg/L	2.5	SM2540D
Solids, Total (TS)	368 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	333 mg/L	10	SM2540C
Sulfate	33.6 mg/L	2.5	EPA 300.0
Calcium (Total)	79300 ug/L	1000	EPA 200.7
Magnesium (Total)	28700 ug/L	1000	EPA 200.7
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	3.6 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.05 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.4 mg/L	1	SM5310C

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

SiteID: WLV-15-0008

Sample Date: 4/11/2023

IDEM Sample #: AC02350

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	126 %		ASTM D888-09(C)
DO	13.07 mg/L		ASTM D888-09(C)
pH (Field)	8.41 SU		EPA 150.2
Specific Conductance (Field)	495.5 umho/cm		SM2510B
Temperature	13.6 °C		SM2550B(2)
Turbidity (Hach)	1.82 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 50342075002	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	234 mg/L	10	SM2320B
Chloride	20 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	297 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	320 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	280 mg/L	10	SM2540C
Sulfate	32.7 mg/L	0.25	EPA 300.0
Calcium (Total)	68800 ug/L	1000	EPA 200.7
Magnesium (Total)	30300 ug/L	1000	EPA 200.7
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.9 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.1 mg/L	0.1	EPA 365.4
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.1 mg/L	1	SM5310C

Lab ID #: AC02350	Result	Reporting Limit	Method
Coliforms (Total)	816.4 MPN/100mL	1	SM9223B(Colilert-18)
E. coli	238.2 MPN/100mL	1	SM9223B(Colilert-18)

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
2 - Scattered	9 - Snow	1 - East (90 Degrees)	1 - Light
3 - Partly	10 - Sleet	2 - South (180 Degrees)	2 - Mod./Light
4 - Cloudy		3 - West (270 Degrees)	3 - Moderate
5 - Mist			4 - Mod./Strong
6 - Fog			5 - 76-85
7 - Shower			6 - Strong
			6 - > 86

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

SiteID: WLW-15-0009 **USGS Hydrologic Unit:** 051201081502
Stream Name: Leatherwood Creek **County:** Parke
Description: Leatherwood Road **Latitude:** 39 47 55.66899 **Longitude:** -87 19 40.98340
Drainage: **Site Number:** 23T-013

SiteID: WLW-15-0009 **Sample Date:** 4/11/2023 **IDEM Sample #:** AC02351
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Large log jam on half of bridge underside partially diverting streamflow.

Lab ID #:	Result	Reporting Limit	Method
% Sat	122.9 %		ASTM D888-09(C)
DO	12.57 mg/L		ASTM D888-09(C)
pH (Field)	8.36 SU		EPA 150.2
Specific Conductance (Field)	548 umho/cm		SM2510B
Temperature	14.3 °C		SM2550B(2)
Turbidity (Hach)	2.18 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: 50342075003	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	243 mg/L	10	SM2320B
Chloride	20.7 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	309 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	324 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	288 mg/L	10	SM2540C
Sulfate	31.8 mg/L	0.25	EPA 300.0
Calcium (Total)	71800 ug/L	1000	EPA 200.7
Magnesium (Total)	31400 ug/L	1000	EPA 200.7
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.1 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.1 mg/L	0.1	EPA 365.4
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.4 mg/L	1	SM5310C

Lab ID #: AC02351	Result	Reporting Limit	Method
Coliforms (Total)	866.4 MPN/100mL	1	SM9223B(Colilert-18)
E. coli	178.9 MPN/100mL	1	SM9223B(Colilert-18)

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

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: WLV-15-0010 **USGS Hydrologic Unit:** 051201081502
Stream Name: Little Leatherwood Creek **County:** Parke
Description: 10 O'Clock Road **Latitude:** 39 49 11.76391 **Longitude:** -87 18 23.53540
Drainage: **Site Number:** 23T-014

SiteID: WLV-15-0010 **Sample Date:** 4/11/2023 **IDEM Sample #:** AC02353
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	144.6 %		ASTM D888-09(C)
DO	14.28 mg/L		ASTM D888-09(C)
pH (Field)	8.44 SU		EPA 150.2
Specific Conductance (Field)	566 umho/cm		SM2510B
Temperature	15.9 °C		SM2550B(2)
Turbidity (Hach)	2.57 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 50342075005	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	249 mg/L	10	SM2320B
Chloride	19.7 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	316 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	4.4 mg/L	2.5	SM2540D
Solids, Total (TS)	351 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	288 mg/L	10	SM2540C
Sulfate	31 mg/L	0.25	EPA 300.0
Calcium (Total)	70600 ug/L	1000	EPA 200.7
Magnesium (Total)	33800 ug/L	1000	EPA 200.7
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.4 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.1 mg/L	0.1	EPA 365.4
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.2 mg/L	1	SM5310C

<u>Lab ID #:</u> AC02353	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	1986.3 MPN/100mL	1	SM9223B(Colilert-18)
E. coli	275.5 MPN/100mL	1	SM9223B(Colilert-18)

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

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: WLV-15-0011 **USGS Hydrologic Unit:** 051201081502
Stream Name: Leatherwood Creek **County:** Parke
Description: 10 O'Clock Road **Latitude:** 39 48 54.34428 **Longitude:** -87 17 56.76259
Drainage: **Site Number:** 23T-015

SiteID: WLV-15-0011 **Sample Date:** 4/11/2023 **IDEM Sample #:** AC02352
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Enclosed cow pasture and cow patties around stream. One cow seen in the distance.

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	142.9 %		ASTM D888-09(C)
DO	14.47 mg/L		ASTM D888-09(C)
pH (Field)	8.54 SU		EPA 150.2
Specific Conductance (Field)	546 umho/cm		SM2510B
Temperature	14.7 °C		SM2550B(2)
Turbidity (Hach)	2.64 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 50342075004	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	229 mg/L	10	SM2320B
Chloride	22.3 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	291 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	5.2 mg/L	2.5	SM2540D
Solids, Total (TS)	331 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	273 mg/L	10	SM2540C
Sulfate	31.1 mg/L	0.25	EPA 300.0
Calcium (Total)	66600 ug/L	1000	EPA 200.7
Magnesium (Total)	30200 ug/L	1000	EPA 200.7
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.9 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.1 mg/L	0.1	EPA 365.4
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.6 mg/L	1	SM5310C

<u>Lab ID #:</u> AC02352	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	1203.3 MPN/100mL	1	3M9223B(Colilert-18)
E. coli	307.6 MPN/100mL	1	3M9223B(Colilert-18)

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

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: WLV-15-0012 **USGS Hydrologic Unit:** 051201081501
Stream Name: Leatherwood Creek **County:** Parke
Description: Hill Top Road **Latitude:** 39 49 19.03199 **Longitude:** -87 16 25.14550
Drainage: **Site Number:** 23T-016

SiteID: WLV-15-0012 **Sample Date:** 2/7/2023 **IDEM Sample #:** AB82881
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	120.1 %		ASTM D888-09(C)
DO	14.49 mg/L		ASTM D888-09(C)
pH (Field)	8.33 SU		EPA 150.2
Specific Conductance (Field)	628 umho/cm		SM2510B
Temperature	7.2 °C		SM2550B(2)
Turbidity (Hach)	2.93 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 50336923006	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	260 mg/L	10	SM2320B
Chloride	25 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	297 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	4.1 mg/L	2.5	SM2540D
Solids, Total (TS)	388 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	378 mg/L	10	SM2540C
Sulfate	38.7 mg/L	2.5	EPA 300.0
Calcium (Total)	72900 ug/L	1000	EPA 200.7
Magnesium (Total)	27900 ug/L	1000	EPA 200.7
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.05 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2 mg/L	1	SM5310C

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

SiteID: WLW-15-0012 **Sample Date:** 3/7/2023 **IDEM Sample #:** AC00239
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Meter 55 for pH. P3 read 7.96.

Lab ID #:	Result	Reporting Limit	Method
% Sat	100.5 %		ASTM D888-09(C)
DO	11.21 mg/L		ASTM D888-09(C)
pH (Field)	8.24 SU		EPA 150.2
Specific Conductance (Field)	587 umho/cm		SM2510B
Temperature	10.4 °C		SM2550B(2)
Turbidity (Hach)	7.4 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	3 Lookup		Observation

Lab ID #: 50339082006	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	242 mg/L	10	SM2320B
Chloride	23.4 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	308 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	6.1 mg/L	2.5	SM2540D
Solids, Total (TS)	374 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	319 mg/L	10	SM2540C
Sulfate	32.3 mg/L	2.5	EPA 300.0
Calcium (Total)	77100 ug/L	1000	EPA 200.7
Magnesium (Total)	28100 ug/L	1000	EPA 200.7
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	3.7 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.061 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.4 mg/L	1	SM5310C

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

SiteID: WLV-15-0012

Sample Date: 4/13/2023

IDEM Sample #: AC02346

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	102.3 %		ASTM D888-09(C)
DO	11.02 mg/L		ASTM D888-09(C)
pH (Field)	8.16 SU		EPA 150.2
Specific Conductance (Field)	581 umho/cm		SM2510B
Temperature	11.9 °C		SM2550B(2)
Turbidity (Hach)	1.79 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 50342075014	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	249 mg/L	10	SM2320B
Chloride	24.6 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	309 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	340 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	307 mg/L	10	SM2540C
Sulfate	30.8 mg/L	0.25	EPA 300.0
Calcium (Total)	73800 ug/L	1000	EPA 200.7
Magnesium (Total)	30200 ug/L	1000	EPA 200.7
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.1 mg/L	0.1	EPA 365.4
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.6 mg/L	1	SM5310C

Lab ID #: AC02346	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	866.4 MPN/100mL	1	SM9223B(Colilert-18)

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
2 - Scattered	9 - Snow	1 - East (90 Degrees)	1 - Light
3 - Partly	10 - Sleet	2 - South (180 Degrees)	2 - Mod./Light
4 - Cloudy		3 - West (270 Degrees)	3 - Moderate
5 - Mist			4 - Mod./Strong
6 - Fog			5 - Strong
7 - Shower			6 - > 86
			6 - Gale

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

SiteID: WLW-15-0013 **USGS Hydrologic Unit:** 051201081501
Stream Name: Cat Creek **County:** Parke
Description: Clay Plant Road **Latitude:** 39 49 57.63528 **Longitude:** -87 16 59.91206
Drainage: **Site Number:** 23T-017

SiteID: WLW-15-0013 **Sample Date:** 4/11/2023 **IDEM Sample #:** AC02354
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	166.1 %		ASTM D888-09(C)
DO	16.52 mg/L		ASTM D888-09(C)
pH (Field)	8.58 SU		EPA 150.2
Specific Conductance (Field)	534 umho/cm		SM2510B
Temperature	15.5 °C		SM2550B(2)
Turbidity (Hach)	2.97 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> 50342075006	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	219 mg/L	10	SM2320B
Chloride	20.8 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	292 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	11.1 mg/L	2.5	SM2540D
Solids, Total (TS)	330 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	276 mg/L	10	SM2540C
Sulfate	32.7 mg/L	0.25	EPA 300.0
Calcium (Total)	64200 ug/L	1000	EPA 200.7
Magnesium (Total)	31900 ug/L	1000	EPA 200.7
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.5 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.1 mg/L	0.1	EPA 365.4
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.5 mg/L	1	SM5310C

<u>Lab ID #:</u> AC02354	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	3M9223B(Colilert-18)
E. coli	218.7 MPN/100mL	1	3M9223B(Colilert-18)

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

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: WLV-15-0014 **USGS Hydrologic Unit:** 051201081501
Stream Name: Leatherwood Creek **County:** Parke
Description: Broadway Street **Latitude:** 39 49 41.69742 **Longitude:** -87 14 55.00007
Drainage: **Site Number:** 23T-018

SiteID: WLV-15-0014 **Sample Date:** 4/13/2023 **IDEM Sample #:** AC02347
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	100.7 %		ASTM D888-09(C)
DO	10.91 mg/L		ASTM D888-09(C)
pH (Field)	8.08 SU		EPA 150.2
Specific Conductance (Field)	595 umho/cm		SM2510B
Temperature	11.7 °C		SM2550B(2)
Turbidity (Hach)	1.91 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> 50342075015	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	246 mg/L	10	SM2320B
Chloride	24.1 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	312 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	349 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	317 mg/L	10	SM2540C
Sulfate	32.7 mg/L	0.25	EPA 300.0
Calcium (Total)	74300 ug/L	1000	EPA 200.7
Magnesium (Total)	30800 ug/L	1000	EPA 200.7
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.9 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.1 mg/L	0.1	EPA 365.4
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.6 mg/L	1	SM5310C

<u>Lab ID #:</u> AC02347	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	3M9223B(Colilert-18)
E. coli	816.4 MPN/100mL	1	3M9223B(Colilert-18)

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

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: WLV-15-0015 **USGS Hydrologic Unit:** 051201081501
Stream Name: Leatherwood Creek **County:** Parke
Description: US Highway 41 **Latitude:** 39 50 4.32313 **Longitude:** -87 14 8.75426
Drainage: **Site Number:** 23T-019

SiteID: WLV-15-0015 **Sample Date:** 4/13/2023 **IDEM Sample #:** AC02348
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	105.4 %		ASTM D888-09(C)
DO	11.44 mg/L		ASTM D888-09(C)
pH (Field)	8.16 SU		EPA 150.2
Specific Conductance (Field)	574 umho/cm		SM2510B
Temperature	11.6 °C		SM2550B(2)
Turbidity (Hach)	2.25 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> 50342075016	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	240 mg/L	10	SM2320B
Chloride	22 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	310 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	351 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	300 mg/L	10	SM2540C
Sulfate	33.3 mg/L	0.25	EPA 300.0
Calcium (Total)	73800 ug/L	1000	EPA 200.7
Magnesium (Total)	30500 ug/L	1000	EPA 200.7
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.9 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.1 mg/L	0.1	EPA 365.4
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.8 mg/L	1	SM5310C

<u>Lab ID #:</u> AC02348	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	1986.3 MPN/100mL	1	SM9223B(Colilert-18)
E. coli	980.4 MPN/100mL	1	SM9223B(Colilert-18)

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

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: WLW-15-0016 **USGS Hydrologic Unit:** 051201081501
Stream Name: Leatherwood Creek **County:** Parke
Description: Marshall Road **Latitude:** 39 50 20.23781 **Longitude:** -87 11 33.49247
Drainage: **Site Number:** 23T-020

SiteID: WLW-15-0016 **Sample Date:** 4/13/2023 **IDEM Sample #:** AC02349
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 broke nutrients bottle

Lab ID #:	Result	Reporting Limit	Method
% Sat	115.8 %		ASTM D888-09(C)
DO	12.17 mg/L		ASTM D888-09(C)
pH (Field)	8.23 SU		EPA 150.2
Specific Conductance (Field)	496.4 umho/cm		SM2510B
Temperature	13.1 °C		SM2550B(2)
Turbidity (Hach)	2.16 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 50342075017	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	210 mg/L	10	SM2320B
Chloride	22.4 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	271 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	301 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	256 mg/L	10	SM2540C
Sulfate	21.9 mg/L	0.25	EPA 300.0
Calcium (Total)	63800 ug/L	1000	EPA 200.7
Magnesium (Total)	27200 ug/L	1000	EPA 200.7
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.3 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.1 mg/L	0.1	EPA 365.4
TKN	< 0.5 mg/L	0.5	EPA 351.2

Lab ID #: AC02349	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	3M9223B(Colilert-18)
E. coli	2419.6 MPN/100mL	1	3M9223B(Colilert-18)

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
2 - Scattered	9 - Snow	9 - East (90 Degrees)	1 - Light
3 - Partly	10 - Sleet	18 - South (180 Degrees)	2 - Mod./Light
4 - Cloudy		27 - West (270 Degrees)	3 - Moderate
5 - Mist			4 - Mod./Strong
6 - Fog			5 - Strong
7 - Shower			6 - > 86
			6 - Gale