

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

SiteID: WLV190-0010 **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: 513.799 **Site Number:** 23T-001

SiteID: WLV190-0010 **Sample Date:** 8/8/2023 **IDEM Sample #:** AC30689
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	93.8 %	ASTM D888-09(C)
	DO	8.12 mg/L	ASTM D888-09(C)
	pH (Field)	7.93 SU	EPA 150.2
	Specific Conductance (Field)	473.6 umho/cm	SM2510B
	Temperature	22.3 °C	SM2550B(2)
	Turbidity (Hach)	18.4 NTU	EPA 180.1
	Air Temp	5 Lookup	Observation
	Sky Conditions	2 Lookup	Observation
	Wind Direction	27 Lookup	Observation
	Wind Strength	0 Lookup	Observation

Lab ID #: 50351437001	Result	Reporting Limit	Method
	Alkalinity (as CaCO3)	204 mg/L	SM2320B
	Chloride	14.2 mg/L	0.25 EPA 300.0
	Hardness (as CaCO3)	244 mg/L	SM2340B
	Solids, Suspended Total, (TSS)	29.2 mg/L	2.5 SM2540D
	Solids, Total (TS)	306 mg/L	10 SM2540B
	Solids, Total Dissolved (TDS)	265 mg/L	10 SM2540C
	Sulfate	21.7 mg/L	0.25 EPA 300.0
	Calcium (Total)	63200 ug/L	1000 EPA 200.7
	Magnesium (Total)	21000 ug/L	1000 EPA 200.7
	COD	14 mg/L	10 EPA 410.4
	Nitrogen, Ammonia	< 0.1 mg/L	0.1 EPA 350.1
	Nitrogen, Nitrate+Nitrite	0.7 mg/L	0.1 EPA 353.2
	Phosphorus, Total	0.075 mg/L	0.05 EPA 365.1
	TKN	0.87 mg/L	0.5 EPA 351.2
	TOC	3.9 mg/L	1 SM5310C

Lab ID #: AC30689	Result	Reporting Limit	Method
	Coliforms (Total)	> 2419.6 MPN/100mL	2419.6 3M9223B(Colilert-18)
	E. coli	461.1 MPN/100mL	1 3M9223B(Colilert-18)

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SiteID: WL190-0010 **Sample Date:** 8/15/2023 **IDEM Sample #:** AC30709
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	92.4 %		ASTM D888-09(C)
DO	8.42 mg/L		ASTM D888-09(C)
pH (Field)	7.95 SU		EPA 150.2
Specific Conductance (Field)	367 umho/cm		SM2510B
Temperature	19.9 °C		SM2550B(2)
Turbidity (Hach)	40.5 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	3 Lookup		Observation

Lab ID #: AC30709	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	1299.7 MPN/100mL	1	SM9223B(Colilert-18)

SiteID: WL190-0010 **Sample Date:** 8/22/2023 **IDEM Sample #:** AC30729
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	105.9 %		ASTM D888-09(C)
DO	8.05 mg/L		ASTM D888-09(C)
pH (Field)	8.21 SU		EPA 150.2
Specific Conductance (Field)	494.4 umho/cm		SM2510B
Temperature	29.5 °C		SM2550B(2)
Turbidity (Hach)	8.28 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AC30729	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	108.1 MPN/100mL	1	SM9223B(Colilert-18)

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SiteID: WLV190-0010 **Sample Date:** 8/30/2023 **IDEM Sample #:** AC30749
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	84.3 %		ASTM D888-09(C)
DO	7.47 mg/L		ASTM D888-09(C)
pH (Field)	8.05 SU		EPA 150.2
Specific Conductance (Field)	491.2 umho/cm		SM2510B
Temperature	21.1 °C		SM2550B(2)
Turbidity (Hach)	21.8 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: AC30749	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	§M9223B(Colilert-18)
E. coli	488.4 MPN/100mL	1	§M9223B(Colilert-18)

SiteID: WLV190-0010 **Sample Date:** 9/5/2023 **IDEM Sample #:** AC30769
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	108.7 %		ASTM D888-09(C)
DO	8.88 mg/L		ASTM D888-09(C)
pH (Field)	8.12 SU		EPA 150.2
Specific Conductance (Field)	491.3 umho/cm		SM2510B
Temperature	25.5 °C		SM2550B(2)
Turbidity (Hach)	5.03 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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Lab ID #: 50353339001	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	225 mg/L	10	SM2320B
Chloride	13.1 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	260 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	5.9 mg/L	2.5	SM2540D
Solids, Total (TS)	291 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	259 mg/L	10	SM2540C
Sulfate	23.9 mg/L	0.25	EPA 300.0
Calcium (Total)	67900 ug/L	1000	EPA 200.7
Magnesium (Total)	21800 ug/L	1000	EPA 200.7
COD	10.4 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	< 0.05 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.4 mg/L	1	SM5310C

Lab ID #: AC30769	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	238.2 MPN/100mL	1	SM9223B(Colilert-18)

SiteID: WL190-0010 **Sample Date:** 10/3/2023 **IDEM Sample #:** AC37548
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	86.3 %		ASTM D888-09(C)
DO	7.93 mg/L		ASTM D888-09(C)
pH (Field)	7.7 SU		EPA 150.2
Specific Conductance (Field)	490 umho/cm		SM2510B
Temperature	19.5 °C		SM2550B(2)
Turbidity (Hach)	4.23 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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Lab ID #: 50355619002	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	217 mg/L	10	SM2320B
Chloride	16.3 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	263 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	6.1 mg/L	2.5	SM2540D
Solids, Total (TS)	273 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	258 mg/L	10	SM2540C
Sulfate	21.9 mg/L	0.25	EPA 300.0
Calcium (Total)	67500 ug/L	1000	EPA 200.7
Magnesium (Total)	22900 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	0.64 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.069 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.6 mg/L	1	SM5310C

Lab ID #: AC37548	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	172.6 MPN/100mL	1	SM9223B(Colilert-18)

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	

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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:** 8/8/2023 **IDEM Sample #:** AC30699
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	90.4 %		ASTM D888-09(C)
DO	8.2 mg/L		ASTM D888-09(C)
pH (Field)	7.88 SU		EPA 150.2
Specific Conductance (Field)	610 umho/cm		SM2510B
Temperature	20 °C		SM2550B(2)
Turbidity (Hach)	12.9 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 50351437002	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	225 mg/L	10	SM2320B
Chloride	10.5 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	246 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	13.8 mg/L	2.5	SM2540D
Solids, Total (TS)	403 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	366 mg/L	10	SM2540C
Sulfate	79.2 mg/L	2.5	EPA 300.0
Calcium (Total)	61300 ug/L	1000	EPA 200.7
Magnesium (Total)	22500 ug/L	1000	EPA 200.7
COD	12.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.22 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	3.8 mg/L	1	SM5310C

Lab ID #: AC30699	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	3M9223B(Colilert-18)
E. coli	1732.9 MPN/100mL	1	3M9223B(Colilert-18)

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SiteID: WLV-15-0004 **Sample Date:** 8/15/2023 **IDEM Sample #:** AC30719
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	96.2 %		ASTM D888-09(C)
DO	8.63 mg/L		ASTM D888-09(C)
pH (Field)	7.9 SU		EPA 150.2
Specific Conductance (Field)	650 umho/cm		SM2510B
Temperature	20.6 °C		SM2550B(2)
Turbidity (Hach)	2.75 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AC30719	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	1299.7 MPN/100mL	1	SM9223B(Colilert-18)

SiteID: WLV-15-0004 **Sample Date:** 8/30/2023 **IDEM Sample #:** AC30759
Water Flow Type Pool **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Log jam developed in past week

Lab ID #:	Result	Reporting Limit	Method
% Sat	82.2 %		ASTM D888-09(C)
DO	7.62 mg/L		ASTM D888-09(C)
pH (Field)	7.78 SU		EPA 150.2
Specific Conductance (Field)	558 umho/cm		SM2510B
Temperature	19.3 °C		SM2550B(2)
Turbidity (Hach)	3.85 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	3 Lookup		Observation

Lab ID #: AC30759	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	238.2 MPN/100mL	1	SM9223B(Colilert-18)

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SitelD: WLV-15-0004

Sample Date: 9/5/2023

IDEM Sample #: AC30779

Water Flow Type Stagnant

Water Appearance Clear

Water Depth

Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments: Log jam. Stream mostly dry. Took sample in small pool of water.

Lab ID #:	Result	Reporting Limit	Method
% Sat	2.6 %		ASTM D888-09(C)
DO	0.23 mg/L		ASTM D888-09(C)
pH (Field)	7.36 SU		EPA 150.2
Specific Conductance (Field)	689 umho/cm		SM2510B
Temperature	20.7 °C		SM2550B(2)
Turbidity (Hach)	4.77 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: 50353339002	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	258 mg/L	10	SM2320B
Chloride	10.7 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	305 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	3 mg/L	2.5	SM2540D
Solids, Total (TS)	410 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	390 mg/L	10	SM2540C
Sulfate	82.6 mg/L	2.5	EPA 300.0
Calcium (Total)	78400 ug/L	1000	EPA 200.7
Magnesium (Total)	26400 ug/L	1000	EPA 200.7
COD	11.1 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	< 0.1 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	3.4 mg/L	1	SM5310C
Lab ID #: AC30779	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	§M9223B(Colilert-18)
E. coli	185 MPN/100mL	1	§M9223B(Colilert-18)

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SitID: WLV-15-0004

Sample Date: 10/3/2023

IDEM Sample #: AC37558

Water Flow Type Pool

Water Appearance Clear

Water Depth

Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments: Only a pool under the bridge and rest of stream has run dry. Stagnant.

Lab ID #:	Result	Reporting Limit	Method
% Sat	28.1 %		ASTM D888-09(C)
DO	2.7 mg/L		ASTM D888-09(C)
pH (Field)	7.16 SU		EPA 150.2
Specific Conductance (Field)	786 umho/cm		SM2510B
Temperature	17.3 °C		SM2550B(2)
Turbidity (Hach)	4.03 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 50355619001	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	306 mg/L	10	SM2320B
Chloride	13 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	356 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	508 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	470 mg/L	10	SM2540C
Sulfate	94.8 mg/L	2.5	EPA 300.0
Calcium (Total)	91800 ug/L	1000	EPA 200.7
Magnesium (Total)	30900 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	< 0.1 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.16 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.4 mg/L	1	SM5310C

Lab ID #: AC37558	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	7.4 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	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	

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Surface Water Results Summary

SiteID: WLV190-0012 **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: 475.859 **Site Number:** 23T-003

SiteID: WLV190-0012 **Sample Date:** 8/8/2023 **IDEM Sample #:** AC30700
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	95.8 %		ASTM D888-09(C)
DO	8.36 mg/L		ASTM D888-09(C)
pH (Field)	8 SU		EPA 150.2
Specific Conductance (Field)	454.9 umho/cm		SM2510B
Temperature	22.1 °C		SM2550B(2)
Turbidity (Hach)	8.1 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 50351437020	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	198 mg/L	10	SM2320B
Chloride	14.4 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	229 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	8.4 mg/L	2.5	SM2540D
Solids, Total (TS)	296 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	253 mg/L	10	SM2540C
Sulfate	21 mg/L	0.25	EPA 300.0
Calcium (Total)	59600 ug/L	1000	EPA 200.7
Magnesium (Total)	19400 ug/L	1000	EPA 200.7
COD	11.6 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.66 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.055 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.6 mg/L	1	SM5310C

Lab ID #: AC30700	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	3M9223B(Colilert-18)
E. coli	307.6 MPN/100mL	1	3M9223B(Colilert-18)

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SiteID: WL190-0012 **Sample Date:** 8/15/2023 **IDEM Sample #:** AC30720
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	91.6 %		ASTM D888-09(C)
DO	8.46 mg/L		ASTM D888-09(C)
pH (Field)	7.88 SU		EPA 150.2
Specific Conductance (Field)	363 umho/cm		SM2510B
Temperature	19.2 °C		SM2550B(2)
Turbidity (Hach)	29 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AC30720	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	920.8 MPN/100mL	1	SM9223B(Colilert-18)

SiteID: WL190-0012 **Sample Date:** 8/23/2023 **IDEM Sample #:** AC30740
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	87 %		ASTM D888-09(C)
DO	7.15 mg/L		ASTM D888-09(C)
pH (Field)	8.08 SU		EPA 150.2
Specific Conductance (Field)	476.1 umho/cm		SM2510B
Temperature	25.2 °C		SM2550B(2)
Turbidity (Hach)	6.41 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AC30740	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	172.5 MPN/100mL	1	SM9223B(Colilert-18)

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

SiteID: WLV190-0012 Sample Date: 8/30/2023 IDEM Sample #: AC30760
 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	86.9 %		ASTM D888-09(C)
DO	7.72 mg/L		ASTM D888-09(C)
pH (Field)	7.97 SU		EPA 150.2
Specific Conductance (Field)	483.1 umho/cm		SM2510B
Temperature	21.2 °C		SM2550B(2)
Turbidity (Hach)	20.3 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: AC30760	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	§M9223B(Colilert-18)
E. coli	435.2 MPN/100mL	1	§M9223B(Colilert-18)

SiteID: WLV190-0012 Sample Date: 9/5/2023 IDEM Sample #: AC30780
 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	125.5 %		ASTM D888-09(C)
DO	9.95 mg/L		ASTM D888-09(C)
pH (Field)	8.22 SU		EPA 150.2
Specific Conductance (Field)	507 umho/cm		SM2510B
Temperature	27 °C		SM2550B(2)
Turbidity (Hach)	8.38 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

Lab ID #: 50353339019	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	216 mg/L	10	SM2320B
Chloride	13 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	252 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	6.4 mg/L	2.5	SM2540D
Solids, Total (TS)	279 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	255 mg/L	10	SM2540C
Sulfate	22.2 mg/L	0.25	EPA 300.0
Calcium (Total)	65800 ug/L	1000	EPA 200.7
Magnesium (Total)	21400 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	0.67 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

Lab ID #: AC30780	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	153.9 MPN/100mL	1	SM9223B(Colilert-18)

SiteID: WL190-0012 **Sample Date:** 10/3/2023 **IDEM Sample #:** AC37559
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	88.2 %		ASTM D888-09(C)
DO	87.9 mg/L		ASTM D888-09(C)
pH (Field)	7.96 SU		EPA 150.2
Specific Conductance (Field)	476.6 umho/cm		SM2510B
Temperature	19 °C		SM2550B(2)
Turbidity (Hach)	3.39 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

Lab ID #: 50355619018	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	213 mg/L	10	SM2320B
Chloride	15.9 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	253 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	3.2 mg/L	2.5	SM2540D
Solids, Total (TS)	282 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	264 mg/L	10	SM2540C
Sulfate	20.4 mg/L	0.25	EPA 300.0
Calcium (Total)	64900 ug/L	1000	EPA 200.7
Magnesium (Total)	22100 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	0.56 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

Lab ID #: AC37559	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	218.7 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	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

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Surface Water Results Summary

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: 469.922 **Site Number:** 23T-005

SiteID: WLV-15-0017 **Sample Date:** 8/8/2023 **IDEM Sample #:** AC30701
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 #:	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	103.6 %		ASTM D888-09(C)
DO	8.81 mg/L		ASTM D888-09(C)
pH (Field)	8.05 SU		EPA 150.2
Specific Conductance (Field)	451.2 umho/cm		SM2510B
Temperature	23.3 °C		SM2550B(2)
Turbidity (Hach)	7.12 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 50351437003	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	196 mg/L	10	SM2320B
Chloride	14.6 mg/L	0.25	EPA 300.0
Fluoride	0.11 mg/L	0.1	EPA 300.0
Hardness (as CaCO3)	228 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	11.4 mg/L	2.5	SM2540D
Solids, Total (TS)	273 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	244 mg/L	10	SM2540C
Sulfate	19.1 mg/L	0.25	EPA 300.0
Calcium (Total)	59200 ug/L	1000	EPA 200.7
Magnesium (Total)	19400 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	0.7 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

Lab ID #: AC30701	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	3M9223B(Colilert-18)
E. coli	275.5 MPN/100mL	1	3M9223B(Colilert-18)

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

SiteID: WLW-15-0017 **Sample Date:** 8/15/2023 **IDEM Sample #:** AC30721
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	91.2 %		ASTM D888-09(C)
DO	8.41 mg/L		ASTM D888-09(C)
pH (Field)	7.86 SU		EPA 150.2
Specific Conductance (Field)	358 umho/cm		SM2510B
Temperature	19.3 °C		SM2550B(2)
Turbidity (Hach)	32 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: AC30721	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	1119.9 MPN/100mL	1	SM9223B(Colilert-18)

SiteID: WLW-15-0017 **Sample Date:** 8/23/2023 **IDEM Sample #:** AC30741
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	91.8 %		ASTM D888-09(C)
DO	7.58 mg/L		ASTM D888-09(C)
pH (Field)	8.07 SU		EPA 150.2
Specific Conductance (Field)	483.4 umho/cm		SM2510B
Temperature	25 °C		SM2550B(2)
Turbidity (Hach)	5.97 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AC30741	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	222.4 MPN/100mL	1	SM9223B(Colilert-18)

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

SiteID: WLV-15-0017 **Sample Date:** 8/30/2023 **IDEM Sample #:** AC30761
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	7.88 mg/L		ASTM D888-09(C)
pH (Field)	8 SU		EPA 150.2
Specific Conductance (Field)	481.8 umho/cm		SM2510B
Temperature	21 °C		SM2550B(2)
Turbidity (Hach)	20 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AC30761	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	§M9223B(Colilert-18)
E. coli	435.2 MPN/100mL	1	§M9223B(Colilert-18)

SiteID: WLV-15-0017 **Sample Date:** 9/5/2023 **IDEM Sample #:** AC30781
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	129.1 %		ASTM D888-09(C)
DO	10.19 mg/L		ASTM D888-09(C)
pH (Field)	8.29 SU		EPA 150.2
Specific Conductance (Field)	497 umho/cm		SM2510B
Temperature	27.5 °C		SM2550B(2)
Turbidity (Hach)	7.07 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

Lab ID #: 50353339003	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	212 mg/L	10	SM2320B
Chloride	13.1 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	242 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	7.9 mg/L	2.5	SM2540D
Solids, Total (TS)	277 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	247 mg/L	10	SM2540C
Sulfate	22.1 mg/L	0.25	EPA 300.0
Calcium (Total)	63100 ug/L	1000	EPA 200.7
Magnesium (Total)	20600 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	0.7 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.076 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.6 mg/L	1	SM5310C

Lab ID #: AC30781	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	328.2 MPN/100mL	1	SM9223B(Colilert-18)

SiteID: WLV-15-0017 **Sample Date:** 10/3/2023 **IDEM Sample #:** AC37560
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	99.2 %		ASTM D888-09(C)
DO	8.94 mg/L		ASTM D888-09(C)
pH (Field)	8 SU		EPA 150.2
Specific Conductance (Field)	475.1 umho/cm		SM2510B
Temperature	20.1 °C		SM2550B(2)
Turbidity (Hach)	5.33 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

Lab ID #: 50355619003	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	212 mg/L	10	SM2320B
Chloride	15.8 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	252 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	2.7 mg/L	2.5	SM2540D
Solids, Total (TS)	268 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	249 mg/L	10	SM2540C
Sulfate	19.7 mg/L	0.25	EPA 300.0
Calcium (Total)	64900 ug/L	1000	EPA 200.7
Magnesium (Total)	21800 ug/L	1000	EPA 200.7
COD	11 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.59 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.05 mg/L	0.05	EPA 365.1
TKN	0.61 mg/L	0.5	EPA 351.2
TOC	2.8 mg/L	1	SM5310C

Lab ID #: AC37560	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	488.4 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	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: WLV190-0003 **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: 447.497 **Site Number:** 23T-006

SiteID: WLV190-0003 **Sample Date:** 8/8/2023 **IDEM Sample #:** AC30702
Water Flow Type: Glide **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	105.1 %		ASTM D888-09(C)
DO	8.93 mg/L		ASTM D888-09(C)
pH (Field)	8 SU		EPA 150.2
Specific Conductance (Field)	456.7 umho/cm		SM2510B
Temperature	23.5 °C		SM2550B(2)
Turbidity (Hach)	5.31 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> 50351437004	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	194 mg/L	10	SM2320B
Chloride	16.4 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	228 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	8.2 mg/L	2.5	SM2540D
Solids, Total (TS)	286 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	251 mg/L	10	SM2540C
Sulfate	18.1 mg/L	0.25	EPA 300.0
Calcium (Total)	59400 ug/L	1000	EPA 200.7
Magnesium (Total)	19400 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	0.87 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.051 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	3 mg/L	1	SM5310C

<u>Lab ID #:</u> AC30702	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	3M9223B(Colilert-18)
E. coli	142.1 MPN/100mL	1	3M9223B(Colilert-18)

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

SiteID: WL190-0003 **Sample Date:** 8/16/2023 **IDEM Sample #:** AC30722
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	88.3 %		ASTM D888-09(C)
DO	8.47 mg/L		ASTM D888-09(C)
pH (Field)	7.79 SU		EPA 150.2
Specific Conductance (Field)	380.9 umho/cm		SM2510B
Temperature	17.3 °C		SM2550B(2)
Turbidity (Hach)	27.5 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AC30722	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	178.9 MPN/100mL	1	SM9223B(Colilert-18)

SiteID: WL190-0003 **Sample Date:** 8/23/2023 **IDEM Sample #:** AC30742
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	7.79 mg/L		ASTM D888-09(C)
pH (Field)	7.99 SU		EPA 150.2
Specific Conductance (Field)	485.6 umho/cm		SM2510B
Temperature	24.5 °C		SM2550B(2)
Turbidity (Hach)	6.73 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AC30742	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	148.3 MPN/100mL	1	SM9223B(Colilert-18)

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

SiteID: WLV190-0003 **Sample Date:** 8/30/2023 **IDEM Sample #:** AC30762
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	93 %		ASTM D888-09(C)
DO	8.36 mg/L		ASTM D888-09(C)
pH (Field)	8 SU		EPA 150.2
Specific Conductance (Field)	482.8 umho/cm		SM2510B
Temperature	20.7 °C		SM2550B(2)
Turbidity (Hach)	16.5 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AC30762	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	§M9223B(Colilert-18)
E. coli	461.1 MPN/100mL	1	§M9223B(Colilert-18)

SiteID: WLV190-0003 **Sample Date:** 9/7/2023 **IDEM Sample #:** AC30782
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	91.3 %		ASTM D888-09(C)
DO	8.01 mg/L		ASTM D888-09(C)
pH (Field)	8.05 SU		EPA 150.2
Specific Conductance (Field)	501 umho/cm		SM2510B
Temperature	21.8 °C		SM2550B(2)
Turbidity (Hach)	8.98 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

Lab ID #: 50353339004	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	216 mg/L	10	SM2320B
Chloride	13.6 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	245 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	5.7 mg/L	2.5	SM2540D
Solids, Total (TS)	287 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	277 mg/L	10	SM2540C
Sulfate	21.8 mg/L	0.25	EPA 300.0
Calcium (Total)	64300 ug/L	1000	EPA 200.7
Magnesium (Total)	20400 ug/L	1000	EPA 200.7
COD	10.9 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	0.052 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.7 mg/L	1	SM5310C

Lab ID #: AC30782	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	328.2 MPN/100mL	1	SM9223B(Colilert-18)

SiteID: WL190-0003 **Sample Date:** 10/3/2023 **IDEM Sample #:** AC37561
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	110.5 %		ASTM D888-09(C)
DO	9.87 mg/L		ASTM D888-09(C)
pH (Field)	8.06 SU		EPA 150.2
Specific Conductance (Field)	468.1 umho/cm		SM2510B
Temperature	20.7 °C		SM2550B(2)
Turbidity (Hach)	5.32 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

Lab ID #: 50355619004	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	206 mg/L	10	SM2320B
Chloride	15.7 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	244 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	249 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	255 mg/L	10	SM2540C
Sulfate	19.4 mg/L	0.25	EPA 300.0
Calcium (Total)	62700 ug/L	1000	EPA 200.7
Magnesium (Total)	21200 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	0.64 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

Lab ID #: AC37561	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	172.6 MPN/100mL	1	SM9223B(Colilert-18)

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
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 - Gale
			1 - < 32
			2 - 33-45
			3 - 46-60
			4 - 61-75
			5 - 76-85
			6 - > 86

**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: 15.4095 **Site Number:** 23T-007

SiteID: WLV-15-0006 **Sample Date:** 8/10/2023 **IDEM Sample #:** AC30698
Water Flow Type Riffle **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Rain event occurred overnight.

Lab ID #:	Result	Reporting Limit	Method
	% Sat	88.4 %	ASTM D888-09(C)
	DO	7.82 mg/L	ASTM D888-09(C)
	pH (Field)	7.82 SU	EPA 150.2
	Specific Conductance (Field)	9.65 umho/cm	SM2510B
	Temperature	21.4 °C	SM2550B(2)
	Turbidity (Hach)	40.1 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 #: 50351437017	Result	Reporting Limit	Method	
	Alkalinity (as CaCO3)	175 mg/L	10	SM2320B
	Chloride	10.7 mg/L	0.25	EPA 300.0
	Hardness (as CaCO3)	201 mg/L	10	SM2340B
	Solids, Suspended Total, (TSS)	8.9 mg/L	2.5	SM2540D
	Solids, Total (TS)	255 mg/L	10	SM2540B
	Solids, Total Dissolved (TDS)	224 mg/L	10	SM2540C
	Sulfate	20.9 mg/L	0.25	EPA 300.0
	Calcium (Total)	51200 ug/L	1000	EPA 200.7
	Magnesium (Total)	17700 ug/L	1000	EPA 200.7
	COD	11.6 mg/L	10	EPA 410.4
	Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
	Nitrogen, Nitrate+Nitrite	< 0.1 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	3.6 mg/L	1	SM5310C

Lab ID #: AC30698	Result	Reporting Limit	Method	
	Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	3M9223B(Colilert-18)
	E. coli	648.8 MPN/100mL	1	3M9223B(Colilert-18)

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

SiteID: WLW-15-0006 **Sample Date:** 8/16/2023 **IDEM Sample #:** AC30718
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	80.4 %		ASTM D888-09(C)
DO	7.37 mg/L		ASTM D888-09(C)
pH (Field)	7.62 SU		EPA 150.2
Specific Conductance (Field)	388.2 umho/cm		SM2510B
Temperature	19.5 °C		SM2550B(2)
Turbidity (Hach)	12.9 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AC30718	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	248.9 MPN/100mL	1	SM9223B(Colilert-18)

SiteID: WLW-15-0006 **Sample Date:** 8/23/2023 **IDEM Sample #:** AC30738
Water Flow Type Stagnant **Water Appearance** Sheen **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Oily sheen present

Lab ID #:	Result	Reporting Limit	Method
% Sat	55.7 %		ASTM D888-09(C)
DO	4.73 mg/L		ASTM D888-09(C)
pH (Field)	7.22 SU		EPA 150.2
Specific Conductance (Field)	469.5 umho/cm		SM2510B
Temperature	23.4 °C		SM2550B(2)
Turbidity (Hach)	2.92 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AC30738	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	167 MPN/100mL	1	SM9223B(Colilert-18)

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

SiteID: WLV-15-0006 Sample Date: 8/30/2023 IDEM Sample #: AC30758
 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	82.3 %		ASTM D888-09(C)
DO	7.49 mg/L		ASTM D888-09(C)
pH (Field)	7.8 SU		EPA 150.2
Specific Conductance (Field)	509 umho/cm		SM2510B
Temperature	20.1 °C		SM2550B(2)
Turbidity (Hach)	9.28 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: AC30758	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	§M9223B(Colilert-18)
E. coli	344.1 MPN/100mL	1	§M9223B(Colilert-18)

SiteID: WLV-15-0006 Sample Date: 9/7/2023 IDEM Sample #: AC30778
 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	75 %		ASTM D888-09(C)
DO	6.59 mg/L		ASTM D888-09(C)
pH (Field)	7.79 SU		EPA 150.2
Specific Conductance (Field)	539 umho/cm		SM2510B
Temperature	21.6 °C		SM2550B(2)
Turbidity (Hach)	15.7 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

Lab ID #: 50353339017	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	239 mg/L	10	SM2320B
Chloride	9 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	271 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	14.6 mg/L	2.5	SM2540D
Solids, Total (TS)	309 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	308 mg/L	10	SM2540C
Sulfate	30.2 mg/L	0.25	EPA 300.0
Calcium (Total)	71300 ug/L	1000	EPA 200.7
Magnesium (Total)	22700 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	< 0.1 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	3.5 mg/L	1	SM5310C

Lab ID #: AC30778	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	579.4 MPN/100mL	1	SM9223B(Colilert-18)

SiteID: WLV-15-0006 **Sample Date:** 10/3/2023 **IDEM Sample #:** AC37557
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	63.7 %		ASTM D888-09(C)
DO	6.16 mg/L		ASTM D888-09(C)
pH (Field)	7.54 SU		EPA 150.2
Specific Conductance (Field)	540 umho/cm		SM2510B
Temperature	17.1 °C		SM2550B(2)
Turbidity (Hach)	5.3 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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

Lab ID #: 50355619016	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	249 mg/L	10	SM2320B
Chloride	7.7 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	289 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	4.2 mg/L	2.5	SM2540D
Solids, Total (TS)	312 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	290 mg/L	10	SM2540C
Sulfate	26.3 mg/L	0.25	EPA 300.0
Calcium (Total)	76200 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	< 0.1 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.058 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.6 mg/L	1	SM5310C

Lab ID #: AC37557	Result	Reporting Limit	Method
Coliforms (Total)	2419.6 MPN/100mL	1	SM9223B(Colilert-18)
E. coli	124.6 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	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: WLV190-0017 **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: 3.895 **Site Number:** 23T-009

SiteID: WLV190-0017 **Sample Date:** 8/10/2023 **IDEM Sample #:** AC30697
Water Flow Type Run **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Rain event occurred overnight.

Lab ID #:	Result	Reporting Limit	Method
	% Sat	83.5 %	ASTM D888-09(C)
	DO	7.56 mg/L	ASTM D888-09(C)
	pH (Field)	7.81 SU	EPA 150.2
	Specific Conductance (Field)	390.3 umho/cm	SM2510B
	Temperature	20.2 °C	SM2550B(2)
	Turbidity (Hach)	45.7 NTU	EPA 180.1
	Air Temp	4 Lookup	Observation
	Sky Conditions	3 Lookup	Observation
	Wind Direction	27 Lookup	Observation
	Wind Strength	1 Lookup	Observation

Lab ID #: 50351437016	Result	Reporting Limit	Method
	Alkalinity (as CaCO3)	135 mg/L	10 SM2320B
	Chloride	29.7 mg/L	2.5 EPA 300.0
	Hardness (as CaCO3)	151 mg/L	10 SM2340B
	Solids, Suspended Total, (TSS)	28.4 mg/L	5 SM2540D
	Solids, Total (TS)	267 mg/L	10 SM2540B
	Solids, Total Dissolved (TDS)	219 mg/L	10 SM2540C
	Sulfate	12.2 mg/L	0.25 EPA 300.0
	Calcium (Total)	42100 ug/L	1000 EPA 200.7
	Magnesium (Total)	11300 ug/L	1000 EPA 200.7
	COD	22.4 mg/L	10 EPA 410.4
	Nitrogen, Ammonia	< 0.1 mg/L	0.1 EPA 350.1
	Nitrogen, Nitrate+Nitrite	0.34 mg/L	0.1 EPA 353.2
	Phosphorus, Total	0.13 mg/L	0.05 EPA 365.1
	TKN	1.1 mg/L	0.5 EPA 351.2
	TOC	5.2 mg/L	1 SM5310C

Lab ID #: AC30697	Result	Reporting Limit	Method
	Coliforms (Total)	> 2419.6 MPN/100mL	2419.6 3M9223B(Colilert-18)
	E. coli	> 2419.6 MPN/100mL	2419.6 3M9223B(Colilert-18)

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

SiteID: WLV190-0017 **Sample Date:** 8/16/2023 **IDEM Sample #:** AC30717
Water Flow Type Pool **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Did dilution because site failed for E. Coli last week

Lab ID #:	Result	Reporting Limit	Method
% Sat	72.7 %		ASTM D888-09(C)
DO	6.83 mg/L		ASTM D888-09(C)
pH (Field)	7.73 SU		EPA 150.2
Specific Conductance (Field)	411.7 umho/cm		SM2510B
Temperature	18.4 °C		SM2550B(2)
Turbidity (Hach)	17.2 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AC30717	Result	Reporting Limit	Method
E. coli	183.5 MPN/100mL	1	SM9223B(Colilert-18)

Lab ID #: AC30717b	Result	Reporting Limit	Method
Coliforms (Total)	11980 MPN/100mL	100	SM9223B(Colilert-18)

SiteID: WLV190-0017 **Sample Date:** 8/23/2023 **IDEM Sample #:** AC30737
Water Flow Type Run **Water Appearance** Sheen **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Checked DO with calibration meter because DO was so low. Used calibration meter S2 and DO value read 3.03 mg/L. Oily sheen present.

Lab ID #:	Result	Reporting Limit	Method
% Sat	34.3 %		ASTM D888-09(C)
DO	2.94 mg/L		ASTM D888-09(C)
pH (Field)	7.51 SU		EPA 150.2
Specific Conductance (Field)	405.8 umho/cm		SM2510B
Temperature	23 °C		SM2550B(2)
Turbidity (Hach)	7.31 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AC30737	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	1986.3 MPN/100mL	1	SM9223B(Colilert-18)

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

SiteID: WL190-0017 **Sample Date:** 8/30/2023 **IDEM Sample #:** AC30757
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	73.8 %		ASTM D888-09(C)
DO	6.78 mg/L		ASTM D888-09(C)
pH (Field)	7.84 SU		EPA 150.2
Specific Conductance (Field)	438 umho/cm		SM2510B
Temperature	19.2 °C		SM2550B(2)
Turbidity (Hach)	11.3 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #:	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	488.4 MPN/100mL	1	SM9223B(Colilert-18)

SiteID: WL190-0017 **Sample Date:** 9/7/2023 **IDEM Sample #:** AC30777
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	37.1 %		ASTM D888-09(C)
DO	3.33 mg/L		ASTM D888-09(C)
pH (Field)	7.63 SU		EPA 150.2
Specific Conductance (Field)	505 umho/cm		SM2510B
Temperature	20.6 °C		SM2550B(2)
Turbidity (Hach)	7.64 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

Lab ID #: 50353339016	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	219 mg/L	10	SM2320B
Chloride	15.1 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	241 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	6.6 mg/L	2.5	SM2540D
Solids, Total (TS)	272 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	270 mg/L	10	SM2540C
Sulfate	17.7 mg/L	0.25	EPA 300.0
Calcium (Total)	63500 ug/L	1000	EPA 200.7
Magnesium (Total)	20000 ug/L	1000	EPA 200.7
COD	17.9 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	< 0.1 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.099 mg/L	0.05	EPA 365.1
TKN	0.56 mg/L	0.5	EPA 351.2
TOC	5 mg/L	1	SM5310C

Lab ID #: AC30777	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	261.3 MPN/100mL	1	SM9223B(Colilert-18)

SiteID: WL190-0017 **Sample Date:** 10/4/2023 **IDEM Sample #:** AC37556
Water Flow Type Run **Water Appearance** Sheen **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Sheen. Confirmed DO (mg/L) 3.14 with S2.

Lab ID #:	Result	Reporting Limit	Method
% Sat	32.1 %		ASTM D888-09(C)
DO	2.96 mg/L		ASTM D888-09(C)
pH (Field)	7.64 SU		EPA 150.2
Specific Conductance (Field)	567 umho/cm		SM2510B
Temperature	19.1 °C		SM2550B(2)
Turbidity (Hach)	11.1 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

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

Lab ID #: 50355619015	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	274 mg/L	10	SM2320B
Chloride	15 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	291 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)	296 mg/L	10	SM2540C
Sulfate	10.4 mg/L	0.25	EPA 300.0
Calcium (Total)	75400 ug/L	1000	EPA 200.7
Magnesium (Total)	25000 ug/L	1000	EPA 200.7
COD	26.5 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	< 0.1 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	7.3 mg/L	1	SM5310C

Lab ID #: AC37556	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	77.6 MPN/100mL	1	SM9223B(Colilert-18)

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: WLV190-0016 **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: 2.509 **Site Number:** 23T-010

SiteID: WLV190-0016 **Sample Date:** 8/10/2023 **IDEM Sample #:** AC30696
Water Flow Type Pool **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Rain event occurred overnight.

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
	% Sat	68.9 %	ASTM D888-09(C)
	DO	6.22 mg/L	ASTM D888-09(C)
	pH (Field)	7.68 SU	EPA 150.2
	Specific Conductance (Field)	378.6 umho/cm	SM2510B
	Temperature	20.3 °C	SM2550B(2)
	Turbidity (Hach)	32.5 NTU	EPA 180.1
	Air Temp	4 Lookup	Observation
	Sky Conditions	3 Lookup	Observation
	Wind Direction	27 Lookup	Observation
	Wind Strength	0 Lookup	Observation

<u>Lab ID #:</u> 50351437015	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
	Alkalinity (as CaCO3)	168 mg/L	10 SM2320B
	Chloride	13 mg/L	0.25 EPA 300.0
	Hardness (as CaCO3)	192 mg/L	10 SM2340B
	Solids, Suspended Total, (TSS)	23.5 mg/L	3.7 SM2540D
	Solids, Total (TS)	270 mg/L	10 SM2540B
	Solids, Total Dissolved (TDS)	207 mg/L	10 SM2540C
	Sulfate	10.3 mg/L	0.25 EPA 300.0
	Calcium (Total)	45000 ug/L	1000 EPA 200.7
	Magnesium (Total)	19300 ug/L	1000 EPA 200.7
	COD	22 mg/L	10 EPA 410.4
	Nitrogen, Ammonia	0.16 mg/L	0.1 EPA 350.1
	Nitrogen, Nitrate+Nitrite	0.3 mg/L	0.1 EPA 353.2
	Phosphorus, Total	0.17 mg/L	0.05 EPA 365.1
	TKN	0.88 mg/L	0.5 EPA 351.2
	TOC	5.8 mg/L	1 SM5310C

<u>Lab ID #:</u> AC30696b	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
	Coliforms (Total)	34480 MPN/100mL	100 3M9223B(Colilert-18)
	E. coli	4040 MPN/100mL	100 3M9223B(Colilert-18)

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

SiteID: WLV190-0016 **Sample Date:** 8/16/2023 **IDEM Sample #:** AC30716
Water Flow Type Pool **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Did dilution because site failed for E. Coli last week

Lab ID #:	Result	Reporting Limit	Method
% Sat	61.7 %		ASTM D888-09(C)
DO	5.76 mg/L		ASTM D888-09(C)
pH (Field)	7.64 SU		EPA 150.2
Specific Conductance (Field)	406.8 umho/cm		SM2510B
Temperature	18.6 °C		SM2550B(2)
Turbidity (Hach)	27.7 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AC30716	Result	Reporting Limit	Method
E. coli	829.7 MPN/100mL	1	SM9223B(Colilert-18)

Lab ID #: AC30716b	Result	Reporting Limit	Method
Coliforms (Total)	14210 MPN/100mL	100	SM9223B(Colilert-18)

SiteID: WLV190-0016 **Sample Date:** 8/23/2023 **IDEM Sample #:** AC30736
Water Flow Type Pool **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Checked DO with calibration meter b/c DO was so low. Calibration value read 1.37. Used meter S2.

Lab ID #:	Result	Reporting Limit	Method
% Sat	20.9 %		ASTM D888-09(C)
DO	1.76 mg/L		ASTM D888-09(C)
pH (Field)	7.57 SU		EPA 150.2
Specific Conductance (Field)	571 umho/cm		SM2510B
Temperature	23.8 °C		SM2550B(2)
Turbidity (Hach)	7.04 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AC30736	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	478.6 MPN/100mL	1	SM9223B(Colilert-18)

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

SiteID: WL190-0016 **Sample Date:** 8/30/2023 **IDEM Sample #:** AC30756
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	66.4 %		ASTM D888-09(C)
DO	6.06 mg/L		ASTM D888-09(C)
pH (Field)	7.93 SU		EPA 150.2
Specific Conductance (Field)	598 umho/cm		SM2510B
Temperature	19.8 °C		SM2550B(2)
Turbidity (Hach)	9.77 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: AC30756	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)

SiteID: WL190-0016 **Sample Date:** 9/7/2023 **IDEM Sample #:** AC30776
Water Flow Type Run **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Did dilution because site failed for E. Coli previous week.

Lab ID #:	Result	Reporting Limit	Method
% Sat	30.5 %		ASTM D888-09(C)
DO	2.72 mg/L		ASTM D888-09(C)
pH (Field)	7.75 SU		EPA 150.2
Specific Conductance (Field)	640 umho/cm		SM2510B
Temperature	20.8 °C		SM2550B(2)
Turbidity (Hach)	8.88 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

Lab ID #: 50353339015	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	274 mg/L	10	SM2320B
Chloride	19 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	294 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	9.7 mg/L	2.5	SM2540D
Solids, Total (TS)	365 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	349 mg/L	10	SM2540C
Sulfate	24.8 mg/L	0.25	EPA 300.0
Calcium (Total)	69100 ug/L	1000	EPA 200.7
Magnesium (Total)	29500 ug/L	1000	EPA 200.7
COD	22.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	3.3 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.54 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.25 mg/L	0.05	EPA 365.1
TKN	4.4 mg/L	0.5	EPA 351.2
TOC	6.7 mg/L	1	SM5310C

Lab ID #: AC30776	Result	Reporting Limit	Method
E. coli	1299.7 MPN/100mL	1	SM9223B(Colilert-18)

Lab ID #: AC30776b	Result	Reporting Limit	Method
Coliforms (Total)	29870 MPN/100mL	100	SM9223B(Colilert-18)

SiteID: WL190-0016 **Sample Date:** 10/4/2023 **IDEM Sample #:** AC37555
Water Flow Type Pool **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Sheen. Confirmed DO (mg/L) 3.57 with S2.

Lab ID #:	Result	Reporting Limit	Method
% Sat	36.5 %		ASTM D888-09(C)
DO	3.39 mg/L		ASTM D888-09(C)
pH (Field)	7.64 SU		EPA 150.2
Specific Conductance (Field)	559 umho/cm		SM2510B
Temperature	19.4 °C		SM2550B(2)
Turbidity (Hach)	7.71 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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

Lab ID #: 50355619014	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	265 mg/L	10	SM2320B
Chloride	16.2 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	280 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	18.5 mg/L	3.2	SM2540D
Solids, Total (TS)	345 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	291 mg/L	10	SM2540C
Sulfate	17.8 mg/L	0.25	EPA 300.0
Calcium (Total)	64300 ug/L	1000	EPA 200.7
Magnesium (Total)	29000 ug/L	1000	EPA 200.7
COD	41.6 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	< 0.1 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.34 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	10.7 mg/L	1	SM5310C

Lab ID #: AC37555	Result	Reporting Limit	Method
Coliforms (Total)	2419.6 MPN/100mL	1	SM9223B(Colilert-18)
E. coli	45.9 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	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-15-0007 **USGS Hydrologic Unit:** 051201081502
Stream Name: Rocky Run **County:** Parke
Description: Arabia Road **Latitude:** 39 46 19.80264 **Longitude:** -87 19 20.42222
Drainage: 4.7585 **Site Number:** 23T-011

SiteID: WLW-15-0007 **Sample Date:** 8/10/2023 **IDEM Sample #:** AC30695
Water Flow Type Riffle **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Rain event occurred overnight.

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	94.6 %		ASTM D888-09(C)
DO	8.92 mg/L		ASTM D888-09(C)
pH (Field)	7.98 SU		EPA 150.2
Specific Conductance (Field)	607 umho/cm		SM2510B
Temperature	18.1 °C		SM2550B(2)
Turbidity (Hach)	2.83 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> 50351437014	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	263 mg/L	10	SM2320B
Chloride	20.2 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)	366 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	354 mg/L	10	SM2540C
Sulfate	37.6 mg/L	0.25	EPA 300.0
Calcium (Total)	78600 ug/L	1000	EPA 200.7
Magnesium (Total)	27700 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	0.25 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

<u>Lab ID #:</u> AC30695	<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**

SiteID: WLW-15-0007 **Sample Date:** 8/15/2023 **IDEM Sample #:** AC30715
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	99.9 %		ASTM D888-09(C)
DO	9.36 mg/L		ASTM D888-09(C)
pH (Field)	8.07 SU		EPA 150.2
Specific Conductance (Field)	636 umho/cm		SM2510B
Temperature	18.5 °C		SM2550B(2)
Turbidity (Hach)	2.76 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AC30715	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	913.9 MPN/100mL	1	SM9223B(Colilert-18)

SiteID: WLW-15-0007 **Sample Date:** 8/22/2023 **IDEM Sample #:** AC30735
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	109.7 %		ASTM D888-09(C)
DO	9.37 mg/L		ASTM D888-09(C)
pH (Field)	8.02 SU		EPA 150.2
Specific Conductance (Field)	661 umho/cm		SM2510B
Temperature	23.1 °C		SM2550B(2)
Turbidity (Hach)	2.5 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AC30735	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	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**

SiteID: WLV-15-0007 **Sample Date:** 8/29/2023 **IDEM Sample #:** AC30755
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	95.2 %		ASTM D888-09(C)
DO	8.69 mg/L		ASTM D888-09(C)
pH (Field)	8.11 SU		EPA 150.2
Specific Conductance (Field)	702 umho/cm		SM2510B
Temperature	19.8 °C		SM2550B(2)
Turbidity (Hach)	1.74 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AC30755	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	§M9223B(Colilert-18)
E. coli	387.3 MPN/100mL	1	§M9223B(Colilert-18)

SiteID: WLV-15-0007 **Sample Date:** 9/6/2023 **IDEM Sample #:** AC30775
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	101.3 %		ASTM D888-09(C)
DO	9.09 mg/L		ASTM D888-09(C)
pH (Field)	8.07 SU		EPA 150.2
Specific Conductance (Field)	700 umho/cm		SM2510B
Temperature	20.6 °C		SM2550B(2)
Turbidity (Hach)	4.71 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

Lab ID #: 50353339014	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	292 mg/L	10	SM2320B
Chloride	21.1 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	345 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	2.7 mg/L	2.5	SM2540D
Solids, Total (TS)	393 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	389 mg/L	10	SM2540C
Sulfate	48.3 mg/L	0.25	EPA 300.0
Calcium (Total)	86000 ug/L	1000	EPA 200.7
Magnesium (Total)	31500 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	< 0.1 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	1.8 mg/L	1	SM5310C

Lab ID #: AC30775	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	260.3 MPN/100mL	1	SM9223B(Colilert-18)

SiteID: WLW-15-0007 **Sample Date:** 10/4/2023 **IDEM Sample #:** AC37554
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	97.9 %		ASTM D888-09(C)
DO	9.3 mg/L		ASTM D888-09(C)
pH (Field)	8.05 SU		EPA 150.2
Specific Conductance (Field)	691 umho/cm		SM2510B
Temperature	17.7 °C		SM2550B(2)
Turbidity (Hach)	2.83 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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

Lab ID #: 50355619013	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	308 mg/L	10	SM2320B
Chloride	20 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	358 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	6.3 mg/L	2.5	SM2540D
Solids, Total (TS)	422 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	385 mg/L	10	SM2540C
Sulfate	38.7 mg/L	2.5	EPA 300.0
Calcium (Total)	89700 ug/L	1000	EPA 200.7
Magnesium (Total)	32500 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	< 0.1 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	1.6 mg/L	1	SM5310C

Lab ID #: AC37554	Result	Reporting Limit	Method
Coliforms (Total)	1986.3 MPN/100mL	1	SM9223B(Colilert-18)
E. coli	158.5 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	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-15-0008 **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: 26.103 **Site Number:** 23T-012

SiteID: WLV-15-0008 **Sample Date:** 8/9/2023 **IDEM Sample #:** AC30694
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	113.3 %		ASTM D888-09(C)
DO	9.96 mg/L		ASTM D888-09(C)
pH (Field)	8.07 SU		EPA 150.2
Specific Conductance (Field)	568 umho/cm		SM2510B
Temperature	21.6 °C		SM2550B(2)
Turbidity (Hach)	2.25 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 50351437013	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	250 mg/L	10	SM2320B
Chloride	16.5 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	286 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)	320 mg/L	10	SM2540C
Sulfate	31.4 mg/L	0.25	EPA 300.0
Calcium (Total)	68500 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	0.4 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.051 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.1 mg/L	1	SM5310C

Lab ID #: AC30694	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	3M9223B(Colilert-18)
E. coli	435.2 MPN/100mL	1	3M9223B(Colilert-18)

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

SiteID: WLV-15-0008 **Sample Date:** 8/15/2023 **IDEM Sample #:** AC30714
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	100.4 %		ASTM D888-09(C)
DO	8.98 mg/L		ASTM D888-09(C)
pH (Field)	8.13 SU		EPA 150.2
Specific Conductance (Field)	516 umho/cm		SM2510B
Temperature	20.8 °C		SM2550B(2)
Turbidity (Hach)	11.9 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AC30714	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	2419.6 MPN/100mL	1	SM9223B(Colilert-18)

SiteID: WLV-15-0008 **Sample Date:** 8/22/2023 **IDEM Sample #:** AC30734
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	127.4 %		ASTM D888-09(C)
DO	9.94 mg/L		ASTM D888-09(C)
pH (Field)	8.17 SU		EPA 150.2
Specific Conductance (Field)	575 umho/cm		SM2510B
Temperature	28.1 °C		SM2550B(2)
Turbidity (Hach)	4.68 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AC30734	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	206.4 MPN/100mL	1	SM9223B(Colilert-18)

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

SiteID: WLV-15-0008 **Sample Date:** 8/29/2023 **IDEM Sample #:** AC30754
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	107.5 %		ASTM D888-09(C)
DO	9.06 mg/L		ASTM D888-09(C)
pH (Field)	8.08 SU		EPA 150.2
Specific Conductance (Field)	606 umho/cm		SM2510B
Temperature	23.7 °C		SM2550B(2)
Turbidity (Hach)	3.53 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AC30754	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	§M9223B(Colilert-18)
E. coli	547.5 MPN/100mL	1	§M9223B(Colilert-18)

SiteID: WLV-15-0008 **Sample Date:** 9/6/2023 **IDEM Sample #:** AC30774
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	105.3 %		ASTM D888-09(C)
DO	8.94 mg/L		ASTM D888-09(C)
pH (Field)	8.11 SU		EPA 150.2
Specific Conductance (Field)	604 umho/cm		SM2510B
Temperature	23.5 °C		SM2550B(2)
Turbidity (Hach)	7.82 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

Lab ID #: 50353339013	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	262 mg/L	10	SM2320B
Chloride	13.9 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	310 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	4.5 mg/L	2.5	SM2540D
Solids, Total (TS)	348 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	346 mg/L	10	SM2540C
Sulfate	35.4 mg/L	0.25	EPA 300.0
Calcium (Total)	75200 ug/L	1000	EPA 200.7
Magnesium (Total)	29600 ug/L	1000	EPA 200.7
COD	13.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.37 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

Lab ID #: AC30774	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	435.2 MPN/100mL	1	SM9223B(Colilert-18)

SiteID: WLW-15-0008 **Sample Date:** 10/4/2023 **IDEM Sample #:** AC37553
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	103.7 %		ASTM D888-09(C)
DO	9.53 mg/L		ASTM D888-09(C)
pH (Field)	7.99 SU		EPA 150.2
Specific Conductance (Field)	613 umho/cm		SM2510B
Temperature	19.4 °C		SM2550B(2)
Turbidity (Hach)	3.6 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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

Lab ID #: 50355619012	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	277 mg/L	10	SM2320B
Chloride	16.9 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	336 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)	314 mg/L	10	SM2540C
Sulfate	36 mg/L	0.25	EPA 300.0
Calcium (Total)	82900 ug/L	1000	EPA 200.7
Magnesium (Total)	31300 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	0.29 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

Lab ID #: AC37553	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	101.9 MPN/100mL	1	SM9223B(Colilert-18)

Weather Code Definitions			
SC	WD	WS	AT
Sky Conditions	Wind Direction	Wind Strength	Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)
2 - Scattered	9 - Snow	9	East (90 Degrees)
3 - Partly	10 - Sleet	18	South (180 Degrees)
4 - Cloudy		27	West (270 Degrees)
5 - Mist			0 - Calm
6 - Fog			1 - Light
7 - Shower			2 - Mod./Light
			3 - Moderate
			4 - Mod./Strong
			5 - Strong
			6 - Gale
			1 - < 32
			2 - 33-45
			3 - 46-60
			4 - 61-75
			5 - 76-85
			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: 23.543 **Site Number:** 23T-013

SiteID: WLW-15-0009 **Sample Date:** 8/9/2023 **IDEM Sample #:** AC30693
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Iron-colored residue

Lab ID #:	Result	Reporting Limit	Method
	% Sat	102.2 %	ASTM D888-09(C)
	DO	8.94 mg/L	ASTM D888-09(C)
	pH (Field)	7.98 SU	EPA 150.2
	Specific Conductance (Field)	557 umho/cm	SM2510B
	Temperature	21.9 °C	SM2550B(2)
	Turbidity (Hach)	3.31 NTU	EPA 180.1
	Air Temp	5 Lookup	Observation
	Sky Conditions	3 Lookup	Observation
	Wind Direction	27 Lookup	Observation
	Wind Strength	1 Lookup	Observation

Lab ID #: 50351437012	Result	Reporting Limit	Method	
	Alkalinity (as CaCO3)	243 mg/L	10	SM2320B
	Chloride	17.6 mg/L	0.25	EPA 300.0
	Hardness (as CaCO3)	293 mg/L	10	SM2340B
	Solids, Suspended Total, (TSS)	2.7 mg/L	2.5	SM2540D
	Solids, Total (TS)	356 mg/L	10	SM2540B
	Solids, Total Dissolved (TDS)	315 mg/L	10	SM2540C
	Sulfate	29.3 mg/L	0.25	EPA 300.0
	Calcium (Total)	69800 ug/L	1000	EPA 200.7
	Magnesium (Total)	28900 ug/L	1000	EPA 200.7
	COD	10.8 mg/L	10	EPA 410.4
	Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
	Nitrogen, Nitrate+Nitrite	0.57 mg/L	0.1	EPA 353.2
	Phosphorus, Total	0.094 mg/L	0.05	EPA 365.1
	TKN	< 0.5 mg/L	0.5	EPA 351.2
	TOC	2.5 mg/L	1	SM5310C

Lab ID #: AC30693	Result	Reporting Limit	Method	
	Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	3M9223B(Colilert-18)
	E. coli	435.2 MPN/100mL	1	3M9223B(Colilert-18)

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

SiteID: WLV-15-0009 **Sample Date:** 8/15/2023 **IDEM Sample #:** AC30713
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	101.1 %		ASTM D888-09(C)
DO	9.01 mg/L		ASTM D888-09(C)
pH (Field)	8.08 SU		EPA 150.2
Specific Conductance (Field)	527 umho/cm		SM2510B
Temperature	20.9 °C		SM2550B(2)
Turbidity (Hach)	12.6 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: AC30713	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	§M9223B(Colilert-18)
E. coli	1299.7 MPN/100mL	1	§M9223B(Colilert-18)

SiteID: WLV-15-0009 **Sample Date:** 8/22/2023 **IDEM Sample #:** AC30733
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	127.1 %		ASTM D888-09(C)
DO	10.04 mg/L		ASTM D888-09(C)
pH (Field)	8.14 SU		EPA 150.2
Specific Conductance (Field)	578 umho/cm		SM2510B
Temperature	27.4 °C		SM2550B(2)
Turbidity (Hach)	6.83 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AC30733	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	§M9223B(Colilert-18)
E. coli	275.5 MPN/100mL	1	§M9223B(Colilert-18)

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

SiteID: WLV-15-0009 **Sample Date:** 8/29/2023 **IDEM Sample #:** AC30753
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	113.2 %		ASTM D888-09(C)
DO	9.47 mg/L		ASTM D888-09(C)
pH (Field)	8.07 SU		EPA 150.2
Specific Conductance (Field)	597 umho/cm		SM2510B
Temperature	24.3 °C		SM2550B(2)
Turbidity (Hach)	8.87 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AC30753	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	§M9223B(Colilert-18)
E. coli	365.4 MPN/100mL	1	§M9223B(Colilert-18)

SiteID: WLV-15-0009 **Sample Date:** 9/6/2023 **IDEM Sample #:** AC30773
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Iron colored residue along bank. Did dilution because turbidity greater than 50.

Lab ID #:	Result	Reporting Limit	Method
% Sat	90.6 %		ASTM D888-09(C)
DO	7.67 mg/L		ASTM D888-09(C)
pH (Field)	7.98 SU		EPA 150.2
Specific Conductance (Field)	511 umho/cm		SM2510B
Temperature	23.7 °C		SM2550B(2)
Turbidity (Hach)	106 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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

Lab ID #: 50353339012	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	222 mg/L	10	SM2320B
Chloride	12 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	259 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	64.1 mg/L	6.8	SM2540D
Solids, Total (TS)	360 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	304 mg/L	10	SM2540C
Sulfate	25.7 mg/L	0.25	EPA 300.0
Calcium (Total)	63000 ug/L	1000	EPA 200.7
Magnesium (Total)	24700 ug/L	1000	EPA 200.7
COD	15 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	0.16 mg/L	0.05	EPA 365.1
TKN	0.8 mg/L	0.5	EPA 351.2
TOC	4.2 mg/L	1	SM5310C

Lab ID #: AC30773b	Result	Reporting Limit	Method
Coliforms (Total)	198630 MPN/100mL	100	SM9223B(Colilert-18)
E. coli	8800 MPN/100mL	100	SM9223B(Colilert-18)

SiteID: WLW-15-0009 **Sample Date:** 10/4/2023 **IDEM Sample #:** AC37552
Water Flow Type Glike **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Dilution because site failed last month for E. Coli. Iron substance orange residue and oily sheen.

Lab ID #:	Result	Reporting Limit	Method
% Sat	95.6 %		ASTM D888-09(C)
DO	8.82 mg/L		ASTM D888-09(C)
pH (Field)	7.98 SU		EPA 150.2
Specific Conductance (Field)	602 umho/cm		SM2510B
Temperature	19.3 °C		SM2550B(2)
Turbidity (Hach)	5.78 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

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

Lab ID #: 50355619011	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	272 mg/L	10	SM2320B
Chloride	18.1 mg/L	0.25	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)	355 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	335 mg/L	10	SM2540C
Sulfate	31.8 mg/L	0.25	EPA 300.0
Calcium (Total)	77100 ug/L	1000	EPA 200.7
Magnesium (Total)	29800 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	0.55 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.076 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.6 mg/L	1	SM5310C

Lab ID #: AC37552	Result	Reporting Limit	Method
E. coli	275.5 MPN/100mL	1	SM9223B(Colilert-18)

Lab ID #: AC37552b	Result	Reporting Limit	Method
Coliforms (Total)	6310 MPN/100mL	100	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	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-15-0010 **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: 2.16 **Site Number:** 23T-014

SiteID: WLW-15-0010 **Sample Date:** 8/9/2023 **IDEM Sample #:** AC30692
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	81.7 %		ASTM D888-09(C)
DO	7.35 mg/L		ASTM D888-09(C)
pH (Field)	7.65 SU		EPA 150.2
Specific Conductance (Field)	570 umho/cm		SM2510B
Temperature	20.5 °C		SM2550B(2)
Turbidity (Hach)	22 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> 50351437011	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	247 mg/L	10	SM2320B
Chloride	14.8 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	295 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	21.8 mg/L	2.9	SM2540D
Solids, Total (TS)	392 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	324 mg/L	10	SM2540C
Sulfate	28.9 mg/L	0.25	EPA 300.0
Calcium (Total)	70200 ug/L	1000	EPA 200.7
Magnesium (Total)	29100 ug/L	1000	EPA 200.7
COD	11.1 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.3 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.091 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.4 mg/L	1	SM5310C

<u>Lab ID #:</u> AC30692	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	3M9223B(Colilert-18)
E. coli	1986.3 MPN/100mL	1	3M9223B(Colilert-18)

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

SiteID: WLW-15-0010 **Sample Date:** 8/15/2023 **IDEM Sample #:** AC30712
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	85.6 %		ASTM D888-09(C)
DO	7.82 mg/L		ASTM D888-09(C)
pH (Field)	7.71 SU		EPA 150.2
Specific Conductance (Field)	442 umho/cm		SM2510B
Temperature	19.7 °C		SM2550B(2)
Turbidity (Hach)	20.4 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AC30712	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)

SiteID: WLW-15-0010 **Sample Date:** 8/22/2023 **IDEM Sample #:** AC30732
Water Flow Type Run **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Did dilution because site failed for E. Coli previous week.

Lab ID #:	Result	Reporting Limit	Method
% Sat	67.5 %		ASTM D888-09(C)
DO	5.55 mg/L		ASTM D888-09(C)
pH (Field)	7.74 SU		EPA 150.2
Specific Conductance (Field)	601 umho/cm		SM2510B
Temperature	25.2 °C		SM2550B(2)
Turbidity (Hach)	17.7 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AC30732b	Result	Reporting Limit	Method
Coliforms (Total)	241960 MPN/100mL	100	SM9223B(Colilert-18)
E. coli	198630 MPN/100mL	100	SM9223B(Colilert-18)

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

SiteID: WLW-15-0010 **Sample Date:** 8/29/2023 **IDEM Sample #:** AC30752
Water Flow Type Run **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Dilution because site failed for E. Coli last week.

Lab ID #:	Result	Reporting Limit	Method
% Sat	92.4 %		ASTM D888-09(C)
DO	8.14 mg/L		ASTM D888-09(C)
pH (Field)	7.82 SU		EPA 150.2
Specific Conductance (Field)	616 umho/cm		SM2510B
Temperature	21.5 °C		SM2550B(2)
Turbidity (Hach)	11.4 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AC30752	Result	Reporting Limit	Method
E. coli	1986.3 MPN/100mL	1	SM9223B(Colilert-18)

Lab ID #: AC30752b	Result	Reporting Limit	Method
Coliforms (Total)	20980 MPN/100mL	100	SM9223B(Colilert-18)

SiteID: WLW-15-0010 **Sample Date:** 9/6/2023 **IDEM Sample #:** AC30772
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	75.1 %		ASTM D888-09(C)
DO	6.42 mg/L		ASTM D888-09(C)
pH (Field)	7.85 SU		EPA 150.2
Specific Conductance (Field)	563 umho/cm		SM2510B
Temperature	23.1 °C		SM2550B(2)
Turbidity (Hach)	21.5 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

Lab ID #: 50353339011	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	238 mg/L	10	SM2320B
Chloride	12.5 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	282 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	15.8 mg/L	2.9	SM2540D
Solids, Total (TS)	353 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	330 mg/L	10	SM2540C
Sulfate	31.3 mg/L	0.25	EPA 300.0
Calcium (Total)	66800 ug/L	1000	EPA 200.7
Magnesium (Total)	28000 ug/L	1000	EPA 200.7
COD	15.1 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.14 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.62 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.17 mg/L	0.05	EPA 365.1
TKN	1.4 mg/L	0.5	EPA 351.2
TOC	4.9 mg/L	1	SM5310C

Lab ID #: AC30772	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)

SiteID: WLW-15-0010 **Sample Date:** 10/4/2023 **IDEM Sample #:** AC37551
Water Flow Type Pool **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Dilution because site failed for E. Coli last month

Lab ID #:	Result	Reporting Limit	Method
% Sat	47.2 %		ASTM D888-09(C)
DO	4.4 mg/L		ASTM D888-09(C)
pH (Field)	7.5 SU		EPA 150.2
Specific Conductance (Field)	598 umho/cm		SM2510B
Temperature	18.8 °C		SM2550B(2)
Turbidity (Hach)	45.9 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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

Lab ID #: 50355619010	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	271 mg/L	10	SM2320B
Chloride	16.3 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	323 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	39.6 mg/L	5	SM2540D
Solids, Total (TS)	391 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	328 mg/L	10	SM2540C
Sulfate	26.7 mg/L	0.25	EPA 300.0
Calcium (Total)	79200 ug/L	1000	EPA 200.7
Magnesium (Total)	30500 ug/L	1000	EPA 200.7
COD	20.5 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.2 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.76 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.3 mg/L	0.05	EPA 365.1
TKN	1.2 mg/L	0.5	EPA 351.2
TOC	4 mg/L	1	SM5310C

Lab ID #: AC37551b	Result	Reporting Limit	Method
Coliforms (Total)	23820 MPN/100mL	100	SM9223B(Colilert-18)
E. coli	3590 MPN/100mL	100	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	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-15-0011 **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: 17.6405 **Site Number:** 23T-015

SiteID: WLW-15-0011 **Sample Date:** 8/9/2023 **IDEM Sample #:** AC30691
Water Flow Type: Glide **Water Appearance:** Clear **Water Depth:** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %:** 0-20%
Sampler Comments: Cattle present in stream

Lab ID #:	Result	Reporting Limit	Method
% Sat	135.9 %		ASTM D888-09(C)
DO	11.73 mg/L		ASTM D888-09(C)
pH (Field)	8.18 SU		EPA 150.2
Specific Conductance (Field)	554 umho/cm		SM2510B
Temperature	22.6 °C		SM2550B(2)
Turbidity (Hach)	3.45 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 50351437010	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	243 mg/L	10	SM2320B
Chloride	18.8 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	285 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	4 mg/L	2.5	SM2540D
Solids, Total (TS)	347 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	315 mg/L	10	SM2540C
Sulfate	28.1 mg/L	0.25	EPA 300.0
Calcium (Total)	68300 ug/L	1000	EPA 200.7
Magnesium (Total)	27800 ug/L	1000	EPA 200.7
COD	11.1 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.63 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.078 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.9 mg/L	1	SM5310C

Lab ID #: AC30691	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	3M9223B(Colilert-18)
E. coli	343.6 MPN/100mL	1	3M9223B(Colilert-18)

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

SiteID: WLW-15-0011 **Sample Date:** 8/15/2023 **IDEM Sample #:** AC30711
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	117.5 %		ASTM D888-09(C)
DO	10.49 mg/L		ASTM D888-09(C)
pH (Field)	8.23 SU		EPA 150.2
Specific Conductance (Field)	521 umho/cm		SM2510B
Temperature	20.9 °C		SM2550B(2)
Turbidity (Hach)	9.5 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	3 Lookup		Observation

Lab ID #: AC30711	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	1986.3 MPN/100mL	1	SM9223B(Colilert-18)

SiteID: WLW-15-0011 **Sample Date:** 8/22/2023 **IDEM Sample #:** AC30731
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	166.3 %		ASTM D888-09(C)
DO	12.66 mg/L		ASTM D888-09(C)
pH (Field)	8.28 SU		EPA 150.2
Specific Conductance (Field)	529 umho/cm		SM2510B
Temperature	29.5 °C		SM2550B(2)
Turbidity (Hach)	7.38 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AC30731	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)

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

SiteID: WLW-15-0011 **Sample Date:** 8/29/2023 **IDEM Sample #:** AC30751
Water Flow Type Glide **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Dilution because site failed for E. Coli last week. Cows in water.

Lab ID #:	Result	Reporting Limit	Method
% Sat	160.8 %		ASTM D888-09(C)
DO	12.77 mg/L		ASTM D888-09(C)
pH (Field)	8.26 SU		EPA 150.2
Specific Conductance (Field)	594 umho/cm		SM2510B
Temperature	27.3 °C		SM2550B(2)
Turbidity (Hach)	69.1 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AC30751	Result	Reporting Limit	Method
E. coli	980.4 MPN/100mL	1	SM9223B(Colilert-18)

Lab ID #: AC30751b	Result	Reporting Limit	Method
Coliforms (Total)	26030 MPN/100mL	100	SM9223B(Colilert-18)

SiteID: WLW-15-0011 **Sample Date:** 9/6/2023 **IDEM Sample #:** AC30771
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	127.4 %		ASTM D888-09(C)
DO	10.55 mg/L		ASTM D888-09(C)
pH (Field)	8.21 SU		EPA 150.2
Specific Conductance (Field)	568 umho/cm		SM2510B
Temperature	24.8 °C		SM2550B(2)
Turbidity (Hach)	11 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

Lab ID #: 50353339010	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	242 mg/L	10	SM2320B
Chloride	16 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	282 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	8 mg/L	2.5	SM2540D
Solids, Total (TS)	344 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	336 mg/L	10	SM2540C
Sulfate	30.1 mg/L	0.25	EPA 300.0
Calcium (Total)	67200 ug/L	1000	EPA 200.7
Magnesium (Total)	27600 ug/L	1000	EPA 200.7
COD	10.6 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.75 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.074 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.9 mg/L	1	SM5310C

Lab ID #: AC30771	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	1553.1 MPN/100mL	1	SM9223B(Colilert-18)

SiteID: WLW-15-0011 **Sample Date:** 10/4/2023 **IDEM Sample #:** AC37550
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Cows are present in the stream

Lab ID #:	Result	Reporting Limit	Method
% Sat	114.2 %		ASTM D888-09(C)
DO	10.2 mg/L		ASTM D888-09(C)
pH (Field)	8.04 SU		EPA 150.2
Specific Conductance (Field)	431.7 umho/cm		SM2510B
Temperature	20.6 °C		SM2550B(2)
Turbidity (Hach)	29.5 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

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

Lab ID #: 50355619009	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	277 mg/L	10	SM2320B
Chloride	19.5 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	326 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	9.6 mg/L	2.6	SM2540D
Solids, Total (TS)	370 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	334 mg/L	10	SM2540C
Sulfate	31.2 mg/L	0.25	EPA 300.0
Calcium (Total)	79900 ug/L	1000	EPA 200.7
Magnesium (Total)	30600 ug/L	1000	EPA 200.7
COD	16.7 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.57 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.12 mg/L	0.05	EPA 365.1
TKN	1.2 mg/L	0.5	EPA 351.2
TOC	4.3 mg/L	1	SM5310C

Lab ID #: AC37550	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	> 2419.6 MPN/100mL	2419.6	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	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: 10.9545 **Site Number:** 23T-016

SiteID: WLV-15-0012 **Sample Date:** 8/9/2023 **IDEM Sample #:** AC30706
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	99.9 %	ASTM D888-09(C)
	DO	8.98 mg/L	ASTM D888-09(C)
	pH (Field)	8.03 SU	EPA 150.2
	Specific Conductance (Field)	589 umho/cm	SM2510B
	Temperature	20.5 °C	SM2550B(2)
	Turbidity (Hach)	2.6 NTU	EPA 180.1
	Air Temp	4 Lookup	Observation
	Sky Conditions	1 Lookup	Observation
	Wind Direction	27 Lookup	Observation
	Wind Strength	0 Lookup	Observation

Lab ID #: 50351437008	Result	Reporting Limit	Method	
	Alkalinity (as CaCO3)	258 mg/L	10	SM2320B
	Chloride	22.4 mg/L	0.25	EPA 300.0
	Hardness (as CaCO3)	295 mg/L	10	SM2340B
	Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
	Solids, Total (TS)	373 mg/L	10	SM2540B
	Solids, Total Dissolved (TDS)	333 mg/L	10	SM2540C
	Sulfate	24.9 mg/L	0.25	EPA 300.0
	Calcium (Total)	72300 ug/L	1000	EPA 200.7
	Magnesium (Total)	27700 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	0.83 mg/L	0.1	EPA 353.2
	Phosphorus, Total	0.12 mg/L	0.05	EPA 365.1
	TKN	< 0.5 mg/L	0.5	EPA 351.2
	TOC	3.5 mg/L	1	SM5310C

Lab ID #: AC30706	Result	Reporting Limit	Method	
	Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	3M9223B(Colilert-18)
	E. coli	613.1 MPN/100mL	1	3M9223B(Colilert-18)

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

SiteID: WLW-15-0012 **Sample Date:** 8/15/2023 **IDEM Sample #:** AC30726
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	98.9 %		ASTM D888-09(C)
DO	9 mg/L		ASTM D888-09(C)
pH (Field)	8.13 SU		EPA 150.2
Specific Conductance (Field)	562 umho/cm		SM2510B
Temperature	19.8 °C		SM2550B(2)
Turbidity (Hach)	6.83 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AC30726	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	727 MPN/100mL	1	SM9223B(Colilert-18)

SiteID: WLW-15-0012 **Sample Date:** 8/22/2023 **IDEM Sample #:** AC30746
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	136.6 %		ASTM D888-09(C)
DO	11.23 mg/L		ASTM D888-09(C)
pH (Field)	8.28 SU		EPA 150.2
Specific Conductance (Field)	620 umho/cm		SM2510B
Temperature	25.2 °C		SM2550B(2)
Turbidity (Hach)	4.63 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AC30746	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	920.8 MPN/100mL	1	SM9223B(Colilert-18)

**Indiana Department of Environmental Management
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SiteID: WLV-15-0012 **Sample Date:** 8/29/2023 **IDEM Sample #:** AC30766
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	137.9 %		ASTM D888-09(C)
DO	12.01 mg/L		ASTM D888-09(C)
pH (Field)	8.28 SU		EPA 150.2
Specific Conductance (Field)	634 umho/cm		SM2510B
Temperature	22.4 °C		SM2550B(2)
Turbidity (Hach)	5.17 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AC30766	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	§M9223B(Colilert-18)
E. coli	461.1 MPN/100mL	1	§M9223B(Colilert-18)

SiteID: WLV-15-0012 **Sample Date:** 9/6/2023 **IDEM Sample #:** AC30786
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	92 %		ASTM D888-09(C)
DO	7.93 mg/L		ASTM D888-09(C)
pH (Field)	8.1 SU		EPA 150.2
Specific Conductance (Field)	619 umho/cm		SM2510B
Temperature	22.7 °C		SM2550B(2)
Turbidity (Hach)	14.6 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

Lab ID #: 50353339008	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	266 mg/L	10	SM2320B
Chloride	19.3 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	293 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	7.2 mg/L	2.5	SM2540D
Solids, Total (TS)	359 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	355 mg/L	10	SM2540C
Sulfate	26.9 mg/L	0.25	EPA 300.0
Calcium (Total)	72200 ug/L	1000	EPA 200.7
Magnesium (Total)	27300 ug/L	1000	EPA 200.7
COD	12.6 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.25 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.1 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.12 mg/L	0.05	EPA 365.1
TKN	0.65 mg/L	0.5	EPA 351.2
TOC	3.2 mg/L	1	SM5310C

Lab ID #: AC30786	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)

SiteID: WLW-15-0012 **Sample Date:** 10/4/2023 **IDEM Sample #:** AC37565
Water Flow Type Pool **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Dilution because site failed for E. Coli previous month. Oily sheen.

Lab ID #:	Result	Reporting Limit	Method
% Sat	83 %		ASTM D888-09(C)
DO	7.83 mg/L		ASTM D888-09(C)
pH (Field)	8.04 SU		EPA 150.2
Specific Conductance (Field)	642 umho/cm		SM2510B
Temperature	18 °C		SM2550B(2)
Turbidity (Hach)	5.67 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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

Lab ID #: 50355619007	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	289 mg/L	10	SM2320B
Chloride	24.2 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	336 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	2.7 mg/L	2.5	SM2540D
Solids, Total (TS)	379 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	342 mg/L	10	SM2540C
Sulfate	27.6 mg/L	0.25	EPA 300.0
Calcium (Total)	84100 ug/L	1000	EPA 200.7
Magnesium (Total)	30600 ug/L	1000	EPA 200.7
COD	12.6 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.81 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.12 mg/L	0.05	EPA 365.1
TKN	0.52 mg/L	0.5	EPA 351.2
TOC	3.1 mg/L	1	SM5310C

Lab ID #: AC37565	Result	Reporting Limit	Method
E. coli	2419.6 MPN/100mL	1	SM9223B(Colilert-18)

Lab ID #: AC37565b	Result	Reporting Limit	Method
Coliforms (Total)	11450 MPN/100mL	100	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	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	

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Surface Water Results Summary

SiteID: WLV-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: 4.167 **Site Number:** 23T-017

SiteID: WLV-15-0013 **Sample Date:** 8/9/2023 **IDEM Sample #:** AC30690
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	83.5 %		ASTM D888-09(C)
DO	7.56 mg/L		ASTM D888-09(C)
pH (Field)	7.87 SU		EPA 150.2
Specific Conductance (Field)	513 umho/cm		SM2510B
Temperature	20.2 °C		SM2550B(2)
Turbidity (Hach)	3.55 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 50351437009	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	213 mg/L	10	SM2320B
Chloride	13.3 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)	333 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	301 mg/L	10	SM2540C
Sulfate	34.7 mg/L	0.25	EPA 300.0
Calcium (Total)	62700 ug/L	1000	EPA 200.7
Magnesium (Total)	25300 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	0.22 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	3.9 mg/L	1	SM5310C

Lab ID #: AC30690	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	3M9223B(Colilert-18)
E. coli	613.1 MPN/100mL	1	3M9223B(Colilert-18)

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

SiteID: WLV-15-0013 **Sample Date:** 8/15/2023 **IDEM Sample #:** AC30710
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	86.5 %		ASTM D888-09(C)
DO	7.85 mg/L		ASTM D888-09(C)
pH (Field)	7.93 SU		EPA 150.2
Specific Conductance (Field)	476 umho/cm		SM2510B
Temperature	19.9 °C		SM2550B(2)
Turbidity (Hach)	13.5 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AC30710	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)

SiteID: WLV-15-0013 **Sample Date:** 8/22/2023 **IDEM Sample #:** AC30730
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Did dilution because site failed for E. Coli previous week.

Lab ID #:	Result	Reporting Limit	Method
% Sat	97.5 %		ASTM D888-09(C)
DO	8.16 mg/L		ASTM D888-09(C)
pH (Field)	8.09 SU		EPA 150.2
Specific Conductance (Field)	606 umho/cm		SM2510B
Temperature	24.3 °C		SM2550B(2)
Turbidity (Hach)	4.73 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AC30730	Result	Reporting Limit	Method
E. coli	1553.1 MPN/100mL	1	SM9223B(Colilert-18)

Lab ID #: AC30730b	Result	Reporting Limit	Method
Coliforms (Total)	9330 MPN/100mL	100	SM9223B(Colilert-18)

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

SiteID: WLV-15-0013 **Sample Date:** 8/29/2023 **IDEM Sample #:** AC30750
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	103.7 %		ASTM D888-09(C)
DO	9.3 mg/L		ASTM D888-09(C)
pH (Field)	8.1 SU		EPA 150.2
Specific Conductance (Field)	639 umho/cm		SM2510B
Temperature	20.7 °C		SM2550B(2)
Turbidity (Hach)	3.94 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AC30750	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	461.1 MPN/100mL	1	SM9223B(Colilert-18)

SiteID: WLV-15-0013 **Sample Date:** 9/6/2023 **IDEM Sample #:** AC30770
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	81.8 %		ASTM D888-09(C)
DO	7.08 mg/L		ASTM D888-09(C)
pH (Field)	8.05 SU		EPA 150.2
Specific Conductance (Field)	606 umho/cm		SM2510B
Temperature	22.5 °C		SM2550B(2)
Turbidity (Hach)	9.05 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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Lab ID #: 50353339009	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	250 mg/L	10	SM2320B
Chloride	15.2 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	305 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	4.3 mg/L	2.5	SM2540D
Solids, Total (TS)	361 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	346 mg/L	10	SM2540C
Sulfate	43.3 mg/L	0.25	EPA 300.0
Calcium (Total)	72500 ug/L	1000	EPA 200.7
Magnesium (Total)	30000 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	0.71 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.17 mg/L	0.05	EPA 365.1
TKN	0.78 mg/L	0.5	EPA 351.2
TOC	3.4 mg/L	1	SM5310C

Lab ID #: AC30770	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)

SiteID: WLW-15-0013 **Sample Date:** 10/4/2023 **IDEM Sample #:** AC37549
Water Flow Type Pool **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Dilution because the site failed last month for E. Coli

Lab ID #:	Result	Reporting Limit	Method
% Sat	67.3 %		ASTM D888-09(C)
DO	6.43 mg/L		ASTM D888-09(C)
pH (Field)	7.82 SU		EPA 150.2
Specific Conductance (Field)	609 umho/cm		SM2510B
Temperature	18.1 °C		SM2550B(2)
Turbidity (Hach)	7.05 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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Lab ID #: 50355619008	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	266 mg/L	10	SM2320B
Chloride	14.1 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	337 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	3.9 mg/L	2.5	SM2540D
Solids, Total (TS)	379 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	325 mg/L	10	SM2540C
Sulfate	36.3 mg/L	2.5	EPA 300.0
Calcium (Total)	81100 ug/L	1000	EPA 200.7
Magnesium (Total)	32500 ug/L	1000	EPA 200.7
COD	12.9 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.44 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.19 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	3.7 mg/L	1	SM5310C

Lab ID #: AC37549	Result	Reporting Limit	Method
E. coli	191.8 MPN/100mL	1	SM9223B(Colilert-18)

Lab ID #: AC37549b	Result	Reporting Limit	Method
Coliforms (Total)	19560 MPN/100mL	100	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	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: 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: 6.65 **Site Number:** 23T-018

SiteID: WLV-15-0014 **Sample Date:** 8/9/2023 **IDEM Sample #:** AC30705
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	66.3 %		ASTM D888-09(C)
DO	6 mg/L		ASTM D888-09(C)
pH (Field)	7.53 SU		EPA 150.2
Specific Conductance (Field)	618 umho/cm		SM2510B
Temperature	20.1 °C		SM2550B(2)
Turbidity (Hach)	4.72 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> 50351437007	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	259 mg/L	10	SM2320B
Chloride	21.7 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	304 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	3.9 mg/L	2.5	SM2540D
Solids, Total (TS)	408 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	369 mg/L	10	SM2540C
Sulfate	27.3 mg/L	0.25	EPA 300.0
Calcium (Total)	74000 ug/L	1000	EPA 200.7
Magnesium (Total)	29000 ug/L	1000	EPA 200.7
COD	14.8 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	0.3 mg/L	0.05	EPA 365.1
TKN	0.96 mg/L	0.5	EPA 351.2
TOC	5.7 mg/L	1	SM5310C

<u>Lab ID #:</u> AC30705	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	3M9223B(Colilert-18)
E. coli	1119.9 MPN/100mL	1	3M9223B(Colilert-18)

**Indiana Department of Environmental Management
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SiteID: WLW-15-0014 **Sample Date:** 8/15/2023 **IDEM Sample #:** AC30725
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	73.7 %		ASTM D888-09(C)
DO	6.76 mg/L		ASTM D888-09(C)
pH (Field)	7.72 SU		EPA 150.2
Specific Conductance (Field)	566 umho/cm		SM2510B
Temperature	19.5 °C		SM2550B(2)
Turbidity (Hach)	20.8 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AC30725	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)

SiteID: WLW-15-0014 **Sample Date:** 8/22/2023 **IDEM Sample #:** AC30745
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Did dilution because site failed for E. Coli previous week.

Lab ID #:	Result	Reporting Limit	Method
% Sat	86.6 %		ASTM D888-09(C)
DO	7.24 mg/L		ASTM D888-09(C)
pH (Field)	7.68 SU		EPA 150.2
Specific Conductance (Field)	652 umho/cm		SM2510B
Temperature	24.3 °C		SM2550B(2)
Turbidity (Hach)	4.72 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AC30745b	Result	Reporting Limit	Method
Coliforms (Total)	120330 MPN/100mL	100	SM9223B(Colilert-18)
E. coli	16160 MPN/100mL	100	SM9223B(Colilert-18)

**Indiana Department of Environmental Management
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SiteID: WLV-15-0014 **Sample Date:** 8/29/2023 **IDEM Sample #:** AC30765
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Dilution because site failed for E. Coli last week

Lab ID #:	Result	Reporting Limit	Method
% Sat	85.9 %		ASTM D888-09(C)
DO	7.64 mg/L		ASTM D888-09(C)
pH (Field)	7.55 SU		EPA 150.2
Specific Conductance (Field)	682 umho/cm		SM2510B
Temperature	21.3 °C		SM2550B(2)
Turbidity (Hach)	8.91 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AC30765b	Result	Reporting Limit	Method
Coliforms (Total)	173290 MPN/100mL	100	§M9223B(Colilert-18)
E. coli	24810 MPN/100mL	100	§M9223B(Colilert-18)

SiteID: WLV-15-0014 **Sample Date:** 9/6/2023 **IDEM Sample #:** AC30785
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Did dilution because site failed for E. Coli previous week.

Lab ID #:	Result	Reporting Limit	Method
% Sat	61.8 %		ASTM D888-09(C)
DO	5.42 mg/L		ASTM D888-09(C)
pH (Field)	7.64 SU		EPA 150.2
Specific Conductance (Field)	662 umho/cm		SM2510B
Temperature	21.8 °C		SM2550B(2)
Turbidity (Hach)	9.01 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
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Lab ID #: 50353339007	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	271 mg/L	10	SM2320B
Chloride	22.2 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	312 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	3.9 mg/L	2.5	SM2540D
Solids, Total (TS)	388 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	377 mg/L	10	SM2540C
Sulfate	35.6 mg/L	0.25	EPA 300.0
Calcium (Total)	77200 ug/L	1000	EPA 200.7
Magnesium (Total)	28900 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	0.17 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	3 mg/L	1	SM5310C

Lab ID #: AC30785b	Result	Reporting Limit	Method
Coliforms (Total)	64880 MPN/100mL	100	SM9223B(Colilert-18)
E. coli	2920 MPN/100mL	100	SM9223B(Colilert-18)

SiteID: WLW-15-0014 **Sample Date:** 10/4/2023 **IDEM Sample #:** AC37564
Water Flow Type Pool **Water Appearance** Sheen **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Oily sheen. Dilution because site failed for E. Coli last month.

Lab ID #:	Result	Reporting Limit	Method
% Sat	45.2 %		ASTM D888-09(C)
DO	4.27 mg/L		ASTM D888-09(C)
pH (Field)	7.55 SU		EPA 150.2
Specific Conductance (Field)	648 umho/cm		SM2510B
Temperature	18 °C		SM2550B(2)
Turbidity (Hach)	6.83 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

**Indiana Department of Environmental Management
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Lab ID #: 50355619006	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	279 mg/L	10	SM2320B
Chloride	22.8 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	335 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	3 mg/L	2.5	SM2540D
Solids, Total (TS)	370 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	348 mg/L	10	SM2540C
Sulfate	34.8 mg/L	0.25	EPA 300.0
Calcium (Total)	83400 ug/L	1000	EPA 200.7
Magnesium (Total)	30800 ug/L	1000	EPA 200.7
COD	11.9 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	0.18 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	3 mg/L	1	SM5310C

Lab ID #: AC37564b	Result	Reporting Limit	Method
Coliforms (Total)	30760 MPN/100mL	100	SM9223B(Colilert-18)
E. coli	7490 MPN/100mL	100	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)
2 - Scattered	9 - Snow	9	East (90 Degrees)
3 - Partly	10 - Sleet	18	South (180 Degrees)
4 - Cloudy		27	West (270 Degrees)
5 - Mist			0 - Calm
6 - Fog			1 - Light
7 - Shower			2 - Mod./Light
			3 - Moderate
			4 - Mod./Strong
			5 - Strong
			6 - Gale
			1 - < 32
			2 - 33-45
			3 - 46-60
			4 - 61-75
			5 - 76-85
			6 - > 86

**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: 5.444 **Site Number:** 23T-019

SiteID: WLV-15-0015 **Sample Date:** 8/9/2023 **IDEM Sample #:** AC30704
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	66.5 %		ASTM D888-09(C)
DO	6.11 mg/L		ASTM D888-09(C)
pH (Field)	7.59 SU		EPA 150.2
Specific Conductance (Field)	594 umho/cm		SM2510B
Temperature	19.4 °C		SM2550B(2)
Turbidity (Hach)	8.28 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 50351437006	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	251 mg/L	10	SM2320B
Chloride	23.7 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	298 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	4.1 mg/L	2.5	SM2540D
Solids, Total (TS)	383 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	345 mg/L	10	SM2540C
Sulfate	29.8 mg/L	0.25	EPA 300.0
Calcium (Total)	72600 ug/L	1000	EPA 200.7
Magnesium (Total)	28300 ug/L	1000	EPA 200.7
COD	14.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.61 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.26 mg/L	0.05	EPA 365.1
TKN	0.74 mg/L	0.5	EPA 351.2
TOC	4.8 mg/L	1	SM5310C

Lab ID #: AC30704	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	3M9223B(Colilert-18)
E. coli	1299.7 MPN/100mL	1	3M9223B(Colilert-18)

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

SiteID: WLW-15-0015 **Sample Date:** 8/15/2023 **IDEM Sample #:** AC30724
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	78.7 %		ASTM D888-09(C)
DO	7.18 mg/L		ASTM D888-09(C)
pH (Field)	7.81 SU		EPA 150.2
Specific Conductance (Field)	576 umho/cm		SM2510B
Temperature	19.8 °C		SM2550B(2)
Turbidity (Hach)	12.6 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AC30724	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)

SiteID: WLW-15-0015 **Sample Date:** 8/22/2023 **IDEM Sample #:** AC30744
Water Flow Type Riffle **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Did dilution because site failed for E. Coli previous week.

Lab ID #:	Result	Reporting Limit	Method
% Sat	77.4 %		ASTM D888-09(C)
DO	6.68 mg/L		ASTM D888-09(C)
pH (Field)	7.74 SU		EPA 150.2
Specific Conductance (Field)	632 umho/cm		SM2510B
Temperature	22.6 °C		SM2550B(2)
Turbidity (Hach)	6 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AC30744	Result	Reporting Limit	Method
E. coli	344.1 MPN/100mL	1	SM9223B(Colilert-18)

Lab ID #: AC30744b	Result	Reporting Limit	Method
Coliforms (Total)	9600 MPN/100mL	100	SM9223B(Colilert-18)

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

SiteID: WLW-15-0015 **Sample Date:** 8/29/2023 **IDEM Sample #:** AC30764
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	69.7 %		ASTM D888-09(C)
DO	6.57 mg/L		ASTM D888-09(C)
pH (Field)	7.53 SU		EPA 150.2
Specific Conductance (Field)	660 umho/cm		SM2510B
Temperature	18.3 °C		SM2550B(2)
Turbidity (Hach)	5.64 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AC30764	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	435.2 MPN/100mL	1	SM9223B(Colilert-18)

SiteID: WLW-15-0015 **Sample Date:** 9/6/2023 **IDEM Sample #:** AC30784
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	53.8 %		ASTM D888-09(C)
DO	4.85 mg/L		ASTM D888-09(C)
pH (Field)	7.63 SU		EPA 150.2
Specific Conductance (Field)	640 umho/cm		SM2510B
Temperature	20.4 °C		SM2550B(2)
Turbidity (Hach)	8.55 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

Lab ID #: 50353339006	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	265 mg/L	10	SM2320B
Chloride	16.3 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	321 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	5.2 mg/L	2.5	SM2540D
Solids, Total (TS)	395 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	338 mg/L	10	SM2540C
Sulfate	46.2 mg/L	0.25	EPA 300.0
Calcium (Total)	79400 ug/L	1000	EPA 200.7
Magnesium (Total)	29800 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	0.22 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.29 mg/L	0.05	EPA 365.1
TKN	0.58 mg/L	0.5	EPA 351.2
TOC	3.5 mg/L	1	SM5310C

Lab ID #: AC30784	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	1732.9 MPN/100mL	1	SM9223B(Colilert-18)

SiteID: WLW-15-0015 **Sample Date:** 10/4/2023 **IDEM Sample #:** AC37563
Water Flow Type Pool **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Iron color substance orange color

Lab ID #:	Result	Reporting Limit	Method
% Sat	49.7 %		ASTM D888-09(C)
DO	4.79 mg/L		ASTM D888-09(C)
pH (Field)	7.54 SU		EPA 150.2
Specific Conductance (Field)	677 umho/cm		SM2510B
Temperature	17 °C		SM2550B(2)
Turbidity (Hach)	5.3 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

**Indiana Department of Environmental Management
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Lab ID #: 50355619005	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	277 mg/L	10	SM2320B
Chloride	23.6 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	349 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	386 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	376 mg/L	10	SM2540C
Sulfate	43.3 mg/L	2.5	EPA 300.0
Calcium (Total)	86300 ug/L	1000	EPA 200.7
Magnesium (Total)	32400 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	0.56 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.13 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.4 mg/L	1	SM5310C

Lab ID #: AC37563	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	456.9 MPN/100mL	1	SM9223B(Colilert-18)

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: WLV-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: 1.403 **Site Number:** 23T-020

SiteID: WLV-15-0016 **Sample Date:** 8/9/2023 **IDEM Sample #:** AC30703
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	71 %		ASTM D888-09(C)
DO	6.47 mg/L		ASTM D888-09(C)
pH (Field)	7.68 SU		EPA 150.2
Specific Conductance (Field)	440.4 umho/cm		SM2510B
Temperature	19.9 °C		SM2550B(2)
Turbidity (Hach)	9.44 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 50351437005	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	199 mg/L	10	SM2320B
Chloride	17.2 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	222 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	13.9 mg/L	2.5	SM2540D
Solids, Total (TS)	278 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	248 mg/L	10	SM2540C
Sulfate	7.2 mg/L	0.25	EPA 300.0
Calcium (Total)	53200 ug/L	1000	EPA 200.7
Magnesium (Total)	21600 ug/L	1000	EPA 200.7
COD	15.7 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.26 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.16 mg/L	0.05	EPA 365.1
TKN	0.73 mg/L	0.5	EPA 351.2
TOC	5.2 mg/L	1	SM5310C

<u>Lab ID #:</u> AC30703b	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	26030 MPN/100mL	100	3M9223B(Colilert-18)
E. coli	2230 MPN/100mL	100	3M9223B(Colilert-18)

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

SiteID: WLW-15-0016 **Sample Date:** 8/15/2023 **IDEM Sample #:** AC30723
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Did a dilution because site failed previous trip for E coli

Lab ID #:	Result	Reporting Limit	Method
	% Sat	87.1 %	ASTM D888-09(C)
	DO	7.94 mg/L	ASTM D888-09(C)
	pH (Field)	8.04 SU	EPA 150.2
	Specific Conductance (Field)	566 umho/cm	SM2510B
	Temperature	19.7 °C	SM2550B(2)
	Turbidity (Hach)	8.97 NTU	EPA 180.1
	Air Temp	4 Lookup	Observation
	Sky Conditions	2 Lookup	Observation
	Wind Direction	27 Lookup	Observation
	Wind Strength	1 Lookup	Observation

Lab ID #: AC30723b	Result	Reporting Limit	Method
	Coliforms (Total)	19350 MPN/100mL	100
	E. coli	1420 MPN/100mL	100

SiteID: WLW-15-0016 **Sample Date:** 8/22/2023 **IDEM Sample #:** AC30743
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Did dilution because site failed for E. Coli previous week.

Lab ID #:	Result	Reporting Limit	Method
	% Sat	85.4 %	ASTM D888-09(C)
	DO	7.16 mg/L	ASTM D888-09(C)
	pH (Field)	7.92 SU	EPA 150.2
	Specific Conductance (Field)	588 umho/cm	SM2510B
	Temperature	23.9 °C	SM2550B(2)
	Turbidity (Hach)	4.99 NTU	EPA 180.1
	Air Temp	6 Lookup	Observation
	Sky Conditions	2 Lookup	Observation
	Wind Direction	27 Lookup	Observation
	Wind Strength	0 Lookup	Observation

Lab ID #: AC30743	Result	Reporting Limit	Method
	E. coli	2419.6 MPN/100mL	1

Lab ID #: AC30743b	Result	Reporting Limit	Method
	Coliforms (Total)	11870 MPN/100mL	100

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

SiteID: WLW-15-0016 **Sample Date:** 8/29/2023 **IDEM Sample #:** AC30763
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	66.3 %		ASTM D888-09(C)
DO	6.15 mg/L		ASTM D888-09(C)
pH (Field)	7.73 SU		EPA 150.2
Specific Conductance (Field)	602 umho/cm		SM2510B
Temperature	19 °C		SM2550B(2)
Turbidity (Hach)	7.6 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AC30763	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	1986.3 MPN/100mL	1	SM9223B(Colilert-18)

SiteID: WLW-15-0016 **Sample Date:** 9/6/2023 **IDEM Sample #:** AC30783
Water Flow Type Stagnant **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Stream was mostly dry. Took sample in an isolated pool.

Lab ID #:	Result	Reporting Limit	Method
% Sat	22.7 %		ASTM D888-09(C)
DO	1.99 mg/L		ASTM D888-09(C)
pH (Field)	7.77 SU		EPA 150.2
Specific Conductance (Field)	619 umho/cm		SM2510B
Temperature	21.9 °C		SM2550B(2)
Turbidity (Hach)	20.9 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

Lab ID #: 50353339005	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	275 mg/L	10	SM2320B
Chloride	27.7 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	293 mg/L	10	SM2340B
Solids, Suspended Total, (TSS)	14.9 mg/L	3.5	SM2540D
Solids, Total (TS)	368 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	323 mg/L	10	SM2540C
Sulfate	6.3 mg/L	0.25	EPA 300.0
Calcium (Total)	70900 ug/L	1000	EPA 200.7
Magnesium (Total)	28300 ug/L	1000	EPA 200.7
COD	19.2 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.36 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	< 0.1 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.22 mg/L	0.05	EPA 365.1
TKN	1.3 mg/L	0.5	EPA 351.2
TOC	6.2 mg/L	1	SM5310C

Lab ID #: AC30783	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B(Colilert-18)
E. coli	344.8 MPN/100mL	1	SM9223B(Colilert-18)

SiteID: WLW-15-0016 **Sample Date:** 10/4/2023 **IDEM Sample #:** AC37562

Water Flow Type Pool **Water Appearance** Brown **Water Depth** **Algae?**

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

Sampler Comments: Not taken because stream was mostly dry and pool of water filled with debris. Oily sheen present with natural algae present.

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

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	