

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

SiteID: LMG-05-0002 **USGS Hydrologic Unit:** 040400010509
Stream Name: Burns Ditch **County:** Porter
Description: US 20 **Latitude:** 41 35 37.03501 **Longitude:** -87 13 14.49068
Drainage: 164.931 **Site Number:** 13T-001

SiteID: LMG-05-0002 **Sample Date:** 7/8/2013 **IDEM Sample #:** AB13579
Water Flow Type: Glide **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	52 %		ASTM D888-09(C)
DO	4.29 mg/L		ASTM D888-09(C)
pH (Field)	7.79 SU		EPA 150.2
Specific Conductance (Field)	833 umho/cm		SM2510B
Temperature	24.94 °C		SM2550B(2)
Turbidity (Hach)	13.9 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Flow	105.79 cf/sec		TM D5389-95/D3858
Sky Conditions	8 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> A988960	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	190 mg/L	10	EPA 310.2
Chloride	87 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	280 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	16 mg/L	1	SM2540D
Solids, Total (TS)	490 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	450 mg/L	10	SM2540C
Sulfate	51 mg/L	1.3	EPA 300.0
COD	32 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.12 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.75 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.16 mg/L	0.05	EPA 365.1
TKN	1.3 mg/L	0.3	SM4500N(Org)-D
TOC	9.5 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13579	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	980.4 MPN/100mL	1	SM9223B

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SiteID: LMG-05-0002 Sample Date: 7/22/2013 IDEM Sample #: AB11720
 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	39.9 %		SM4500-OG
DO	3.14 mg/L		SM4500-OG
pH (Field)	7.57 SU		EPA 150.2
Specific Conductance (Field)	738 umho/cm		SM2510B
Temperature	27.62 °C		SM2550B(2)
Turbidity (Hach)	9.58 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: LMG-05-0002 Sample Date: 8/5/2013 IDEM Sample #: AB13986
 Water Flow Type Glide Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	75.9 %		ASTM D888-09(C)
DO	6.57 mg/L		ASTM D888-09(C)
pH (Field)	7.95 SU		EPA 150.2
Specific Conductance (Field)	808 umho/cm		SM2510B
Temperature	22.42 °C		SM2550B(2)
Turbidity (Hach)	13.8 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Flow	75.529 cf/sec		TM D5389-95/D3858
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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Lab ID #: A991467	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	190 mg/L	10	EPA 310.2
Chloride	87 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	300 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	19 mg/L	1	SM2540D
Solids, Total (TS)	500 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	450 mg/L	10	SM2540C
Sulfate	63 mg/L	1.3	EPA 300.0
COD	26 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.67 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.14 mg/L	0.05	EPA 365.1
TKN	0.44 mg/L	0.3	SM4500N(Org)-D
TOC	7.7 mg/L	1	SM5310C

Lab ID #: AB13986	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	816.4 MPN/100mL	1	SM9223B

SiteID: LMG-05-0002 **Sample Date:** 9/9/2013 **IDEM Sample #:** AB14602
Water Flow Type Glide **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	64.1 %		ASTM D888-09(C)
DO	5.42 mg/L		ASTM D888-09(C)
pH (Field)	7.87 SU		EPA 150.2
Specific Conductance (Field)	831 umho/cm		SM2510B
Temperature	23.56 °C		SM2550B(2)
Turbidity (Hach)	12.6 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Flow	-22.661 cf/sec		TM D5389-95/D3858
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

**Indiana Department of Environmental Management
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Lab ID #: A994684	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	230 mg/L	20	EPA 310.2
Chloride	93 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	300 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	12 mg/L	1	SM2540D
Solids, Total (TS)	490 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	450 mg/L	10	SM2540C
Sulfate	71 mg/L	2.5	EPA 300.0
COD	16 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.28 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.13 mg/L	0.05	EPA 365.1
TKN	1.3 mg/L	0.3	SM4500N(Org)-D
TOC	7.1 mg/L	2	SM5310C

SiteID: LMG-05-0002 **Sample Date:** 9/9/2013 **IDEM Sample #:** AB12811

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	65.8 %		ASTM D888-09(C)
DO	5.52 mg/L		ASTM D888-09(C)
pH (Field)	7.92 SU		EPA 150.2
Specific Conductance (Field)	862 umho/cm		SM2510B
Temperature	23.99 °C		SM2550B(2)
Turbidity	9.7 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12811	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	108.1 MPN/100mL	1	SM9223B

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SiteID: LMG-05-0002 Sample Date: 9/16/2013 IDEM Sample #: AB12850
 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	57.6 %		ASTM D888-09(C)
DO	5.41 mg/L		ASTM D888-09(C)
pH (Field)	7.86 SU		EPA 150.2
Specific Conductance (Field)	875 umho/cm		SM2510B
Temperature	18.25 °C		SM2550B(2)
Turbidity	11.1 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12850	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1986.3 MPN/100mL	1	SM9223B

SiteID: LMG-05-0002 Sample Date: 9/23/2013 IDEM Sample #: AB12889
 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	65.4 %		ASTM D888-09(C)
DO	6.28 mg/L		ASTM D888-09(C)
pH (Field)	7.62 SU		EPA 150.2
Specific Conductance (Field)	580 umho/cm		SM2510B
Temperature	17.26 °C		SM2550B(2)
Turbidity	13.2 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12889	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	727 MPN/100mL	1	SM9223B

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

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

SiteID: LMG-05-0003 **USGS Hydrologic Unit:** 040400010509
Stream Name: Willow Creek **County:** Porter
Description: Clem Road **Latitude:** 41 35 17.82917 **Longitude:** -87 12 15.90561
Drainage: 8.556 **Site Number:** 13T-002

SiteID: LMG-05-0003 **Sample Date:** 7/8/2013 **IDEM Sample #:** AB13590
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	81.8 %		ASTM D888-09(C)
DO	7.65 mg/L		ASTM D888-09(C)
pH (Field)	7.84 SU		EPA 150.2
Specific Conductance (Field)	1111 umho/cm		SM2510B
Temperature	18.47 °C		SM2550B(2)
Turbidity (Hach)	10.6 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	8 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> A988962	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	200 mg/L	50	EPA 310.2
Chloride	170 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	340 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	9 mg/L	1	SM2540D
Solids, Total (TS)	670 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	580 mg/L	10	SM2540C
Sulfate	64 mg/L	1.3	EPA 300.0
COD	19 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.5 mg/L	0.05	EPA 353.2
Phosphorus, Total	0.076 mg/L	0.05	EPA 365.1
TKN	0.8 mg/L	0.3	SM4500N(Org)-D
TOC	3.7 mg/L	2	SM5310C

<u>Lab ID #:</u> AB13590	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

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SiteID: LMG-05-0003 Sample Date: 7/22/2013 IDEM Sample #: AB11721
 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	91.2 %		SM4500-OG
DO	7.98 mg/L		SM4500-OG
pH (Field)	7.95 SU		EPA 150.2
Specific Conductance (Field)	1013 umho/cm		SM2510B
Temperature	20.7 °C		SM2550B(2)
Turbidity (Hach)	5.78 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: LMG-05-0003 Sample Date: 8/5/2013 IDEM Sample #: AB13997
 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	91.1 %		ASTM D888-09(C)
DO	8.81 mg/L		ASTM D888-09(C)
pH (Field)	7.84 SU		EPA 150.2
Specific Conductance (Field)	1062 umho/cm		SM2510B
Temperature	16.79 °C		SM2550B(2)
Turbidity (Hach)	5.78 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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Lab ID #: A991468	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	150 mg/L	50	EPA 310.2
Chloride	190 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	320 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	2 mg/L	1	SM2540D
Solids, Total (TS)	620 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	580 mg/L	10	SM2540C
Sulfate	74 mg/L	2.5	EPA 300.0
COD	13 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.44 mg/L	0.01	EPA 353.2
Phosphorus, Total	< 0.05 mg/L	0.05	EPA 365.1
TKN	< 0.3 mg/L	0.3	SM4500N(Org)-D
TOC	3.7 mg/L	2	SM5310C

Lab ID #: AB13997	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	2419.6 MPN/100mL	1	SM9223B

SiteID: LMG-05-0003 **Sample Date:** 9/9/2013 **IDEM Sample #:** AB14613
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	73.2 %		ASTM D888-09(C)
DO	6.87 mg/L		ASTM D888-09(C)
pH (Field)	7.76 SU		EPA 150.2
Specific Conductance (Field)	1124 umho/cm		SM2510B
Temperature	18.23 °C		SM2550B(2)
Turbidity (Hach)	4.19 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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Lab ID #: A994685	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	260 mg/L	20	EPA 310.2
Chloride	180 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	350 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	1 mg/L	1	SM2540D
Solids, Total (TS)	660 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	630 mg/L	10	SM2540C
Sulfate	57 mg/L	1.3	EPA 300.0
COD	12 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.35 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.067 mg/L	0.05	EPA 365.1
TKN	0.61 mg/L	0.3	SM4500N(Org)-D
TOC	3.3 mg/L	2	SM5310C

SiteID: LMG-05-0003 **Sample Date:** 9/9/2013 **IDEM Sample #:** AB12822

Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**

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

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	75.6 %		ASTM D888-09(C)
DO	7.04 mg/L		ASTM D888-09(C)
pH (Field)	7.86 SU		EPA 150.2
Specific Conductance (Field)	1171 umho/cm		SM2510B
Temperature	18.68 °C		SM2550B(2)
Turbidity	2.3 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12822	Result	Reporting Limit	Method
E. coli	290.9 MPN/100mL	1	SM9223B

Lab ID #: AB12822a	Result	Reporting Limit	Method
Coliforms (Total)	24196 MPN/100mL	10	SM9223B

**Indiana Department of Environmental Management
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SiteID: LMG-05-0003 Sample Date: 9/16/2013 IDEM Sample #: AB12861
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	74.8 %		ASTM D888-09(C)
DO	7.58 mg/L		ASTM D888-09(C)
pH (Field)	7.83 SU		EPA 150.2
Specific Conductance (Field)	1040 umho/cm		SM2510B
Temperature	14.6 °C		SM2550B(2)
Turbidity	7 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12861	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

SiteID: LMG-05-0003 Sample Date: 9/23/2013 IDEM Sample #: AB12900
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	77.6 %		ASTM D888-09(C)
DO	8.12 mg/L		ASTM D888-09(C)
pH (Field)	7.78 SU		EPA 150.2
Specific Conductance (Field)	1116 umho/cm		SM2510B
Temperature	13.17 °C		SM2550B(2)
Turbidity	4.8 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12900	Result	Reporting Limit	Method
E. coli	387.3 MPN/100mL	1	SM9223B
Lab ID #: AB12900a	Result	Reporting Limit	Method
Coliforms (Total)	24196 MPN/100mL	10	SM9223B

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

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

SiteID: LMG-05-0004 **USGS Hydrologic Unit:** 040400010509
Stream Name: Willow Creek **County:** Porter
Description: Stone Avenue **Latitude:** 41 33 53.72915 **Longitude:** -87 11 20.59828
Drainage: 5.350 **Site Number:** 13T-003

SiteID: LMG-05-0004 **Sample Date:** 7/8/2013 **IDEM Sample #:** AB13601
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	82.9 %		ASTM D888-09(C)
DO	7.47 mg/L		ASTM D888-09(C)
pH (Field)	7.85 SU		EPA 150.2
Specific Conductance (Field)	896 umho/cm		SM2510B
Temperature	20.36 °C		SM2550B(2)
Turbidity (Hach)	63.9 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	8 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> A988963	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	160 mg/L	10	EPA 310.2
Chloride	99 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	270 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	78 mg/L	1	SM2540D
Solids, Total (TS)	550 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	400 mg/L	10	SM2540C
Sulfate	45 mg/L	1.3	EPA 300.0
COD	37 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.14 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	3.5 mg/L	0.05	EPA 353.2
Phosphorus, Total	0.2 mg/L	0.05	EPA 365.1
TKN	0.77 mg/L	0.3	SM4500N(Org)-D
TOC	6.3 mg/L	2	SM5310C

<u>Lab ID #:</u> AB13601	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

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

SiteID: LMG-05-0004 **Sample Date:** 7/22/2013 **IDEM Sample #:** AB11722
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	98 %		SM4500-OG
DO	8.15 mg/L		SM4500-OG
pH (Field)	8.06 SU		EPA 150.2
Specific Conductance (Field)	800 umho/cm		SM2510B
Temperature	24.05 °C		SM2550B(2)
Turbidity (Hach)	8.87 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: LMG-05-0004 **Sample Date:** 8/5/2013 **IDEM Sample #:** AB14008
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	87.2 %		ASTM D888-09(C)
DO	8.14 mg/L		ASTM D888-09(C)
pH (Field)	7.84 SU		EPA 150.2
Specific Conductance (Field)	822 umho/cm		SM2510B
Temperature	18.48 °C		SM2550B(2)
Turbidity (Hach)	4 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	8 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 #: A991469	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	140 mg/L	10	EPA 310.2
Chloride	140 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	230 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	3 mg/L	1	SM2540D
Solids, Total (TS)	510 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	440 mg/L	10	SM2540C
Sulfate	82 mg/L	2.5	EPA 300.0
COD	12 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.12 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.44 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.053 mg/L	0.05	EPA 365.1
TKN	< 0.3 mg/L	0.3	SM4500N(Org)-D
TOC	4.4 mg/L	1	SM5310C

Lab ID #: AB14008	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	866.4 MPN/100mL	1	SM9223B

SiteID: LMG-05-0004 **Sample Date:** 9/9/2013 **IDEM Sample #:** AB14624
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	90 %		ASTM D888-09(C)
DO	8 mg/L		ASTM D888-09(C)
pH (Field)	7.91 SU		EPA 150.2
Specific Conductance (Field)	575 umho/cm		SM2510B
Temperature	21.18 °C		SM2550B(2)
Turbidity (Hach)	8.17 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 #: A994686	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	150 mg/L	10	EPA 310.2
Chloride	61 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	210 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	4 mg/L	1	SM2540D
Solids, Total (TS)	320 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	300 mg/L	10	SM2540C
Sulfate	44 mg/L	1.3	EPA 300.0
COD	14 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.33 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.084 mg/L	0.05	EPA 365.1
TKN	0.54 mg/L	0.3	SM4500N(Org)-D
TOC	3.3 mg/L	1	SM5310C

SiteID: LMG-05-0004 **Sample Date:** 9/9/2013 **IDEM Sample #:** AB12833

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	92.9 %		ASTM D888-09(C)
DO	8.14 mg/L		ASTM D888-09(C)
pH (Field)	7.97 SU		EPA 150.2
Specific Conductance (Field)	594 umho/cm		SM2510B
Temperature	21.74 °C		SM2550B(2)
Turbidity	7.9 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12833	Result	Reporting Limit	Method
E. coli	980.4 MPN/100mL	1	SM9223B

Lab ID #: AB12833a	Result	Reporting Limit	Method
Coliforms (Total)	> 24196 MPN/100mL	24196	SM9223B

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

SiteID: LMG-05-0004 Sample Date: 9/16/2013 IDEM Sample #: AB12872
 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	76.5 %		ASTM D888-09(C)
DO	7.47 mg/L		ASTM D888-09(C)
pH (Field)	7.78 SU		EPA 150.2
Specific Conductance (Field)	800 umho/cm		SM2510B
Temperature	16.38 °C		SM2550B(2)
Turbidity	8 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12872	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1299.7 MPN/100mL	1	SM9223B

SiteID: LMG-05-0004 Sample Date: 9/23/2013 IDEM Sample #: AB12911
 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	86.6 %		ASTM D888-09(C)
DO	8.8 mg/L		ASTM D888-09(C)
pH (Field)	7.87 SU		EPA 150.2
Specific Conductance (Field)	882 umho/cm		SM2510B
Temperature	14.51 °C		SM2550B(2)
Turbidity	4.9 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12911	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	178.2 MPN/100mL	1	SM9223B

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

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

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

SiteID: LMG-05-0006 **USGS Hydrologic Unit:** 040400010508
Stream Name: Deep River **County:** Lake
Description: 29th Avenue **Latitude:** 41 33 56.09423 **Longitude:** -87 17 39.74435
Drainage: 150.342 **Site Number:** 13T-005

SiteID: LMG-05-0006 **Sample Date:** 7/8/2013 **IDEM Sample #:** AB13609
Water Flow Type: Glide **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	84.9 %		ASTM D888-09(C)
DO	7.15 mg/L		ASTM D888-09(C)
pH (Field)	7.9 SU		EPA 150.2
Specific Conductance (Field)	681 umho/cm		SM2510B
Temperature	24.12 °C		SM2550B(2)
Turbidity (Hach)	14.7 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	8 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> A988964	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	180 mg/L	10	EPA 310.2
Chloride	65 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	250 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	15 mg/L	1	SM2540D
Solids, Total (TS)	410 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	360 mg/L	10	SM2540C
Sulfate	38 mg/L	1.3	EPA 300.0
COD	34 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.46 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.13 mg/L	0.05	EPA 365.1
TKN	1.1 mg/L	0.3	SM4500N(Org)-D
TOC	8.7 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13609	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	275.5 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0006 Sample Date: 7/22/2013 IDEM Sample #: AB11723
 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	71.7 %		SM4500-OG
DO	3.31 mg/L		SM4500-OG
pH (Field)	7.93 SU		EPA 150.2
Specific Conductance (Field)	544 umho/cm		SM2510B
Temperature	30.11 °C		SM2550B(2)
Turbidity (Hach)	10.1 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: LMG-05-0006 Sample Date: 8/5/2013 IDEM Sample #: AB14016
 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	90.3 %		ASTM D888-09(C)
DO	7.78 mg/L		ASTM D888-09(C)
pH (Field)	8.05 SU		EPA 150.2
Specific Conductance (Field)	739 umho/cm		SM2510B
Temperature	22.72 °C		SM2550B(2)
Turbidity (Hach)	15.4 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	8 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 #: A991470	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	200 mg/L	10	EPA 310.2
Chloride	69 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	300 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	18 mg/L	1	SM2540D
Solids, Total (TS)	470 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	390 mg/L	10	SM2540C
Sulfate	53 mg/L	1.3	EPA 300.0
COD	28 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.22 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.13 mg/L	0.05	EPA 365.1
TKN	0.7 mg/L	0.3	SM4500N(Org)-D
TOC	7.4 mg/L	1	SM5310C

Lab ID #: AB14016	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	178.5 MPN/100mL	1	SM9223B

SiteID: LMG-05-0006 **Sample Date:** 9/9/2013 **IDEM Sample #:** AB14632
Water Flow Type Glide **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	84.7 %		ASTM D888-09(C)
DO	7.08 mg/L		ASTM D888-09(C)
pH (Field)	8.01 SU		EPA 150.2
Specific Conductance (Field)	737 umho/cm		SM2510B
Temperature	24.29 °C		SM2550B(2)
Turbidity (Hach)	9.23 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 #: A994687	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	240 mg/L	20	EPA 310.2
Chloride	64 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	300 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	8 mg/L	1	SM2540D
Solids, Total (TS)	410 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	410 mg/L	10	SM2540C
Sulfate	50 mg/L	1.3	EPA 300.0
COD	21 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.074 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.13 mg/L	0.05	EPA 365.1
TKN	1.1 mg/L	0.3	SM4500N(Org)-D
TOC	6.4 mg/L	1	SM5310C

SiteID: LMG-05-0006 **Sample Date:** 9/9/2013 **IDEM Sample #:** AB12841
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	86.4 %		ASTM D888-09(C)
DO	7.17 mg/L		ASTM D888-09(C)
pH (Field)	8.03 SU		EPA 150.2
Specific Conductance (Field)	766 umho/cm		SM2510B
Temperature	24.68 °C		SM2550B(2)
Turbidity	7.5 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12841	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	15.8 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0006 Sample Date: 9/16/2013 IDEM Sample #: AB12880
 Water Flow Type: Glide Water Appearance: Green Water Depth: Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed %: 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	89.1 %		ASTM D888-09(C)
DO	8.16 mg/L		ASTM D888-09(C)
pH (Field)	8.04 SU		EPA 150.2
Specific Conductance (Field)	754 umho/cm		SM2510B
Temperature	19.57 °C		SM2550B(2)
Turbidity	9.4 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12880	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	27.2 MPN/100mL	1	SM9223B

SiteID: LMG-05-0006 Sample Date: 9/23/2013 IDEM Sample #: AB12919
 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	89.8 %		ASTM D888-09(C)
DO	8.38 mg/L		ASTM D888-09(C)
pH (Field)	7.82 SU		EPA 150.2
Specific Conductance (Field)	508 umho/cm		SM2510B
Temperature	18.6 °C		SM2550B(2)
Turbidity	12.1 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12919	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	110.6 MPN/100mL	1	SM9223B

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

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

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

SiteID: LMG-05-0007 **USGS Hydrologic Unit:** 040400010508
Stream Name: Deep River **County:** Lake
Description: Liverpool Road **Latitude:** 41 33 46.16178 **Longitude:** -87 17 26.81088
Drainage: 150.171 **Site Number:** 13T-006

SiteID: LMG-05-0007 **Sample Date:** 7/8/2013 **IDEM Sample #:** AB13610
Water Flow Type: Glide **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	72.2 %		ASTM D888-09(C)
DO	6.03 mg/L		ASTM D888-09(C)
pH (Field)	7.82 SU		EPA 150.2
Specific Conductance (Field)	663 umho/cm		SM2510B
Temperature	24.36 °C		SM2550B(2)
Turbidity (Hach)	12.5 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Flow	49.002 cf/sec		TM D5389-95/D3858
Sky Conditions	8 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> A988965	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	180 mg/L	10	EPA 310.2
Chloride	68 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	250 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	11 mg/L	1	SM2540D
Solids, Total (TS)	380 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	380 mg/L	10	SM2540C
Sulfate	40 mg/L	1.3	EPA 300.0
COD	32 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.42 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.12 mg/L	0.05	EPA 365.1
TKN	1.2 mg/L	0.3	SM4500N(Org)-D
TOC	8.6 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13610	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	195.6 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0007 Sample Date: 7/22/2013 IDEM Sample #: AB11724
 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	87.4 %		SM4500-OG
DO	6.43 mg/L		SM4500-OG
pH (Field)	7.92 SU		EPA 150.2
Specific Conductance (Field)	545 umho/cm		SM2510B
Temperature	30.08 °C		SM2550B(2)
Turbidity (Hach)	9.46 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: LMG-05-0007 Sample Date: 8/5/2013 IDEM Sample #: AB14017
 Water Flow Type Glide Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	92.6 %		ASTM D888-09(C)
DO	7.95 mg/L		ASTM D888-09(C)
pH (Field)	8.11 SU		EPA 150.2
Specific Conductance (Field)	739 umho/cm		SM2510B
Temperature	22.87 °C		SM2550B(2)
Turbidity (Hach)	12.5 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Flow	68.499 cf/sec		TM D5389-95/D3858
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 #: A991471	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	200 mg/L	10	EPA 310.2
Chloride	68 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	300 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	23 mg/L	1	SM2540D
Solids, Total (TS)	480 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	430 mg/L	10	SM2540C
Sulfate	53 mg/L	1.3	EPA 300.0
COD	30 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.23 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.12 mg/L	0.05	EPA 365.1
TKN	0.62 mg/L	0.3	SM4500N(Org)-D
TOC	7.5 mg/L	1	SM5310C

Lab ID #: AB14017	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	146.7 MPN/100mL	1	SM9223B

SiteID: LMG-05-0007 **Sample Date:** 9/9/2013 **IDEM Sample #:** AB12842
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	81.9 %		ASTM D888-09(C)
DO	6.75 mg/L		ASTM D888-09(C)
pH (Field)	8.03 SU		EPA 150.2
Specific Conductance (Field)	765 umho/cm		SM2510B
Temperature	25.04 °C		SM2550B(2)
Turbidity	5.4 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12842	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	21.1 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0007

Sample Date: 9/9/2013

IDEM Sample #: AB14633

Water Flow Type Glide

Water Appearance Murky

Water Depth

Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	74.9 %		ASTM D888-09(C)
DO	6.25 mg/L		ASTM D888-09(C)
pH (Field)	7.98 SU		EPA 150.2
Specific Conductance (Field)	739 umho/cm		SM2510B
Temperature	24.4 °C		SM2550B(2)
Turbidity (Hach)	7.01 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Flow	21.916 cf/sec		TM D5389-95/D3858
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: A994688	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	240 mg/L	20	EPA 310.2
Chloride	66 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	280 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	7 mg/L	1	SM2540D
Solids, Total (TS)	430 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	410 mg/L	10	SM2540C
Sulfate	51 mg/L	1.3	EPA 300.0
COD	25 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.055 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.11 mg/L	0.05	EPA 365.1
TKN	0.8 mg/L	0.3	SM4500N(Org)-D
TOC	6.4 mg/L	1	SM5310C

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

SiteID: LMG-05-0007 Sample Date: 9/16/2013 IDEM Sample #: AB12881
 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	63.7 %		ASTM D888-09(C)
DO	5.83 mg/L		ASTM D888-09(C)
pH (Field)	7.95 SU		EPA 150.2
Specific Conductance (Field)	753 umho/cm		SM2510B
Temperature	19.55 °C		SM2550B(2)
Turbidity	7.5 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12881	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	35.9 MPN/100mL	1	SM9223B

SiteID: LMG-05-0007 Sample Date: 9/23/2013 IDEM Sample #: AB12920
 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	65 %		ASTM D888-09(C)
DO	6.03 mg/L		ASTM D888-09(C)
pH (Field)	7.68 SU		EPA 150.2
Specific Conductance (Field)	507 umho/cm		SM2510B
Temperature	18.89 °C		SM2550B(2)
Turbidity	9.3 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12920	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	104.6 MPN/100mL	1	SM9223B

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

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: LMG-05-0008 **USGS Hydrologic Unit:** 040400010508
Stream Name: Tributary of Deep River **County:** Lake
Description: Shelby Street **Latitude:** 41 33 31.78599 **Longitude:** -87 14 10.86231
Drainage: 3.862 **Site Number:** 13T-007

SiteID: LMG-05-0008 **Sample Date:** 7/8/2013 **IDEM Sample #:** AB13611
Water Flow Type: Glide **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	71 %		ASTM D888-09(C)
DO	6.39 mg/L		ASTM D888-09(C)
pH (Field)	7.71 SU		EPA 150.2
Specific Conductance (Field)	866 umho/cm		SM2510B
Temperature	20.95 °C		SM2550B(2)
Turbidity (Hach)	9.08 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	8 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> A988966	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	210 mg/L	50	EPA 310.2
Chloride	80 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	360 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	2 mg/L	1	SM2540D
Solids, Total (TS)	520 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	450 mg/L	10	SM2540C
Sulfate	53 mg/L	1.3	EPA 300.0
COD	26 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.76 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.15 mg/L	0.05	EPA 365.1
TKN	0.8 mg/L	0.3	SM4500N(Org)-D
TOC	6.1 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13611	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1553.1 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0008 **Sample Date:** 7/22/2013 **IDEM Sample #:** AB11725
Water Flow Type Pool **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Hydrolab Turbidity = 85.6

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	25.1 %		SM4500-OG
DO	2.03 mg/L		SM4500-OG
pH (Field)	7.46 SU		EPA 150.2
Specific Conductance (Field)	808 umho/cm		SM2510B
Temperature	22.8 °C		SM2550B(2)
Turbidity (Hach)	7.34 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

SiteID: LMG-05-0008 **Sample Date:** 8/5/2013 **IDEM Sample #:** AB14018
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	80 %		ASTM D888-09(C)
DO	7.49 mg/L		ASTM D888-09(C)
pH (Field)	7.68 SU		EPA 150.2
Specific Conductance (Field)	794 umho/cm		SM2510B
Temperature	18.49 °C		SM2550B(2)
Turbidity (Hach)	7.42 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	8 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 #: A991473	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	190 mg/L	10	EPA 310.2
Chloride	90 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	320 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	9 mg/L	1	SM2540D
Solids, Total (TS)	540 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	460 mg/L	10	SM2540C
Sulfate	61 mg/L	1.3	EPA 300.0
COD	22 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.59 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.1 mg/L	0.05	EPA 365.1
TKN	< 0.3 mg/L	0.3	SM4500N(Org)-D
TOC	5.1 mg/L	1	SM5310C

Lab ID #: AB14018	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	547.5 MPN/100mL	1	SM9223B

SiteID: LMG-05-0008 **Sample Date:** 9/9/2013 **IDEM Sample #:** AB14634
Water Flow Type Glide **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	47.4 %		ASTM D888-09(C)
DO	4.06 mg/L		ASTM D888-09(C)
pH (Field)	7.66 SU		EPA 150.2
Specific Conductance (Field)	957 umho/cm		SM2510B
Temperature	20.11 °C		SM2550B(2)
Turbidity (Hach)	11.3 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 #: A994689	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	310 mg/L	20	EPA 310.2
Chloride	100 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	420 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	9 mg/L	1	SM2540D
Solids, Total (TS)	580 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	530 mg/L	10	SM2540C
Sulfate	68 mg/L	1.3	EPA 300.0
COD	20 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.19 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.52 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.12 mg/L	0.05	EPA 365.1
TKN	0.63 mg/L	0.3	SM4500N(Org)-D
TOC	4 mg/L	1	SM5310C

SiteID: LMG-05-0008 **Sample Date:** 9/9/2013 **IDEM Sample #:** AB12843

Water Flow Type Stagnant **Water Appearance** Murky **Water Depth** **Algae?**

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

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	35.4 %		ASTM D888-09(C)
DO	3.17 mg/L		ASTM D888-09(C)
pH (Field)	7.63 SU		EPA 150.2
Specific Conductance (Field)	989 umho/cm		SM2510B
Temperature	20.68 °C		SM2550B(2)
Turbidity	23.6 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12843	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	325.5 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0008 Sample Date: 9/16/2013 IDEM Sample #: AB12882
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	69.7 %		ASTM D888-09(C)
DO	6.99 mg/L		ASTM D888-09(C)
pH (Field)	7.74 SU		EPA 150.2
Specific Conductance (Field)	1000 umho/cm		SM2510B
Temperature	15.19 °C		SM2550B(2)
Turbidity	4.9 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12882	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	686.7 MPN/100mL	1	SM9223B

SiteID: LMG-05-0008 Sample Date: 9/23/2013 IDEM Sample #: AB12921
 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 %		ASTM D888-09(C)
DO	7.4 mg/L		ASTM D888-09(C)
pH (Field)	7.66 SU		EPA 150.2
Specific Conductance (Field)	788 umho/cm		SM2510B
Temperature	14.66 °C		SM2550B(2)
Turbidity	5.9 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12921	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	387.3 MPN/100mL	1	SM9223B

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

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: LMG030-0008 **USGS Hydrologic Unit:** 040400010507
Stream Name: Deep River **County:** Lake
Description: Ridge Rd, D/S of Lake George Dam, Hobart **Latitude:** 41 32 7.43000 **Longitude:** -87 15 23.13000
Drainage: 124.048 **Site Number:** 13T-008

SiteID: LMG030-0008 **Sample Date:** 7/8/2013 **IDEM Sample #:** AB13612
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	120.8 %		ASTM D888-09(C)
DO	9.94 mg/L		ASTM D888-09(C)
pH (Field)	8.43 SU		EPA 150.2
Specific Conductance (Field)	654 umho/cm		SM2510B
Temperature	25.09 °C		SM2550B(2)
Turbidity (Hach)	16.5 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

<u>Lab ID #:</u> A988967	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	170 mg/L	10	EPA 310.2
Chloride	62 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	250 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	25 mg/L	1	SM2540D
Solids, Total (TS)	400 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	330 mg/L	10	SM2540C
Sulfate	40 mg/L	1.3	EPA 300.0
COD	35 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.17 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.11 mg/L	0.05	EPA 365.1
TKN	1.8 mg/L	0.3	SM4500N(Org)-D
TOC	8.8 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13612	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

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

SiteID: LMG030-0008

Sample Date: 7/23/2013

IDEM Sample #: AB11726

Water Flow Type Riffle

Water Appearance Murky

Water Depth

Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments: Oakton pH meter probe was not in KCl solution. believe it may not be reading right. meter would not calibrate in field. Did not recognize pH 10

Lab ID #:	Result	Reporting Limit	Method
% Sat	51 %		SM4500-OG
DO	3.89 mg/L		SM4500-OG
pH (Field)	7.74 SU		EPA 150.2
Specific Conductance (Field)	571 umho/cm		SM2510B
Temperature	27.97 °C		SM2550B(2)
Turbidity (Hach)	12.3 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: LMG030-0008

Sample Date: 8/5/2013

IDEM Sample #: AB14019

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	122.1 %		ASTM D888-09(C)
DO	10.27 mg/L		ASTM D888-09(C)
pH (Field)	8.37 SU		EPA 150.2
Specific Conductance (Field)	702 umho/cm		SM2510B
Temperature	23.9 °C		SM2550B(2)
Turbidity (Hach)	13.5 NTU		EPA 180.1
Air Temp	5 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 #: A991474	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	190 mg/L	10	EPA 310.2
Chloride	70 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	290 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	16 mg/L	1	SM2540D
Solids, Total (TS)	470 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	370 mg/L	10	SM2540C
Sulfate	62 mg/L	1.3	EPA 300.0
COD	30 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.63 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.14 mg/L	0.05	EPA 365.1
TKN	1.3 mg/L	0.3	SM4500N(Org)-D
TOC	6.9 mg/L	1	SM5310C

Lab ID #: AB14019	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	461.1 MPN/100mL	1	SM9223B

SiteID: LMG030-0008 **Sample Date:** 9/9/2013 **IDEM Sample #:** AB12844
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	100.6 %		ASTM D888-09(C)
DO	8.19 mg/L		ASTM D888-09(C)
pH (Field)	8.44 SU		EPA 150.2
Specific Conductance (Field)	722 umho/cm		SM2510B
Temperature	25.64 °C		SM2550B(2)
Turbidity	13 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	3 Lookup		Observation

Lab ID #: AB12844	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	275.5 MPN/100mL	1	SM9223B

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

SiteID: LMG030-0008

Sample Date: 9/9/2013

IDEM Sample #: AB14635

Water Flow Type Glide

Water Appearance Murky

Water Depth

Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	110.3 %		ASTM D888-09(C)
DO	9 mg/L		ASTM D888-09(C)
pH (Field)	8.46 SU		EPA 150.2
Specific Conductance (Field)	693 umho/cm		SM2510B
Temperature	25.8 °C		SM2550B(2)
Turbidity (Hach)	10.6 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 #: A994690	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	210 mg/L	20	EPA 310.2
Chloride	59 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	280 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	14 mg/L	1	SM2540D
Solids, Total (TS)	410 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	670 mg/L	10	SM2540C
Sulfate	48 mg/L	1.3	EPA 300.0
COD	35 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.32 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.15 mg/L	0.05	EPA 365.1
TKN	1.3 mg/L	0.3	SM4500N(Org)-D
TOC	6.5 mg/L	1	SM5310C

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

SiteID: LMG030-0008 Sample Date: 9/16/2013 IDEM Sample #: AB12883
 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	100 %		ASTM D888-09(C)
DO	8.8 mg/L		ASTM D888-09(C)
pH (Field)	8.34 SU		EPA 150.2
Specific Conductance (Field)	688 umho/cm		SM2510B
Temperature	21.57 °C		SM2550B(2)
Turbidity	16.9 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12883	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	866.4 MPN/100mL	1	SM9223B

SiteID: LMG030-0008 Sample Date: 9/23/2013 IDEM Sample #: AB12922
 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	85.3 %		ASTM D888-09(C)
DO	7.72 mg/L		ASTM D888-09(C)
pH (Field)	7.77 SU		EPA 150.2
Specific Conductance (Field)	469 umho/cm		SM2510B
Temperature	20.12 °C		SM2550B(2)
Turbidity	15.4 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12922	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	285.1 MPN/100mL	1	SM9223B

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

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

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

SiteID: LMG-05-0009 **USGS Hydrologic Unit:** 040400010506
Stream Name: Duck Creek **County:** Lake
Description: Front Street **Latitude:** 41 32 5.62143 **Longitude:** -87 15 14.33857
Drainage: 15.822 **Site Number:** 13T-009

SiteID: LMG-05-0009 **Sample Date:** 7/8/2013 **IDEM Sample #:** AB13613
Water Flow Type: Glide **Water Appearance:** Murky **Water Depth:** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %:** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	62.9 %		ASTM D888-09(C)
DO	5.36 mg/L		ASTM D888-09(C)
pH (Field)	7.66 SU		EPA 150.2
Specific Conductance (Field)	564 umho/cm		SM2510B
Temperature	23.19 °C		SM2550B(2)
Turbidity (Hach)	11.3 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Flow	7.832 cf/sec		TM D5389-95/D3858
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> A988968	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	180 mg/L	10	EPA 310.2
Chloride	58 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	250 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	15 mg/L	1	SM2540D
Solids, Total (TS)	360 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	300 mg/L	10	SM2540C
Sulfate	31 mg/L	1.3	EPA 300.0
COD	31 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.11 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.81 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.13 mg/L	0.05	EPA 365.1
TKN	1.5 mg/L	0.3	SM4500N(Org)-D
TOC	8 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13613	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

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

SiteID: LMG-05-0009 **Sample Date:** 7/23/2013 **IDEM Sample #:** AB11727
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	47.5 %		SM4500-OG
DO	3.8 mg/L		SM4500-OG
pH (Field)	7.74 SU		EPA 150.2
Specific Conductance (Field)	707 umho/cm		SM2510B
Temperature	23.36 °C		SM2550B(2)
Turbidity (Hach)	5.52 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: LMG-05-0009 **Sample Date:** 8/5/2013 **IDEM Sample #:** AB14020
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	75.6 %		ASTM D888-09(C)
DO	6.75 mg/L		ASTM D888-09(C)
pH (Field)	7.74 SU		EPA 150.2
Specific Conductance (Field)	761 umho/cm		SM2510B
Temperature	20.79 °C		SM2550B(2)
Turbidity (Hach)	2.58 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Flow	1.4024 cf/sec		TM D5389-95/D3858
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 #: A991475	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	140 mg/L	50	EPA 310.2
Chloride	92 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	280 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	1 mg/L	1	SM2540D
Solids, Total (TS)	470 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	420 mg/L	10	SM2540C
Sulfate	44 mg/L	1.3	EPA 300.0
COD	23 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.19 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.1 mg/L	0.05	EPA 365.1
TKN	0.67 mg/L	0.3	SM4500N(Org)-D
TOC	6.4 mg/L	1	SM5310C

Lab ID #: AB14020	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	517.2 MPN/100mL	1	SM9223B

SiteID: LMG-05-0009 **Sample Date:** 9/9/2013 **IDEM Sample #:** AB12845
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	86.9 %		ASTM D888-09(C)
DO	7.37 mg/L		ASTM D888-09(C)
pH (Field)	7.86 SU		EPA 150.2
Specific Conductance (Field)	965 umho/cm		SM2510B
Temperature	23.48 °C		SM2550B(2)
Turbidity	1 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12845	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	59.4 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0009

Sample Date: 9/9/2013

IDEM Sample #: AB14636

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	94.3 %		ASTM D888-09(C)
DO	7.9 mg/L		ASTM D888-09(C)
pH (Field)	7.8 SU		EPA 150.2
Specific Conductance (Field)	930 umho/cm		SM2510B
Temperature	24.14 °C		SM2550B(2)
Turbidity (Hach)	7.12 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Flow	0.5259 cf/sec		TM D5389-95/D3858
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: A994691	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	240 mg/L	20	EPA 310.2
Chloride	120 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	300 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	< 1 mg/L	1	SM2540D
Solids, Total (TS)	520 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	490 mg/L	10	SM2540C
Sulfate	46 mg/L	0.25	EPA 300.0
COD	18 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.24 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.15 mg/L	0.05	EPA 365.1
TKN	0.58 mg/L	0.3	SM4500N(Org)-D
TOC	5.5 mg/L	4	SM5310C

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

SiteID: LMG-05-0009 Sample Date: 9/16/2013 IDEM Sample #: AB12884
 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	85.5 %		ASTM D888-09(C)
DO	8.19 mg/L		ASTM D888-09(C)
pH (Field)	7.86 SU		EPA 150.2
Specific Conductance (Field)	927 umho/cm		SM2510B
Temperature	17.33 °C		SM2550B(2)
Turbidity	1.2 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12884	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	90.8 MPN/100mL	1	SM9223B

SiteID: LMG-05-0009 Sample Date: 9/23/2013 IDEM Sample #: AB12923
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	69.3 %		ASTM D888-09(C)
DO	6.91 mg/L		ASTM D888-09(C)
pH (Field)	7.54 SU		EPA 150.2
Specific Conductance (Field)	722 umho/cm		SM2510B
Temperature	15.74 °C		SM2550B(2)
Turbidity	2.3 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12923	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	191.8 MPN/100mL	1	SM9223B

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

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

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

SiteID: LMG-05-0010 **USGS Hydrologic Unit:** 040400010506
Stream Name: Tributary of Duck Creek **County:** Lake
Description: 10th Street **Latitude:** 41 31 17.70971 **Longitude:** -87 14 23.41143
Drainage: 3.091 **Site Number:** 13T-010

SiteID: LMG-05-0010 **Sample Date:** 7/8/2013 **IDEM Sample #:** AB13580
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	60.4 %		ASTM D888-09(C)
DO	5.28 mg/L		ASTM D888-09(C)
pH (Field)	7.56 SU		EPA 150.2
Specific Conductance (Field)	390 umho/cm		SM2510B
Temperature	21.95 °C		SM2550B(2)
Turbidity (Hach)	5.46 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> A988969	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	130 mg/L	10	EPA 310.2
Chloride	24 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	170 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	4 mg/L	1	SM2540D
Solids, Total (TS)	230 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	190 mg/L	10	SM2540C
Sulfate	19 mg/L	1.3	EPA 300.0
COD	28 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.37 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.098 mg/L	0.05	EPA 365.1
TKN	0.53 mg/L	0.3	SM4500N(Org)-D
TOC	7.5 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13580	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

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

SiteID: LMG-05-0010 Sample Date: 7/22/2013 IDEM Sample #: AB11728
 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	52.8 %		SM4500-OG
DO	4.52 mg/L		SM4500-OG
pH (Field)	7.45 SU		EPA 150.2
Specific Conductance (Field)	676 umho/cm		SM2510B
Temperature	22.21 °C		SM2550B(2)
Turbidity (Hach)	5.8 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

SiteID: LMG-05-0010 Sample Date: 8/5/2013 IDEM Sample #: AB13987
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	71 %		ASTM D888-09(C)
DO	6.59 mg/L		ASTM D888-09(C)
pH (Field)	7.73 SU		EPA 150.2
Specific Conductance (Field)	633 umho/cm		SM2510B
Temperature	18.73 °C		SM2550B(2)
Turbidity (Hach)	3.85 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 #: A991476	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	170 mg/L	50	EPA 310.2
Chloride	50 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	280 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	2 mg/L	1	SM2540D
Solids, Total (TS)	510 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	330 mg/L	10	SM2540C
Sulfate	43 mg/L	1.3	EPA 300.0
COD	18 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.42 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.072 mg/L	0.05	EPA 365.1
TKN	< 0.3 mg/L	0.3	SM4500N(Org)-D
TOC	5.6 mg/L	1	SM5310C

Lab ID #: AB13987	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	770.1 MPN/100mL	1	SM9223B

SiteID: LMG-05-0010 **Sample Date:** 9/9/2013 **IDEM Sample #:** AB12812

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	64.9 %		ASTM D888-09(C)
DO	5.85 mg/L		ASTM D888-09(C)
pH (Field)	7.62 SU		EPA 150.2
Specific Conductance (Field)	846 umho/cm		SM2510B
Temperature	20.21 °C		SM2550B(2)
Turbidity	8.4 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12812	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	344.8 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0010

Sample Date: 9/9/2013

IDEM Sample #: AB14603

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	84.9 %		ASTM D888-09(C)
DO	7.45 mg/L		ASTM D888-09(C)
pH (Field)	7.75 SU		EPA 150.2
Specific Conductance (Field)	828 umho/cm		SM2510B
Temperature	21.73 °C		SM2550B(2)
Turbidity (Hach)	4.33 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 #: A994692	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	230 mg/L	20	EPA 310.2
Chloride	96 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	300 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	2 mg/L	1	SM2540D
Solids, Total (TS)	470 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	470 mg/L	10	SM2540C
Sulfate	47 mg/L	1.3	EPA 300.0
COD	22 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.41 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.074 mg/L	0.05	EPA 365.1
TKN	< 0.3 mg/L	0.3	SM4500N(Org)-D
TOC	3.4 mg/L	1	SM5310C

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

SiteID: LMG-05-0010 Sample Date: 9/16/2013 IDEM Sample #: AB12851
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	74.2 %		ASTM D888-09(C)
DO	7.29 mg/L		ASTM D888-09(C)
pH (Field)	7.68 SU		EPA 150.2
Specific Conductance (Field)	578 umho/cm		SM2510B
Temperature	16.12 °C		SM2550B(2)
Turbidity	4.3 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12851	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1732.9 MPN/100mL	1	SM9223B

SiteID: LMG-05-0010 Sample Date: 9/23/2013 IDEM Sample #: AB12890
 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	78.9 %		ASTM D888-09(C)
DO	8 mg/L		ASTM D888-09(C)
pH (Field)	7.62 SU		EPA 150.2
Specific Conductance (Field)	571 umho/cm		SM2510B
Temperature	14.66 °C		SM2550B(2)
Turbidity	3 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12890	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	218.7 MPN/100mL	1	SM9223B

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

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: LMG-05-0032 **USGS Hydrologic Unit:** 040400010506
Stream Name: Duck Creek **County:** Porter
Description: 750 W **Latitude:** 41 30 59.19250 **Longitude:** -87 12 38.70570
Drainage: 6.517 **Site Number:** 13T-011

SiteID: LMG-05-0032 **Sample Date:** 7/8/2013 **IDEM Sample #:** AB13581
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	74.1 %		ASTM D888-09(C)
DO	6.66 mg/L		ASTM D888-09(C)
pH (Field)	7.91 SU		EPA 150.2
Specific Conductance (Field)	659 umho/cm		SM2510B
Temperature	20.56 °C		SM2550B(2)
Turbidity (Hach)	14.2 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> A988970	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	190 mg/L	10	EPA 310.2
Chloride	38 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	320 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	98 mg/L	1	SM2540D
Solids, Total (TS)	490 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	340 mg/L	10	SM2540C
Sulfate	31 mg/L	1.3	EPA 300.0
COD	40 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	4.2 mg/L	0.05	EPA 353.2
Phosphorus, Total	0.26 mg/L	0.05	EPA 365.1
TKN	0.86 mg/L	0.3	SM4500N(Org)-D
TOC	9 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13581	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

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

SiteID: LMG-05-0032 **Sample Date:** 7/22/2013 **IDEM Sample #:** AB11729
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Winkler #3 1.8 mg/l

Lab ID #:	Result	Reporting Limit	Method
% Sat	22.1 %		SM4500-OG
DO	2.33 mg/L		SM4500-OG
pH (Field)	7.62 SU		EPA 150.2
Specific Conductance (Field)	649 umho/cm		SM2510B
Temperature	23.71 °C		SM2550B(2)
Turbidity	18.6 NTU		SM2130B Mod
Air Temp	6 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

SiteID: LMG-05-0032 **Sample Date:** 8/5/2013 **IDEM Sample #:** AB13988
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	68.4 %		ASTM D888-09(C)
DO	6.46 mg/L		ASTM D888-09(C)
pH (Field)	7.93 SU		EPA 150.2
Specific Conductance (Field)	747 umho/cm		SM2510B
Temperature	18.18 °C		SM2550B(2)
Turbidity (Hach)	34 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 #: A991477	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	180 mg/L	10	EPA 310.2
Chloride	74 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	310 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	22 mg/L	1	SM2540D
Solids, Total (TS)	530 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	460 mg/L	10	SM2540C
Sulfate	72 mg/L	2.5	EPA 300.0
COD	31 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.3 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.17 mg/L	0.05	EPA 365.1
TKN	< 0.3 mg/L	0.3	SM4500N(Org)-D
TOC	10 mg/L	1	SM5310C

Lab ID #: AB13988	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	770.1 MPN/100mL	1	SM9223B

SiteID: LMG-05-0032 **Sample Date:** 9/9/2013 **IDEM Sample #:** AB14604
Water Flow Type Pool **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Isolated pool

Lab ID #:	Result	Reporting Limit	Method
% Sat	10.9 %		ASTM D888-09(C)
DO	0.96 mg/L		ASTM D888-09(C)
pH (Field)	7.72 SU		EPA 150.2
Specific Conductance (Field)	795 umho/cm		SM2510B
Temperature	18.37 °C		SM2550B(2)
Turbidity (Hach)	20.5 NTU		EPA 180.1
Air Temp	6 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 #: A994693	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	350 mg/L	20	EPA 310.2
Chloride	52 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	350 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	16 mg/L	1	SM2540D
Solids, Total (TS)	470 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	430 mg/L	10	SM2540C
Sulfate	4.2 mg/L	0.25	EPA 300.0
COD	42 mg/L	10	EPA 410.4
Nitrogen, Ammonia	2.6 mg/L	0.5	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.016 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.86 mg/L	0.05	EPA 365.1
TKN	4.3 mg/L	0.3	SM4500N(Org)-D
TOC	12 mg/L	1	SM5310C

SiteID: LMG-05-0032 **Sample Date:** 9/9/2013 **IDEM Sample #:** AB12813

Water Flow Type Stagnant **Water Appearance** Murky **Water Depth** **Algae?**

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

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	13.7 %		ASTM D888-09(C)
DO	1.26 mg/L		ASTM D888-09(C)
pH (Field)	7.83 SU		EPA 150.2
Specific Conductance (Field)	824 umho/cm		SM2510B
Temperature	19.61 °C		SM2550B(2)
Turbidity	14.2 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12813	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	2419.6 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0032 Sample Date: 9/16/2013 IDEM Sample #: AB12852
 Water Flow Type Stagnant Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: Isolated pool

Lab ID #:	Result	Reporting Limit	Method
% Sat	18.8 %		ASTM D888-09(C)
DO	1.9 mg/L		ASTM D888-09(C)
pH (Field)	7.83 SU		EPA 150.2
Specific Conductance (Field)	843 umho/cm		SM2510B
Temperature	15.04 °C		SM2550B(2)
Turbidity	18.5 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12852	Result	Reporting Limit	Method
E. coli	435.2 MPN/100mL	1	SM9223B

Lab ID #: AB12852a	Result	Reporting Limit	Method
Coliforms (Total)	> 24196 MPN/100mL	24196	SM9223B

SiteID: LMG-05-0032 Sample Date: 9/23/2013 IDEM Sample #: AB12891
 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	82 %		ASTM D888-09(C)
DO	8.44 mg/L		ASTM D888-09(C)
pH (Field)	7.82 SU		EPA 150.2
Specific Conductance (Field)	927 umho/cm		SM2510B
Temperature	13.92 °C		SM2550B(2)
Turbidity	16.2 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12891	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1046.2 MPN/100mL	1	SM9223B

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

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: LMG-05-0011 **USGS Hydrologic Unit:** 040400010507
Stream Name: Deep River **County:** Lake
Description: Arizona Street **Latitude:** 41 30 42.80903 **Longitude:** -87 17 9.53295
Drainage: 78.790 **Site Number:** 13T-012

SiteID: LMG-05-0011 **Sample Date:** 7/8/2013 **IDEM Sample #:** AB13582
Water Flow Type: Glide **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	74.8 %		ASTM D888-09(C)
DO	6.37 mg/L		ASTM D888-09(C)
pH (Field)	7.8 SU		EPA 150.2
Specific Conductance (Field)	744 umho/cm		SM2510B
Temperature	23.28 °C		SM2550B(2)
Turbidity (Hach)	29.7 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Flow	52.267 cf/sec		TM D5389-95/D3858
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	3 Lookup		Observation

<u>Lab ID #:</u> A988971	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	200 mg/L	10	EPA 310.2
Chloride	58 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	300 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	20 mg/L	1	SM2540D
Solids, Total (TS)	450 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	360 mg/L	10	SM2540C
Sulfate	40 mg/L	1.3	EPA 300.0
COD	30 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.12 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	2.5 mg/L	0.05	EPA 353.2
Phosphorus, Total	0.24 mg/L	0.05	EPA 365.1
TKN	1.4 mg/L	0.3	SM4500N(Org)-D
TOC	8.2 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13582	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

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

SiteID: LMG-05-0011 Sample Date: 7/22/2013 IDEM Sample #: AB11730
 Water Flow Type Run Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	76.3 %		SM4500-OG
DO	6.02 mg/L		SM4500-OG
pH (Field)	7.96 SU		EPA 150.2
Specific Conductance (Field)	654 umho/cm		SM2510B
Temperature	26.34 °C		SM2550B(2)
Turbidity (Hach)	12.5 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: LMG-05-0011 Sample Date: 8/5/2013 IDEM Sample #: AB13989
 Water Flow Type Glide Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	85.1 %		ASTM D888-09(C)
DO	7.72 mg/L		ASTM D888-09(C)
pH (Field)	7.89 SU		EPA 150.2
Specific Conductance (Field)	674 umho/cm		SM2510B
Temperature	19.97 °C		SM2550B(2)
Turbidity (Hach)	11.7 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Flow	32.132 cf/sec		TM D5389-95/D3858
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 #: A991478	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	170 mg/L	10	EPA 310.2
Chloride	73 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	240 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	14 mg/L	1	SM2540D
Solids, Total (TS)	430 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	380 mg/L	10	SM2540C
Sulfate	55 mg/L	1.3	EPA 300.0
COD	33 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.5 mg/L	0.05	EPA 353.2
Phosphorus, Total	0.15 mg/L	0.05	EPA 365.1
TKN	< 0.3 mg/L	0.3	SM4500N(Org)-D
TOC	6.9 mg/L	1	SM5310C

Lab ID #: AB13989	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	727 MPN/100mL	1	SM9223B

SiteID: LMG-05-0011 **Sample Date:** 9/9/2013 **IDEM Sample #:** AB12814
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	97.5 %		ASTM D888-09(C)
DO	8.44 mg/L		ASTM D888-09(C)
pH (Field)	8.12 SU		EPA 150.2
Specific Conductance (Field)	787 umho/cm		SM2510B
Temperature	22.41 °C		SM2550B(2)
Turbidity	17 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12814	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	387.3 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0011

Sample Date: 9/9/2013

IDEM Sample #: AB14605

Water Flow Type Glide

Water Appearance Murky

Water Depth

Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	101 %		ASTM D888-09(C)
DO	8.67 mg/L		ASTM D888-09(C)
pH (Field)	7.91 SU		EPA 150.2
Specific Conductance (Field)	755 umho/cm		SM2510B
Temperature	22.93 °C		SM2550B(2)
Turbidity (Hach)	8.04 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Flow	17.226 cf/sec		TM D5389-95/D3858
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: A994694	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	260 mg/L	50	EPA 310.2
Chloride	67 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	320 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	4 mg/L	1	SM2540D
Solids, Total (TS)	450 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	430 mg/L	10	SM2540C
Sulfate	58 mg/L	2.5	EPA 300.0
COD	20 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	3.6 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.18 mg/L	0.05	EPA 365.1
TKN	0.33 mg/L	0.3	SM4500N(Org)-D
TOC	4.8 mg/L	1	SM5310C

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

SiteID: LMG-05-0011 Sample Date: 9/16/2013 IDEM Sample #: AB12853
 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	94.1 %		ASTM D888-09(C)
DO	9.03 mg/L		ASTM D888-09(C)
pH (Field)	8.16 SU		EPA 150.2
Specific Conductance (Field)	761 umho/cm		SM2510B
Temperature	17.24 °C		SM2550B(2)
Turbidity	21 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12853	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	727 MPN/100mL	1	SM9223B

SiteID: LMG-05-0011 Sample Date: 9/23/2013 IDEM Sample #: AB12892
 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	85.6 %		ASTM D888-09(C)
DO	8.45 mg/L		ASTM D888-09(C)
pH (Field)	7.87 SU		EPA 150.2
Specific Conductance (Field)	711 umho/cm		SM2510B
Temperature	15.9 °C		SM2550B(2)
Turbidity	9.8 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12892	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	816.4 MPN/100mL	1	SM9223B

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

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: LMG-05-0033 **USGS Hydrologic Unit:** 040400010507
Stream Name: Sprout Ditch **County:** Lake
Description: 70th Avenue **Latitude:** 41 29 34.65281 **Longitude:** -87 17 15.43279
Drainage: 3.628 **Site Number:** 13T-013

SiteID: LMG-05-0033 **Sample Date:** 7/8/2013 **IDEM Sample #:** AB13583
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	79.3 %		ASTM D888-09(C)
DO	6.85 mg/L		ASTM D888-09(C)
pH (Field)	7.56 SU		EPA 150.2
Specific Conductance (Field)	513 umho/cm		SM2510B
Temperature	22.56 °C		SM2550B(2)
Turbidity (Hach)	456 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> A988972	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	38 mg/L	10	EPA 310.2
Chloride	73 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	140 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	270 mg/L	1	SM2540D
Solids, Total (TS)	570 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	340 mg/L	10	SM2540C
Sulfate	17 mg/L	1.3	EPA 300.0
COD	39 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.14 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.4 mg/L	0.05	EPA 353.2
Phosphorus, Total	0.69 mg/L	0.05	EPA 365.1
TKN	1.4 mg/L	0.3	SM4500N(Org)-D
TOC	9.6 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13583	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

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

SiteID: LMG-05-0033 **Sample Date:** 7/22/2013 **IDEM Sample #:** AB11731
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Q2 Turbidity: 62

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	47.1 %		SM4500-OG
DO	4.2 mg/L		SM4500-OG
pH (Field)	7.9 SU		EPA 150.2
Specific Conductance (Field)	970 umho/cm		SM2510B
Temperature	22.39 °C		SM2550B(2)
Turbidity	62 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

SiteID: LMG-05-0033 **Sample Date:** 8/5/2013 **IDEM Sample #:** AB13990
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	87.1 %		ASTM D888-09(C)
DO	7.8 mg/L		ASTM D888-09(C)
pH (Field)	7.9 SU		EPA 150.2
Specific Conductance (Field)	847 umho/cm		SM2510B
Temperature	20.61 °C		SM2550B(2)
Turbidity (Hach)	12.9 NTU		EPA 180.1
Air Temp	3 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 #: A991479	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	110 mg/L	10	EPA 310.2
Chloride	73 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	180 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	10 mg/L	1	SM2540D
Solids, Total (TS)	480 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	450 mg/L	10	SM2540C
Sulfate	55 mg/L	1.3	EPA 300.0
COD	22 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.16 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.053 mg/L	0.05	EPA 365.1
TKN	0.62 mg/L	0.3	SM4500N(Org)-D
TOC	6.8 mg/L	5	SM5310C

Lab ID #: AB13990	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	866.4 MPN/100mL	1	SM9223B

SiteID: LMG-05-0033 **Sample Date:** 9/9/2013 **IDEM Sample #:** AB12815

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	60.2 %		ASTM D888-09(C)
DO	5.39 mg/L		ASTM D888-09(C)
pH (Field)	7.72 SU		EPA 150.2
Specific Conductance (Field)	1156 umho/cm		SM2510B
Temperature	20.62 °C		SM2550B(2)
Turbidity	2.9 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12815	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	387.3 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0033

Sample Date: 9/9/2013

IDEM Sample #: AB14606

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	63.3 %		ASTM D888-09(C)
DO	5.61 mg/L		ASTM D888-09(C)
pH (Field)	7.86 SU		EPA 150.2
Specific Conductance (Field)	1121 umho/cm		SM2510B
Temperature	21.08 °C		SM2550B(2)
Turbidity (Hach)	3.47 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 #: A994696	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	210 mg/L	20	EPA 310.2
Chloride	210 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	260 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	1 mg/L	1	SM2540D
Solids, Total (TS)	580 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	600 mg/L	10	SM2540C
Sulfate	41 mg/L	0.25	EPA 300.0
COD	21 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.26 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.067 mg/L	0.05	EPA 365.1
TKN	0.58 mg/L	0.3	SM4500N(Org)-D
TOC	5.8 mg/L	4	SM5310C

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

SiteID: LMG-05-0033 Sample Date: 9/16/2013 IDEM Sample #: AB12854
 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	58.6 %		ASTM D888-09(C)
DO	5.85 mg/L		ASTM D888-09(C)
pH (Field)	7.8 SU		EPA 150.2
Specific Conductance (Field)	1041 umho/cm		SM2510B
Temperature	15.39 °C		SM2550B(2)
Turbidity	2.8 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12854	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	160.7 MPN/100mL	1	SM9223B

SiteID: LMG-05-0033 Sample Date: 9/23/2013 IDEM Sample #: AB12893
 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	86.1 %		ASTM D888-09(C)
DO	8.68 mg/L		ASTM D888-09(C)
pH (Field)	7.77 SU		EPA 150.2
Specific Conductance (Field)	899 umho/cm		SM2510B
Temperature	14.88 °C		SM2550B(2)
Turbidity	14.9 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12893	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	579.4 MPN/100mL	1	SM9223B

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

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: LMG-05-0012 **USGS Hydrologic Unit:** 040400010507
Stream Name: Deep River **County:** Lake
Description: Joliet Road **Latitude:** 41 28 34.10215 **Longitude:** -87 13 12.54660
Drainage: 66.707 **Site Number:** 13T-014

SiteID: LMG-05-0012 **Sample Date:** 7/9/2013 **IDEM Sample #:** AB13584
Water Flow Type Riffle **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	77.2 %		ASTM D888-09(C)
DO	6.76 mg/L		ASTM D888-09(C)
pH (Field)	7.69 SU		EPA 150.2
Specific Conductance (Field)	424 umho/cm		SM2510B
Temperature	21.8 °C		SM2550B(2)
Turbidity (Hach)	92.2 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Flow	96.1718 cf/sec		TM D5389-95/D3858
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> A988973	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	94 mg/L	10	EPA 310.2
Chloride	45 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	160 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	7 mg/L	1	SM2540D
Solids, Total (TS)	340 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	210 mg/L	10	SM2540C
Sulfate	29 mg/L	1.3	EPA 300.0
COD	31 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.7 mg/L	0.05	EPA 353.2
Phosphorus, Total	0.35 mg/L	0.05	EPA 365.1
TKN	1.5 mg/L	0.3	SM4500N(Org)-D
TOC	7.8 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13584	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

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

SiteID: LMG-05-0012 Sample Date: 7/22/2013 IDEM Sample #: AB11732
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: Q2 Turbidity: 1.0

Lab ID #:	Result	Reporting Limit	Method
% Sat	109.7 %		SM4500-OG
DO	8.99 mg/L		SM4500-OG
pH (Field)	8.99 SU		EPA 150.2
Specific Conductance (Field)	628 umho/cm		SM2510B
Temperature	25.83 °C		SM2550B(2)
Turbidity (Hach)	3.35 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: LMG-05-0012 Sample Date: 8/6/2013 IDEM Sample #: AB13991
 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	85.8 %		ASTM D888-09(C)
DO	7.98 mg/L		ASTM D888-09(C)
pH (Field)	8.01 SU		EPA 150.2
Specific Conductance (Field)	678 umho/cm		SM2510B
Temperature	18.76 °C		SM2550B(2)
Turbidity (Hach)	7.58 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Flow	17.1057 cf/sec		TM D5389-95/D3858
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 #: A991480	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	190 mg/L	10	EPA 310.2
Chloride	62 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	280 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	10 mg/L	1	SM2540D
Solids, Total (TS)	430 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	390 mg/L	10	SM2540C
Sulfate	64 mg/L	1.3	EPA 300.0
COD	23 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.4 mg/L	0.05	EPA 353.2
Phosphorus, Total	0.17 mg/L	0.05	EPA 365.1
TKN	0.38 mg/L	0.3	SM4500N(Org)-D
TOC	6.5 mg/L	1	SM5310C

Lab ID #: AB13991	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	325.5 MPN/100mL	1	SM9223B

SiteID: LMG-05-0012 **Sample Date:** 9/9/2013 **IDEM Sample #:** AB12816
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	114.7 %		ASTM D888-09(C)
DO	9.75 mg/L		ASTM D888-09(C)
pH (Field)	8.26 SU		EPA 150.2
Specific Conductance (Field)	766 umho/cm		SM2510B
Temperature	23.35 °C		SM2550B(2)
Turbidity	2.1 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12816	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	148.3 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0012

Sample Date: 9/10/2013

IDEM Sample #: AB14607

Water Flow Type Riffle

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	73.1 %		ASTM D888-09(C)
DO	6.37 mg/L		ASTM D888-09(C)
pH (Field)	7.88 SU		EPA 150.2
Specific Conductance (Field)	740 umho/cm		SM2510B
Temperature	22.06 °C		SM2550B(2)
Turbidity (Hach)	3.43 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Flow	8.7728 cf/sec		TM D5389-95/D3858
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: A994697	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	200 mg/L	10	EPA 310.2
Chloride	55 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	310 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	3 mg/L	1	SM2540D
Solids, Total (TS)	430 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	410 mg/L	10	SM2540C
Sulfate	49 mg/L	1.3	EPA 300.0
COD	18 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	6.9 mg/L	0.2	EPA 353.2
Phosphorus, Total	0.27 mg/L	0.05	EPA 365.1
TKN	0.66 mg/L	0.3	SM4500N(Org)-D
TOC	4.5 mg/L	1	SM5310C

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

SiteID: LMG-05-0012 Sample Date: 9/16/2013 IDEM Sample #: AB12855
 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	106.7 %		ASTM D888-09(C)
DO	10.23 mg/L		ASTM D888-09(C)
pH (Field)	8.24 SU		EPA 150.2
Specific Conductance (Field)	756 umho/cm		SM2510B
Temperature	17.26 °C		SM2550B(2)
Turbidity	1.5 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12855	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	152.9 MPN/100mL	1	SM9223B

SiteID: LMG-05-0012 Sample Date: 9/23/2013 IDEM Sample #: AB12894
 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	98.4 %		ASTM D888-09(C)
DO	9.79 mg/L		ASTM D888-09(C)
pH (Field)	8.05 SU		EPA 150.2
Specific Conductance (Field)	710 umho/cm		SM2510B
Temperature	15.51 °C		SM2550B(2)
Turbidity	3.9 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12894	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	190.4 MPN/100mL	1	SM9223B

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

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

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

SiteID: LMG-05-0013 **USGS Hydrologic Unit:** 040400010504
Stream Name: Tributary of Deep River **County:** Porter
Description: 750 W **Latitude:** 41 27 52.24286 **Longitude:** -87 12 36.59618
Drainage: 2.912 **Site Number:** 13T-015

SiteID: LMG-05-0013 **Sample Date:** 7/9/2013 **IDEM Sample #:** AB13585
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	83.7 %		ASTM D888-09(C)
DO	7.95 mg/L		ASTM D888-09(C)
pH (Field)	7.76 SU		EPA 150.2
Specific Conductance (Field)	624 umho/cm		SM2510B
Temperature	17.73 °C		SM2550B(2)
Turbidity (Hach)	23.4 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

<u>Lab ID #:</u> A988974	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	230 mg/L	50	EPA 310.2
Chloride	12 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	340 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	23 mg/L	1	SM2540D
Solids, Total (TS)	440 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	360 mg/L	10	SM2540C
Sulfate	58 mg/L	1.3	EPA 300.0
COD	33 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.36 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.099 mg/L	0.05	EPA 365.1
TKN	1.3 mg/L	0.3	SM4500N(Org)-D
TOC	8.3 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13585	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

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

SiteID: LMG-05-0013 **Sample Date:** 7/23/2013 **IDEM Sample #:** AB11733
Water Flow Type Pool **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Q-2 Turbidity: 31 NTU

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	80.1 %		SM4500-OG
DO	8.13 mg/L		SM4500-OG
pH (Field)	7.75 SU		EPA 150.2
Specific Conductance (Field)	734 umho/cm		SM2510B
Temperature	18.84 °C		SM2550B(2)
Turbidity (Hach)	11.3 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

SiteID: LMG-05-0013 **Sample Date:** 8/6/2013 **IDEM Sample #:** AB13992
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	88.8 %		ASTM D888-09(C)
DO	8.81 mg/L		ASTM D888-09(C)
pH (Field)	8.07 SU		EPA 150.2
Specific Conductance (Field)	700 umho/cm		SM2510B
Temperature	15.67 °C		SM2550B(2)
Turbidity (Hach)	13.4 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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

Lab ID #: A991481	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	270 mg/L	50	EPA 310.2
Chloride	12 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	410 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	12 mg/L	1	SM2540D
Solids, Total (TS)	470 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	450 mg/L	10	SM2540C
Sulfate	79 mg/L	1.3	EPA 300.0
COD	14 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.19 mg/L	0.01	EPA 353.2
Phosphorus, Total	< 0.05 mg/L	0.05	EPA 365.1
TKN	0.41 mg/L	0.3	SM4500N(Org)-D
TOC	3 mg/L	1	SM5310C

Lab ID #: AB13992	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	686.7 MPN/100mL	1	SM9223B

SiteID: LMG-05-0013 **Sample Date:** 9/9/2013 **IDEM Sample #:** AB12817
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	92.4 %		ASTM D888-09(C)
DO	8.43 mg/L		ASTM D888-09(C)
pH (Field)	8.13 SU		EPA 150.2
Specific Conductance (Field)	744 umho/cm		SM2510B
Temperature	19.72 °C		SM2550B(2)
Turbidity	6.8 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12817	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	517.2 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0013

Sample Date: 9/10/2013

IDEM Sample #: AB14608

Water Flow Type Glide

Water Appearance Murky

Water Depth

Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	86.4 %		ASTM D888-09(C)
DO	8.18 mg/L		ASTM D888-09(C)
pH (Field)	7.92 SU		EPA 150.2
Specific Conductance (Field)	716 umho/cm		SM2510B
Temperature	17.9 °C		SM2550B(2)
Turbidity (Hach)	11.9 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 #: A994698	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	350 mg/L	20	EPA 310.2
Chloride	9.9 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	410 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	9 mg/L	1	SM2540D
Solids, Total (TS)	450 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	440 mg/L	10	SM2540C
Sulfate	65 mg/L	1.3	EPA 300.0
COD	18 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.24 mg/L	0.01	EPA 353.2
Phosphorus, Total	< 0.05 mg/L	0.05	EPA 365.1
TKN	0.46 mg/L	0.3	SM4500N(Org)-D
TOC	2.6 mg/L	1	SM5310C

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

SiteID: LMG-05-0013 Sample Date: 9/16/2013 IDEM Sample #: AB12856
 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	91.1 %		ASTM D888-09(C)
DO	9.1 mg/L		ASTM D888-09(C)
pH (Field)	8.14 SU		EPA 150.2
Specific Conductance (Field)	743 umho/cm		SM2510B
Temperature	15.37 °C		SM2550B(2)
Turbidity	7.5 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12856	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	727 MPN/100mL	1	SM9223B

SiteID: LMG-05-0013 Sample Date: 9/23/2013 IDEM Sample #: AB12895
 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	90.2 %		ASTM D888-09(C)
DO	9.35 mg/L		ASTM D888-09(C)
pH (Field)	7.99 SU		EPA 150.2
Specific Conductance (Field)	727 umho/cm		SM2510B
Temperature	13.61 °C		SM2550B(2)
Turbidity	9.1 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12895	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	613.1 MPN/100mL	1	SM9223B

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

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: LMG-05-0034 **USGS Hydrologic Unit:** 040400010504
Stream Name: Tributary of Deep River **County:** Lake
Description: 89th Avenue **Latitude:** 41 27 22.78824 **Longitude:** -87 13 45.50682
Drainage: 2.364 **Site Number:** 13T-016

SiteID: LMG-05-0034 **Sample Date:** 7/9/2013 **IDEM Sample #:** AB13586
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	83.8 %		ASTM D888-09(C)
DO	7.5 mg/L		ASTM D888-09(C)
pH (Field)	7.8 SU		EPA 150.2
Specific Conductance (Field)	507 umho/cm		SM2510B
Temperature	20.7 °C		SM2550B(2)
Turbidity (Hach)	89.2 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> A988975	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	190 mg/L	10	EPA 310.2
Chloride	22 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	250 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	110 mg/L	1	SM2540D
Solids, Total (TS)	410 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	270 mg/L	10	SM2540C
Sulfate	12 mg/L	1.3	EPA 300.0
COD	50 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.32 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.28 mg/L	0.05	EPA 365.1
TKN	1.9 mg/L	0.3	SM4500N(Org)-D
TOC	12 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13586	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

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

SiteID: LMG-05-0034 **Sample Date:** 7/23/2013 **IDEM Sample #:** AB11734
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	91.8 %		SM4500-OG
DO	8.71 mg/L		SM4500-OG
pH (Field)	7.98 SU		EPA 150.2
Specific Conductance (Field)	617 umho/cm		SM2510B
Temperature	17.47 °C		SM2550B(2)
Turbidity	52.2 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

SiteID: LMG-05-0034 **Sample Date:** 8/6/2013 **IDEM Sample #:** AB13993
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	89.6 %		ASTM D888-09(C)
DO	8.74 mg/L		ASTM D888-09(C)
pH (Field)	8.07 SU		EPA 150.2
Specific Conductance (Field)	724 umho/cm		SM2510B
Temperature	16.47 °C		SM2550B(2)
Turbidity (Hach)	9.84 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 #: A991482	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	240 mg/L	50	EPA 310.2
Chloride	36 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	360 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	30 mg/L	1	SM2540D
Solids, Total (TS)	470 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	440 mg/L	10	SM2540C
Sulfate	58 mg/L	1.3	EPA 300.0
COD	11 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.33 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.052 mg/L	0.05	EPA 365.1
TKN	0.42 mg/L	0.3	SM4500N(Org)-D
TOC	2.4 mg/L	1	SM5310C

Lab ID #: AB13993	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	686.7 MPN/100mL	1	SM9223B

SiteID: LMG-05-0034 **Sample Date:** 9/9/2013 **IDEM Sample #:** AB12818
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	93.5 %		ASTM D888-09(C)
DO	8.15 mg/L		ASTM D888-09(C)
pH (Field)	8.17 SU		EPA 150.2
Specific Conductance (Field)	755 umho/cm		SM2510B
Temperature	22.09 °C		SM2550B(2)
Turbidity	10.8 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12818	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	816.4 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0034

Sample Date: 9/10/2013

IDEM Sample #: AB14609

Water Flow Type Glide

Water Appearance Murky

Water Depth

Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	86.5 %		ASTM D888-09(C)
DO	8.23 mg/L		ASTM D888-09(C)
pH (Field)	7.96 SU		EPA 150.2
Specific Conductance (Field)	763 umho/cm		SM2510B
Temperature	17.68 °C		SM2550B(2)
Turbidity (Hach)	16.7 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 #: A994699	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	300 mg/L	20	EPA 310.2
Chloride	46 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	360 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	19 mg/L	1	SM2540D
Solids, Total (TS)	470 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	440 mg/L	10	SM2540C
Sulfate	51 mg/L	1.3	EPA 300.0
COD	15 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.32 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.073 mg/L	0.05	EPA 365.1
TKN	0.46 mg/L	0.3	SM4500N(Org)-D
TOC	2.3 mg/L	1	SM5310C

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

SiteID: LMG-05-0034 **Sample Date:** 9/16/2013 **IDEM Sample #:** AB12857
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	92.5 %		ASTM D888-09(C)
DO	8.89 mg/L		ASTM D888-09(C)
pH (Field)	8.2 SU		EPA 150.2
Specific Conductance (Field)	753 umho/cm		SM2510B
Temperature	17.17 °C		SM2550B(2)
Turbidity	12.5 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12857			
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	980.4 MPN/100mL	1	SM9223B

SiteID: LMG-05-0034 **Sample Date:** 9/23/2013 **IDEM Sample #:** AB12896
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	91.5 %		ASTM D888-09(C)
DO	9.07 mg/L		ASTM D888-09(C)
pH (Field)	8.04 SU		EPA 150.2
Specific Conductance (Field)	756 umho/cm		SM2510B
Temperature	15.71 °C		SM2550B(2)
Turbidity	20.6 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12896			
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	410.6 MPN/100mL	1	SM9223B

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

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: LMG-05-0014 **USGS Hydrologic Unit:** 040400010504
Stream Name: Tributary of Deep River **County:** Lake
Description: 93rd Avenue **Latitude:** 41 26 56.94874 **Longitude:** -87 14 50.29153
Drainage: 3.505 **Site Number:** 13T-017

SiteID: LMG-05-0014 **Sample Date:** 7/9/2013 **IDEM Sample #:** AB13587
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	81.9 %		ASTM D888-09(C)
DO	6.99 mg/L		ASTM D888-09(C)
pH (Field)	7.86 SU		EPA 150.2
Specific Conductance (Field)	542 umho/cm		SM2510B
Temperature	23.16 °C		SM2550B(2)
Turbidity (Hach)	25.2 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> A988976	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	140 mg/L	10	EPA 310.2
Chloride	47 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	210 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	25 mg/L	1	SM2540D
Solids, Total (TS)	360 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	280 mg/L	10	SM2540C
Sulfate	37 mg/L	1.3	EPA 300.0
COD	24 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.31 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.094 mg/L	0.05	EPA 365.1
TKN	0.66 mg/L	0.3	SM4500N(Org)-D
TOC	6.3 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13587	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1732.9 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0014 Sample Date: 7/23/2013 IDEM Sample #: AB11735
 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	72.3 %		SM4500-OG
DO	6.36 mg/L		SM4500-OG
pH (Field)	7.78 SU		EPA 150.2
Specific Conductance (Field)	596 umho/cm		SM2510B
Temperature	20.93 °C		SM2550B(2)
Turbidity	10.8 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

SiteID: LMG-05-0014 Sample Date: 8/6/2013 IDEM Sample #: AB13994
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	82.6 %		ASTM D888-09(C)
DO	7.8 mg/L		ASTM D888-09(C)
pH (Field)	7.93 SU		EPA 150.2
Specific Conductance (Field)	676 umho/cm		SM2510B
Temperature	18.02 °C		SM2550B(2)
Turbidity (Hach)	5.73 NTU		EPA 180.1
Air Temp	5 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 #: A991483	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	170 mg/L	50	EPA 310.2
Chloride	41 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	320 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	4 mg/L	1	SM2540D
Solids, Total (TS)	410 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	400 mg/L	10	SM2540C
Sulfate	69 mg/L	1.3	EPA 300.0
COD	5 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.077 mg/L	0.01	EPA 353.2
Phosphorus, Total	< 0.05 mg/L	0.05	EPA 365.1
TKN	< 0.3 mg/L	0.3	SM4500N(Org)-D
TOC	3.1 mg/L	1	SM5310C

Lab ID #: AB13994	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	613.1 MPN/100mL	1	SM9223B

SiteID: LMG-05-0014 **Sample Date:** 9/9/2013 **IDEM Sample #:** AB12819

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	89.3 %		ASTM D888-09(C)
DO	7.85 mg/L		ASTM D888-09(C)
pH (Field)	7.97 SU		EPA 150.2
Specific Conductance (Field)	725 umho/cm		SM2510B
Temperature	21.63 °C		SM2550B(2)
Turbidity	6.4 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12819	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	435.2 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0014

Sample Date: 9/10/2013

IDEM Sample #: AB14610

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	69.5 %		ASTM D888-09(C)
DO	6.14 mg/L		ASTM D888-09(C)
pH (Field)	7.83 SU		EPA 150.2
Specific Conductance (Field)	702 umho/cm		SM2510B
Temperature	21.21 °C		SM2550B(2)
Turbidity (Hach)	8.38 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 #: A994700	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	270 mg/L	20	EPA 310.2
Chloride	41 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	330 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	7 mg/L	1	SM2540D
Solids, Total (TS)	410 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	410 mg/L	10	SM2540C
Sulfate	59 mg/L	1.3	EPA 300.0
COD	22 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.08 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.052 mg/L	0.05	EPA 365.1
TKN	0.39 mg/L	0.3	SM4500N(Org)-D
TOC	3.2 mg/L	1	SM5310C

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

SiteID: LMG-05-0014 Sample Date: 9/16/2013 IDEM Sample #: AB12858
 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	92.4 %		ASTM D888-09(C)
DO	8.98 mg/L		ASTM D888-09(C)
pH (Field)	8.05 SU		EPA 150.2
Specific Conductance (Field)	725 umho/cm		SM2510B
Temperature	16.64 °C		SM2550B(2)
Turbidity	7.6 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12858	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	579.4 MPN/100mL	1	SM9223B

SiteID: LMG-05-0014 Sample Date: 9/23/2013 IDEM Sample #: AB12897
 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	91.2 %		ASTM D888-09(C)
DO	9.38 mg/L		ASTM D888-09(C)
pH (Field)	7.95 SU		EPA 150.2
Specific Conductance (Field)	689 umho/cm		SM2510B
Temperature	13.97 °C		SM2550B(2)
Turbidity	7.9 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12897	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	307.6 MPN/100mL	1	SM9223B

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

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: LMG-05-0015 **USGS Hydrologic Unit:** 040400010502
Stream Name: Deep River **County:** Lake
Description: Clay Street **Latitude:** 41 26 49.37521 **Longitude:** -87 16 39.42753
Drainage: 44.481 **Site Number:** 13T-018

SiteID: LMG-05-0015 **Sample Date:** 7/9/2013 **IDEM Sample #:** AB13588
Water Flow Type: Glide **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	59 %		ASTM D888-09(C)
DO	5.14 mg/L		ASTM D888-09(C)
pH (Field)	7.49 SU		EPA 150.2
Specific Conductance (Field)	635 umho/cm		SM2510B
Temperature	22.14 °C		SM2550B(2)
Turbidity (Hach)	16.1 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Flow	45.0057 cf/sec		TM D5389-95/D3858
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> A988977	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	150 mg/L	10	EPA 310.2
Chloride	66 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	220 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	22 mg/L	1	SM2540D
Solids, Total (TS)	410 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	340 mg/L	10	SM2540C
Sulfate	35 mg/L	1.3	EPA 300.0
COD	36 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.17 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	3 mg/L	0.05	EPA 353.2
Phosphorus, Total	0.27 mg/L	0.05	EPA 365.1
TKN	1.3 mg/L	0.3	SM4500N(Org)-D
TOC	9.6 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13588	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

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

SiteID: LMG-05-0015 Sample Date: 7/23/2013 IDEM Sample #: AB11736
 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	64.8 %		SM4500-OG
DO	5.4 mg/L		SM4500-OG
pH (Field)	7.58 SU		EPA 150.2
Specific Conductance (Field)	700 umho/cm		SM2510B
Temperature	23.08 °C		SM2550B(2)
Turbidity	5.28 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

SiteID: LMG-05-0015 Sample Date: 8/6/2013 IDEM Sample #: AB13995
 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	73.1 %		ASTM D888-09(C)
DO	6.72 mg/L		ASTM D888-09(C)
pH (Field)	7.76 SU		EPA 150.2
Specific Conductance (Field)	737 umho/cm		SM2510B
Temperature	19.4 °C		SM2550B(2)
Turbidity (Hach)	5.59 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Flow	8.1597 cf/sec		TM D5389-95/D3858
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 #: A991484	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	170 mg/L	10	EPA 310.2
Chloride	84 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	250 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	4 mg/L	1	SM2540D
Solids, Total (TS)	470 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	410 mg/L	10	SM2540C
Sulfate	50 mg/L	1.3	EPA 300.0
COD	20 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	7.3 mg/L	0.2	EPA 353.2
Phosphorus, Total	0.33 mg/L	0.05	EPA 365.1
TKN	0.33 mg/L	0.3	SM4500N(Org)-D
TOC	7.1 mg/L	1	SM5310C

Lab ID #: AB13995	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	866.4 MPN/100mL	1	SM9223B

SiteID: LMG-05-0015 **Sample Date:** 9/9/2013 **IDEM Sample #:** AB12820
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	84.1 %		ASTM D888-09(C)
DO	7.21 mg/L		ASTM D888-09(C)
pH (Field)	7.78 SU		EPA 150.2
Specific Conductance (Field)	824 umho/cm		SM2510B
Temperature	22.97 °C		SM2550B(2)
Turbidity	4.6 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12820	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	920.8 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0015

Sample Date: 9/10/2013

IDEM Sample #: AB14611

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	64.1 %		ASTM D888-09(C)
DO	5.48 mg/L		ASTM D888-09(C)
pH (Field)	7.66 SU		EPA 150.2
Specific Conductance (Field)	772 umho/cm		SM2510B
Temperature	23.07 °C		SM2550B(2)
Turbidity (Hach)	7.37 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Flow	6.4683 cf/sec		TM D5389-95/D3858
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: A994701	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	130 mg/L	10	EPA 310.2
Chloride	93 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	240 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	4 mg/L	1	SM2540D
Solids, Total (TS)	440 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	420 mg/L	10	SM2540C
Sulfate	53 mg/L	2.5	EPA 300.0
COD	6.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	15 mg/L	0.2	EPA 353.2
Phosphorus, Total	0.64 mg/L	0.05	EPA 365.1
TKN	0.48 mg/L	0.3	SM4500N(Org)-D
TOC	5.5 mg/L	2	SM5310C

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

SiteID: LMG-05-0015 Sample Date: 9/16/2013 IDEM Sample #: AB12859
 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	83 %		ASTM D888-09(C)
DO	8.04 mg/L		ASTM D888-09(C)
pH (Field)	7.81 SU		EPA 150.2
Specific Conductance (Field)	800 umho/cm		SM2510B
Temperature	16.77 °C		SM2550B(2)
Turbidity	4.7 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12859	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1046.2 MPN/100mL	1	SM9223B

SiteID: LMG-05-0015 Sample Date: 9/23/2013 IDEM Sample #: AB12898
 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	79.3 %		ASTM D888-09(C)
DO	7.93 mg/L		ASTM D888-09(C)
pH (Field)	7.72 SU		EPA 150.2
Specific Conductance (Field)	762 umho/cm		SM2510B
Temperature	15.27 °C		SM2550B(2)
Turbidity	3 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12898	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	435.2 MPN/100mL	1	SM9223B

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

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: LMG-05-0035 **USGS Hydrologic Unit:** 040400010504
Stream Name: Deer Creek **County:** Lake
Description: 97th Avenue **Latitude:** 41 26 30.93013 **Longitude:** -87 16 12.66699
Drainage: 5.883 **Site Number:** 13T-019

SiteID: LMG-05-0035 **Sample Date:** 7/9/2013 **IDEM Sample #:** AB13589
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	39.2 %		ASTM D888-09(C)
DO	3.39 mg/L		ASTM D888-09(C)
pH (Field)	7.24 SU		EPA 150.2
Specific Conductance (Field)	579 umho/cm		SM2510B
Temperature	22.55 °C		SM2550B(2)
Turbidity (Hach)	71.3 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> A988979	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	120 mg/L	10	EPA 310.2
Chloride	57 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	210 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	92 mg/L	1	SM2540D
Solids, Total (TS)	470 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	330 mg/L	10	SM2540C
Sulfate	42 mg/L	1.3	EPA 300.0
COD	64 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.81 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.46 mg/L	0.05	EPA 365.1
TKN	2.1 mg/L	0.3	SM4500N(Org)-D
TOC	13 mg/L	5	SM5310C

<u>Lab ID #:</u> AB13589	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

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

SiteID: LMG-05-0035 **Sample Date:** 7/23/2013 **IDEM Sample #:** AB11737
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Hach Reading "99.9": turbidity not taken due to water disturbed by sampling

Lab ID #:	Result	Reporting Limit	Method
% Sat	45.2 %		SM4500-OG
DO	4.02 mg/L		SM4500-OG
pH (Field)	7.59 SU		EPA 150.2
Specific Conductance (Field)	677 umho/cm		SM2510B
Temperature	23.78 °C		SM2550B(2)
Turbidity	NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: LMG-05-0035 **Sample Date:** 8/6/2013 **IDEM Sample #:** AB13996
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	60 %		ASTM D888-09(C)
DO	5.46 mg/L		ASTM D888-09(C)
pH (Field)	7.58 SU		EPA 150.2
Specific Conductance (Field)	717 umho/cm		SM2510B
Temperature	20.01 °C		SM2550B(2)
Turbidity (Hach)	8.48 NTU		EPA 180.1
Air Temp	5 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 #: A991485	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	180 mg/L	10	EPA 310.2
Chloride	79 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	270 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	7 mg/L	1	SM2540D
Solids, Total (TS)	460 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	390 mg/L	10	SM2540C
Sulfate	62 mg/L	1.3	EPA 300.0
COD	26 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.38 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.22 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.18 mg/L	0.05	EPA 365.1
TKN	< 0.3 mg/L	0.3	SM4500N(Org)-D
TOC	10 mg/L	1	SM5310C

Lab ID #: AB13996	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	228.2 MPN/100mL	1	SM9223B

SiteID: LMG-05-0035 **Sample Date:** 9/9/2013 **IDEM Sample #:** AB12821
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	66.6 %		ASTM D888-09(C)
DO	5.56 mg/L		ASTM D888-09(C)
pH (Field)	7.78 SU		EPA 150.2
Specific Conductance (Field)	832 umho/cm		SM2510B
Temperature	24.31 °C		SM2550B(2)
Turbidity	5.4 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12821	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	435.2 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0035

Sample Date: 9/10/2013

IDEM Sample #: AB14612

Water Flow Type Glide

Water Appearance Murky

Water Depth

Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	50.8 %		ASTM D888-09(C)
DO	4.31 mg/L		ASTM D888-09(C)
pH (Field)	7.71 SU		EPA 150.2
Specific Conductance (Field)	840 umho/cm		SM2510B
Temperature	23.21 °C		SM2550B(2)
Turbidity (Hach)	24.8 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 #: A994702	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	250 mg/L	20	EPA 310.2
Chloride	91 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	310 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	26 mg/L	1	SM2540D
Solids, Total (TS)	500 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	500 mg/L	10	SM2540C
Sulfate	46 mg/L	0.25	EPA 300.0
COD	43 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.4 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.25 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.44 mg/L	0.05	EPA 365.1
TKN	1.6 mg/L	0.3	SM4500N(Org)-D
TOC	11 mg/L	5	SM5310C

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

SiteID: LMG-05-0035 Sample Date: 9/16/2013 IDEM Sample #: AB12860
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	69.2 %		ASTM D888-09(C)
DO	6.7 mg/L		ASTM D888-09(C)
pH (Field)	7.83 SU		EPA 150.2
Specific Conductance (Field)	507 umho/cm		SM2510B
Temperature	16.82 °C		SM2550B(2)
Turbidity	4.3 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12860	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	686.7 MPN/100mL	1	SM9223B

SiteID: LMG-05-0035 Sample Date: 9/23/2013 IDEM Sample #: AB12899
 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	66.1 %		ASTM D888-09(C)
DO	6.53 mg/L		ASTM D888-09(C)
pH (Field)	7.46 SU		EPA 150.2
Specific Conductance (Field)	706 umho/cm		SM2510B
Temperature	15.91 °C		SM2550B(2)
Turbidity	8.3 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12899	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	178.2 MPN/100mL	1	SM9223B

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

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

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

SiteID: LMG-05-0016 **USGS Hydrologic Unit:** 040400010502
Stream Name: Niles Ditch **County:** Lake
Description: Colorado Street **Latitude:** 41 25 25.12623 **Longitude:** -87 17 48.02873
Drainage: 10.029 **Site Number:** 13T-020

SiteID: LMG-05-0016 **Sample Date:** 7/9/2013 **IDEM Sample #:** AB13591
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	22.1 %		ASTM D888-09(C)
DO	1.93 mg/L		ASTM D888-09(C)
pH (Field)	7.39 SU		EPA 150.2
Specific Conductance (Field)	750 umho/cm		SM2510B
Temperature	22.21 °C		SM2550B(2)
Turbidity (Hach)	35.3 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> A988980	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	190 mg/L	10	EPA 310.2
Chloride	43 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	330 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	12 mg/L	1	SM2540D
Solids, Total (TS)	500 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	420 mg/L	10	SM2540C
Sulfate	42 mg/L	1.3	EPA 300.0
COD	61 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.52 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.7 mg/L	0.05	EPA 353.2
Phosphorus, Total	0.57 mg/L	0.05	EPA 365.1
TKN	2.6 mg/L	0.3	SM4500N(Org)-D
TOC	17 mg/L	5	SM5310C

<u>Lab ID #:</u> AB13591	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

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

SiteID: LMG-05-0016 **Sample Date:** 7/23/2013 **IDEM Sample #:** AB11738
Water Flow Type Glide **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Hach reading "99.9"
 Q-2 turbidity =16.3
 Winkler #3 1.3 mg/l (twice)

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	36.3 %		SM4500-OG
DO	3.12 mg/L		SM4500-OG
pH (Field)	7.14 SU		EPA 150.2
Specific Conductance (Field)	790 umho/cm		SM2510B
Temperature	23.25 °C		SM2550B(2)
Turbidity	16.3 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

SiteID: LMG-05-0016 **Sample Date:** 8/6/2013 **IDEM Sample #:** AB13998
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	11.1 %		ASTM D888-09(C)
DO	1.02 mg/L		ASTM D888-09(C)
pH (Field)	7.32 SU		EPA 150.2
Specific Conductance (Field)	984 umho/cm		SM2510B
Temperature	19.01 °C		SM2550B(2)
Turbidity (Hach)	6.63 NTU		EPA 180.1
Air Temp	5 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 #: A991486	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	270 mg/L	50	EPA 310.2
Chloride	130 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	400 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	5 mg/L	1	SM2540D
Solids, Total (TS)	680 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	610 mg/L	10	SM2540C
Sulfate	100 mg/L	2.5	EPA 300.0
COD	29 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.43 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.013 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.3 mg/L	0.05	EPA 365.1
TKN	1.2 mg/L	0.3	SM4500N(Org)-D
TOC	9.1 mg/L	5	SM5310C

Lab ID #: AB13998	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	156.5 MPN/100mL	1	SM9223B

SiteID: LMG-05-0016 **Sample Date:** 9/9/2013 **IDEM Sample #:** AB12823
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Dam upstream of site

Lab ID #:	Result	Reporting Limit	Method
% Sat	10.3 %		ASTM D888-09(C)
DO	0.95 mg/L		ASTM D888-09(C)
pH (Field)	7.27 SU		EPA 150.2
Specific Conductance (Field)	983 umho/cm		SM2510B
Temperature	19.6 °C		SM2550B(2)
Turbidity	6.1 NTU		SM2130B Mod
Air Temp	6 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12823	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	365.4 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0016

Sample Date: 9/10/2013

IDEM Sample #: AB14614

Water Flow Type Pool

Water Appearance Murky

Water Depth

Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments: Completely choked with duckweed. White fungus/algae down stream of beaver dam.

Lab ID #:	Result	Reporting Limit	Method
% Sat	6.5 %		ASTM D888-09(C)
DO	0.55 mg/L		ASTM D888-09(C)
pH (Field)	7.23 SU		EPA 150.2
Specific Conductance (Field)	892 umho/cm		SM2510B
Temperature	20.16 °C		SM2550B(2)
Turbidity (Hach)	7.26 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 #: A994703	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	380 mg/L	20	EPA 310.2
Chloride	55 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	440 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	13 mg/L	1	SM2540D
Solids, Total (TS)	580 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	550 mg/L	10	SM2540C
Sulfate	58 mg/L	1.3	EPA 300.0
COD	38 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.49 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.014 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.42 mg/L	0.05	EPA 365.1
TKN	2.3 mg/L	0.3	SM4500N(Org)-D
TOC	9.5 mg/L	1	SM5310C

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

SiteID: LMG-05-0016 Sample Date: 9/16/2013 IDEM Sample #: AB12862
 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	13 %		ASTM D888-09(C)
DO	1.31 mg/L		ASTM D888-09(C)
pH (Field)	7.35 SU		EPA 150.2
Specific Conductance (Field)	1012 umho/cm		SM2510B
Temperature	15.41 °C		SM2550B(2)
Turbidity	13.1 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12862	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	920.8 MPN/100mL	1	SM9223B

SiteID: LMG-05-0016 Sample Date: 9/23/2013 IDEM Sample #: AB12901
 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	19.9 %		ASTM D888-09(C)
DO	1.97 mg/L		ASTM D888-09(C)
pH (Field)	7.29 SU		EPA 150.2
Specific Conductance (Field)	939 umho/cm		SM2510B
Temperature	15.95 °C		SM2550B(2)
Turbidity	9.9 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12901	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	307.6 MPN/100mL	1	SM9223B

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

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: LMG-05-0017 **USGS Hydrologic Unit:** 040400010502
Stream Name: Niles Ditch **County:** Lake
Description: 121st Avenue **Latitude:** 41 23 53.86221 **Longitude:** -87 18 6.33929
Drainage: 7.238 **Site Number:** 13T-021

SiteID: LMG-05-0017 **Sample Date:** 7/9/2013 **IDEM Sample #:** AB13592
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	13.8 %		ASTM D888-09(C)
DO	1.21 mg/L		ASTM D888-09(C)
pH (Field)	7.28 SU		EPA 150.2
Specific Conductance (Field)	780 umho/cm		SM2510B
Temperature	21.87 °C		SM2550B(2)
Turbidity (Hach)	10.9 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> A988981	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	190 mg/L	10	EPA 310.2
Chloride	77 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	260 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	3 mg/L	1	SM2540D
Solids, Total (TS)	480 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	400 mg/L	10	SM2540C
Sulfate	39 mg/L	1.3	EPA 300.0
COD	34 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.62 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	2.6 mg/L	0.05	EPA 353.2
Phosphorus, Total	0.24 mg/L	0.05	EPA 365.1
TKN	1.8 mg/L	0.3	SM4500N(Org)-D
TOC	10 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13592	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	410.6 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0017 Sample Date: 7/23/2013 IDEM Sample #: AB11739
 Water Flow Type Stagnant 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	4.78 %		SM4500-OG
DO	2.15 mg/L		SM4500-OG
pH (Field)	7.15 SU		EPA 150.2
Specific Conductance (Field)	986 umho/cm		SM2510B
Temperature	25.21 °C		SM2550B(2)
Turbidity	NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: LMG-05-0017 Sample Date: 8/6/2013 IDEM Sample #: AB13999
 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	37.6 %		ASTM D888-09(C)
DO	3.15 mg/L		ASTM D888-09(C)
pH (Field)	7.55 SU		EPA 150.2
Specific Conductance (Field)	715 umho/cm		SM2510B
Temperature	21.34 °C		SM2550B(2)
Turbidity (Hach)	6.79 NTU		EPA 180.1
Air Temp	5 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 #: A991487	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	280 mg/L	50	EPA 310.2
Chloride	34 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	370 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	8 mg/L	1	SM2540D
Solids, Total (TS)	480 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	440 mg/L	10	SM2540C
Sulfate	50 mg/L	1.3	EPA 300.0
COD	32 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.44 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.057 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.42 mg/L	0.05	EPA 365.1
TKN	1.1 mg/L	0.3	SM4500N(Org)-D
TOC	8.5 mg/L	1	SM5310C

Lab ID #: AB13999	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	118.7 MPN/100mL	1	SM9223B

SiteID: LMG-05-0017 **Sample Date:** 9/10/2013 **IDEM Sample #:** AB14615
Water Flow Type Pool **Water Appearance** Black **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	2.7 %		ASTM D888-09(C)
DO	0.24 mg/L		ASTM D888-09(C)
pH (Field)	7.16 SU		EPA 150.2
Specific Conductance (Field)	839 umho/cm		SM2510B
Temperature	22.47 °C		SM2550B(2)
Turbidity (Hach)	16.3 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 #: A994704	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	380 mg/L	20	EPA 310.2
Chloride	23 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	420 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	280 mg/L	1	SM2540D
Solids, Total (TS)	720 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	470 mg/L	10	SM2540C
Sulfate	42 mg/L	1.3	EPA 300.0
COD	76 mg/L	10	EPA 410.4
Nitrogen, Ammonia	1.5 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.014 mg/L	0.01	EPA 353.2
Phosphorus, Total	1.3 mg/L	0.25	EPA 365.1
TKN	4.9 mg/L	0.3	SM4500N(Org)-D
TOC	11 mg/L	1	SM5310C

SiteID: LMG-05-0017 **Sample Date:** 9/10/2013 **IDEM Sample #:** AB12824

Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**

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

Sampler Comments: Covered in duckweed

Lab ID #:	Result	Reporting Limit	Method
% Sat	19.3 %		ASTM D888-09(C)
DO	1.55 mg/L		ASTM D888-09(C)
pH (Field)	7.6 SU		EPA 150.2
Specific Conductance (Field)	824 umho/cm		SM2510B
Temperature	26.71 °C		SM2550B(2)
Turbidity	9.8 NTU		SM2130B Mod
Air Temp	6 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: AB12824	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	387.3 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0017 Sample Date: 9/17/2013 IDEM Sample #: AB12863
 Water Flow Type Stagnant Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: Covered in duckweed

Lab ID #:	Result	Reporting Limit	Method
% Sat	31.2 %		ASTM D888-09(C)
DO	3.25 mg/L		ASTM D888-09(C)
pH (Field)	7.64 SU		EPA 150.2
Specific Conductance (Field)	731 umho/cm		SM2510B
Temperature	13.48 °C		SM2550B(2)
Turbidity	8.2 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	2 Lookup		Observation
Lab ID #: AB12863	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	122.3 MPN/100mL	1	SM9223B

SiteID: LMG-05-0017 Sample Date: 9/24/2013 IDEM Sample #: AB12902
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: Covered in duckweed

Lab ID #:	Result	Reporting Limit	Method
% Sat	34.3 %		ASTM D888-09(C)
DO	3.5 mg/L		ASTM D888-09(C)
pH (Field)	7.49 SU		EPA 150.2
Specific Conductance (Field)	880 umho/cm		SM2510B
Temperature	14.33 °C		SM2550B(2)
Turbidity	7.4 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	9 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12902	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	87.8 MPN/100mL	1	SM9223B

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

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

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

SiteID: LMG-05-0036 **USGS Hydrologic Unit:** 040400010502
Stream Name: Smith Ditch **County:** Lake
Description: 113th Avenue **Latitude:** 41 24 46.14435 **Longitude:** -87 19 58.51046
Drainage: 2.962 **Site Number:** 13T-022

SiteID: LMG-05-0036 **Sample Date:** 7/9/2013 **IDEM Sample #:** AB13593
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	61.7 %		ASTM D888-09(C)
DO	5.07 mg/L		ASTM D888-09(C)
pH (Field)	7.58 SU		EPA 150.2
Specific Conductance (Field)	728 umho/cm		SM2510B
Temperature	25.21 °C		SM2550B(2)
Turbidity (Hach)	49.9 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> A988982	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	150 mg/L	10	EPA 310.2
Chloride	91 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	220 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	29 mg/L	1	SM2540D
Solids, Total (TS)	450 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	380 mg/L	10	SM2540C
Sulfate	24 mg/L	1.3	EPA 300.0
COD	42 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.2 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.11 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.21 mg/L	0.05	EPA 365.1
TKN	1.2 mg/L	0.3	SM4500N(Org)-D
TOC	9.9 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13593	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

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

SiteID: LMG-05-0036 **Sample Date:** 7/22/2013 **IDEM Sample #:** AB11740
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	36.1 %		SM4500-OG
DO	3.13 mg/L		SM4500-OG
pH (Field)	7.33 SU		EPA 150.2
Specific Conductance (Field)	720 umho/cm		SM2510B
Temperature	27.8 °C		SM2550B(2)
Turbidity	117 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	25 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: LMG-05-0036 **Sample Date:** 8/6/2013 **IDEM Sample #:** AB14000
Water Flow Type Glide **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	64.1 %		ASTM D888-09(C)
DO	5.64 mg/L		ASTM D888-09(C)
pH (Field)	7.52 SU		EPA 150.2
Specific Conductance (Field)	861 umho/cm		SM2510B
Temperature	21.66 °C		SM2550B(2)
Turbidity (Hach)	106 NTU		EPA 180.1
Air Temp	5 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 #: A991488	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	170 mg/L	10	EPA 310.2
Chloride	150 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	290 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	60 mg/L	1	SM2540D
Solids, Total (TS)	600 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	510 mg/L	10	SM2540C
Sulfate	64 mg/L	2.5	EPA 300.0
COD	42 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.014 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.17 mg/L	0.05	EPA 365.1
TKN	0.96 mg/L	0.3	SM4500N(Org)-D
TOC	9.9 mg/L	5	SM5310C

Lab ID #: AB14000	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	770.1 MPN/100mL	1	SM9223B

SiteID: LMG-05-0036 **Sample Date:** 9/10/2013 **IDEM Sample #:** AB12825
Water Flow Type Stagnant **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	42.7 %		ASTM D888-09(C)
% Sat	48.1 %		ASTM D888-09(C)
DO	3.91 mg/L		ASTM D888-09(C)
DO	3.45 mg/L		ASTM D888-09(C)
pH (Field)	7.74 SU		EPA 150.2
pH (Field)	7.59 SU		EPA 150.2
Specific Conductance (Field)	1026 umho/cm		SM2510B
Specific Conductance (Field)	988 umho/cm		SM2510B
Temperature	26.11 °C		SM2550B(2)
Temperature	25.58 °C		SM2550B(2)
Turbidity	39.1 NTU		SM2130B Mod
Turbidity (Hach)	28.7 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 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 #: A994705	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	220 mg/L	50	EPA 310.2
Chloride	150 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	310 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	18 mg/L	1	SM2540D
Solids, Total (TS)	620 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	560 mg/L	10	SM2540C
Sulfate	50 mg/L	1.3	EPA 300.0
COD	31 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	< 0.01 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.11 mg/L	0.05	EPA 365.1
TKN	0.35 mg/L	0.3	SM4500N(Org)-D
TOC	11 mg/L	5	SM5310C

Lab ID #: AB12825	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1553.1 MPN/100mL	1	SM9223B

SiteID: LMG-05-0036 **Sample Date:** 9/17/2013 **IDEM Sample #:** AB12864
Water Flow Type Stagnant **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	71.4 %		ASTM D888-09(C)
DO	7.11 mg/L		ASTM D888-09(C)
pH (Field)	7.98 SU		EPA 150.2
Specific Conductance (Field)	1075 umho/cm		SM2510B
Temperature	15.47 °C		SM2550B(2)
Turbidity	18.5 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12864	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	488.4 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0036

Sample Date: 9/24/2013

IDEM Sample #: AB12903

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	77.6 %		ASTM D888-09(C)
DO	7.75 mg/L		ASTM D888-09(C)
pH (Field)	7.54 SU		EPA 150.2
Specific Conductance (Field)	802 umho/cm		SM2510B
Temperature	15.34 °C		SM2550B(2)
Turbidity	47.9 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	9 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12903	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	209.8 MPN/100mL	1	SM9223B

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

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

SiteID: LMG-05-0018 **USGS Hydrologic Unit:** 040400010502
Stream Name: Main Beaver Dam Ditch **County:** Lake
Description: Grant Street **Latitude:** 41 26 7.99158 **Longitude:** -87 21 17.01167
Drainage: 19.073 **Site Number:** 13T-023

SiteID: LMG-05-0018 **Sample Date:** 7/9/2013 **IDEM Sample #:** AB13594
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	57.7 %		ASTM D888-09(C)
DO	5.06 mg/L		ASTM D888-09(C)
pH (Field)	7.33 SU		EPA 150.2
Specific Conductance (Field)	621 umho/cm		SM2510B
Temperature	21.78 °C		SM2550B(2)
Turbidity (Hach)	4.6 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Flow	17.7532 cf/sec		TM D5389-95/D3858
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> A988983	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	150 mg/L	10	EPA 310.2
Chloride	66 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	220 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	2 mg/L	1	SM2540D
Solids, Total (TS)	390 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	340 mg/L	10	SM2540C
Sulfate	34 mg/L	1.3	EPA 300.0
COD	40 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	7.3 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.38 mg/L	0.05	EPA 365.1
TKN	1.2 mg/L	0.3	SM4500N(Org)-D
TOC	9.5 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13594	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1986.3 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0018 Sample Date: 7/22/2013 IDEM Sample #: AB11741
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	84 %		SM4500-OG
DO	7.05 mg/L		SM4500-OG
pH (Field)	7.71 SU		EPA 150.2
Specific Conductance (Field)	635 umho/cm		SM2510B
Temperature	22.57 °C		SM2550B(2)
Turbidity (Hach)	3.56 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: LMG-05-0018 Sample Date: 8/6/2013 IDEM Sample #: AB14001
 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	65.3 %		ASTM D888-09(C)
DO	5.84 mg/L		ASTM D888-09(C)
pH (Field)	7.43 SU		EPA 150.2
Specific Conductance (Field)	720 umho/cm		SM2510B
Temperature	20.74 °C		SM2550B(2)
Turbidity (Hach)	3.07 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Flow	6.9734 cf/sec		TM D5389-95/D3858
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 #: A991489	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	120 mg/L	10	EPA 310.2
Chloride	96 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	230 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	5 mg/L	1	SM2540D
Solids, Total (TS)	450 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	370 mg/L	10	SM2540C
Sulfate	46 mg/L	1.3	EPA 300.0
COD	24 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.14 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	16 mg/L	0.2	EPA 353.2
Phosphorus, Total	0.57 mg/L	0.05	EPA 365.1
TKN	0.96 mg/L	0.3	SM4500N(Org)-D
TOC	8.5 mg/L	1	SM5310C

Lab ID #: AB14001	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	461.1 MPN/100mL	1	SM9223B

SiteID: LMG-05-0018 **Sample Date:** 9/10/2013 **IDEM Sample #:** AB12826
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	71 %		ASTM D888-09(C)
DO	6.1 mg/L		ASTM D888-09(C)
pH (Field)	7.52 SU		EPA 150.2
Specific Conductance (Field)	729 umho/cm		SM2510B
Temperature	22.91 °C		SM2550B(2)
Turbidity	1.2 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12826	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	73.8 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0018

Sample Date: 9/10/2013

IDEM Sample #: AB14617

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	80.7 %		ASTM D888-09(C)
DO	6.95 mg/L		ASTM D888-09(C)
pH (Field)	7.26 SU		EPA 150.2
Specific Conductance (Field)	701 umho/cm		SM2510B
Temperature	22.72 °C		SM2550B(2)
Turbidity (Hach)	1.32 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Flow	3.9153 cf/sec		TM D5389-95/D3858
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: A994706	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	82 mg/L	10	EPA 310.2
Chloride	82 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	190 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	< 1 mg/L	1	SM2540D
Solids, Total (TS)	400 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	380 mg/L	10	SM2540C
Sulfate	43 mg/L	0.25	EPA 300.0
COD	17 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.13 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	20 mg/L	0.2	EPA 353.2
Phosphorus, Total	1.1 mg/L	0.25	EPA 365.1
TKN	0.43 mg/L	0.3	SM4500N(Org)-D
TOC	5.5 mg/L	1	SM5310C

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

SiteID: LMG-05-0018 Sample Date: 9/17/2013 IDEM Sample #: AB12865
 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	68.4 %		ASTM D888-09(C)
DO	6.31 mg/L		ASTM D888-09(C)
pH (Field)	7.57 SU		EPA 150.2
Specific Conductance (Field)	742 umho/cm		SM2510B
Temperature	19.18 °C		SM2550B(2)
Turbidity	1.4 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12865	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	95.9 MPN/100mL	1	SM9223B

SiteID: LMG-05-0018 Sample Date: 9/24/2013 IDEM Sample #: AB12904
 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	70 %		ASTM D888-09(C)
DO	6.5 mg/L		ASTM D888-09(C)
pH (Field)	7.51 SU		EPA 150.2
Specific Conductance (Field)	822 umho/cm		SM2510B
Temperature	18.73 °C		SM2550B(2)
Turbidity	2.5 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	9 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12904	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	112.6 MPN/100mL	1	SM9223B

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

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

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

SiteID: LMG-05-0019 **USGS Hydrologic Unit:** 040400010501
Stream Name: Tributary of Main Beaver Dam Ditch **County:** Lake
Description: Summit Street **Latitude:** 41 25 38.38773 **Longitude:** -87 22 9.47453
Drainage: 2.793 **Site Number:** 13T-024

SiteID: LMG-05-0019 **Sample Date:** 7/9/2013 **IDEM Sample #:** AB13595
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	28.2 %		ASTM D888-09(C)
DO	2.49 mg/L		ASTM D888-09(C)
pH (Field)	7.31 SU		EPA 150.2
Specific Conductance (Field)	566 umho/cm		SM2510B
Temperature	21.22 °C		SM2550B(2)
Turbidity (Hach)	5.99 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	8 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

<u>Lab ID #:</u> A988984	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	150 mg/L	10	EPA 310.2
Chloride	72 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	180 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	3 mg/L	1	SM2540D
Solids, Total (TS)	320 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	310 mg/L	10	SM2540C
Sulfate	15 mg/L	1.3	EPA 300.0
COD	38 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.56 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.095 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.18 mg/L	0.05	EPA 365.1
TKN	1.4 mg/L	0.3	SM4500N(Org)-D
TOC	10 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13595	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

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

SiteID: LMG-05-0019 Sample Date: 7/22/2013 IDEM Sample #: AB11742
 Water Flow Type Run Water Appearance Gray (Septic/Sewag) Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	3.6 %		SM4500-OG
DO	0.31 mg/L		SM4500-OG
pH (Field)	7.38 SU		EPA 150.2
Specific Conductance (Field)	1163 umho/cm		SM2510B
Temperature	16.16 °C		SM2550B(2)
Turbidity	NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: LMG-05-0019 Sample Date: 8/6/2013 IDEM Sample #: AB14002
 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	8.2 %		ASTM D888-09(C)
DO	0.8 mg/L		ASTM D888-09(C)
pH (Field)	7.19 SU		EPA 150.2
Specific Conductance (Field)	990 umho/cm		SM2510B
Temperature	17.9 °C		SM2550B(2)
Turbidity (Hach)	11.7 NTU		EPA 180.1
Air Temp	5 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 #: A991491	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	180 mg/L	10	EPA 310.2
Chloride	140 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	230 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	8 mg/L	1	SM2540D
Solids, Total (TS)	490 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	430 mg/L	10	SM2540C
Sulfate	24 mg/L	1.3	EPA 300.0
COD	43 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.92 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.019 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.35 mg/L	0.05	EPA 365.1
TKN	1.4 mg/L	0.3	SM4500N(Org)-D
TOC	12 mg/L	10	SM5310C

Lab ID #: AB14002	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

SiteID: LMG-05-0019 **Sample Date:** 9/10/2013 **IDEM Sample #:** AB12827
Water Flow Type Stagnant **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	8.6 %		ASTM D888-09(C)
DO	0.81 mg/L		ASTM D888-09(C)
pH (Field)	7.06 SU		EPA 150.2
Specific Conductance (Field)	1388 umho/cm		SM2510B
Temperature	17.89 °C		SM2550B(2)
Turbidity	8.5 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12827	Result	Reporting Limit	Method
E. coli	148.3 MPN/100mL	1	SM9223B

Lab ID #: AB12827a	Result	Reporting Limit	Method
Coliforms (Total)	> 24196 MPN/100mL	24196	SM9223B

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

SiteID: LMG-05-0019

Sample Date: 9/10/2013

IDEM Sample #: AB14618

Water Flow Type Glide

Water Appearance Murky

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	6.5 %		ASTM D888-09(C)
DO	0.65 mg/L		ASTM D888-09(C)
pH (Field)	7.04 SU		EPA 150.2
Specific Conductance (Field)	1355 umho/cm		SM2510B
Temperature	17.42 °C		SM2550B(2)
Turbidity (Hach)	10.4 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 #: A994708	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	280 mg/L	20	EPA 310.2
Chloride	190 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	360 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	18 mg/L	1	SM2540D
Solids, Total (TS)	720 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	680 mg/L	10	SM2540C
Sulfate	80 mg/L	2.5	EPA 300.0
COD	24 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.63 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.06 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.18 mg/L	0.05	EPA 365.1
TKN	1.5 mg/L	0.3	SM4500N(Org)-D
TOC	7.3 mg/L	5	SM5310C

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

SiteID: LMG-05-0019 Sample Date: 9/17/2013 IDEM Sample #: AB12866
 Water Flow Type Stagnant Water Appearance Black Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	23.8 %		ASTM D888-09(C)
DO	2.36 mg/L		ASTM D888-09(C)
pH (Field)	7.51 SU		EPA 150.2
Specific Conductance (Field)	1556 umho/cm		SM2510B
Temperature	15.63 °C		SM2550B(2)
Turbidity	5.2 NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12866	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

SiteID: LMG-05-0019 Sample Date: 9/24/2013 IDEM Sample #: AB12905
 Water Flow Type Stagnant Water Appearance Black Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	17.6 %		ASTM D888-09(C)
DO	1.78 mg/L		ASTM D888-09(C)
pH (Field)	7.43 SU		EPA 150.2
Specific Conductance (Field)	921 umho/cm		SM2510B
Temperature	14.87 °C		SM2550B(2)
Turbidity	9.7 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	9 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12905	Result	Reporting Limit	Method
E. coli	275.5 MPN/100mL	1	SM9223B
Lab ID #: AB12905a	Result	Reporting Limit	Method
Coliforms (Total)	19863 MPN/100mL	10	SM9223B

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

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

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

SiteID: LMG-05-0020 **USGS Hydrologic Unit:** 040400010501
Stream Name: Main Beaver Dam Ditch **County:** Lake
Description: Clark Road **Latitude:** 41 26 30.26862 **Longitude:** -87 23 33.29661
Drainage: 9.860 **Site Number:** 13T-025

SiteID: LMG-05-0020 **Sample Date:** 7/9/2013 **IDEM Sample #:** AB13596
Water Flow Type: Glide **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	48.1 %	ASTM D888-09(C)
	DO	4.25 mg/L	ASTM D888-09(C)
	pH (Field)	7.31 SU	EPA 150.2
	Specific Conductance (Field)	571 umho/cm	SM2510B
	Temperature	21.69 °C	SM2550B(2)
	Turbidity (Hach)	15.5 NTU	EPA 180.1
	Air Temp	5 Lookup	Observation
	Sky Conditions	8 Lookup	Observation
	Wind Direction	27 Lookup	Observation
	Wind Strength	1 Lookup	Observation

<u>Lab ID #:</u> A988985	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
	Alkalinity (as CaCO3)	160 mg/L	EPA 310.2
	Chloride	29 mg/L	EPA 300.0
	Hardness (as CaCO3)	240 mg/L	SM2340B
	Solids, Suspended Total, (TSS)	6 mg/L	SM2540D
	Solids, Total (TS)	360 mg/L	SM2540B
	Solids, Total Dissolved (TDS)	290 mg/L	SM2540C
	Sulfate	22 mg/L	EPA 300.0
	COD	43 mg/L	EPA 410.4
	Nitrogen, Ammonia	0.16 mg/L	SM4500NH3-G
	Nitrogen, Nitrate+Nitrite	5.9 mg/L	EPA 353.2
	Phosphorus, Total	0.15 mg/L	EPA 365.1
	TKN	1.4 mg/L	SM4500N(Org)-D
	TOC	12 mg/L	SM5310C

<u>Lab ID #:</u> AB13596	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
	Coliforms (Total)	> 2419.6 MPN/100mL	2419.6
	E. coli	2419.6 MPN/100mL	1

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

SiteID: LMG-05-0020 **Sample Date:** 7/23/2013 **IDEM Sample #:** AB11743
Water Flow Type Glide **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	19.4 %		SM4500-OG
DO	1.61 mg/L		SM4500-OG
pH (Field)	7.39 SU		EPA 150.2
Specific Conductance (Field)	531 umho/cm		SM2510B
Temperature	24.38 °C		SM2550B(2)
Turbidity (Hach)	70.1 NTU		EPA 180.1
Air Temp	Lookup		Observation
Sky Conditions	Lookup		Observation
Wind Direction	Lookup		Observation
Wind Strength	Lookup		Observation

SiteID: LMG-05-0020 **Sample Date:** 8/6/2013 **IDEM Sample #:** AB14003
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	71 %		ASTM D888-09(C)
DO	5.89 mg/L		ASTM D888-09(C)
pH (Field)	7.43 SU		EPA 150.2
Specific Conductance (Field)	454 umho/cm		SM2510B
Temperature	22.55 °C		SM2550B(2)
Turbidity (Hach)	4.72 NTU		EPA 180.1
Air Temp	5 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 #: A991492	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	200 mg/L	10	EPA 310.2
Chloride	52 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	250 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	2 mg/L	1	SM2540D
Solids, Total (TS)	390 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	340 mg/L	10	SM2540C
Sulfate	16 mg/L	1.3	EPA 300.0
COD	45 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.27 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.11 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.2 mg/L	0.05	EPA 365.1
TKN	0.96 mg/L	0.3	SM4500N(Org)-D
TOC	14 mg/L	1	SM5310C

Lab ID #: AB14003	Result	Reporting Limit	Method
Coliforms (Total)	2419.6 MPN/100mL	1	SM9223B
E. coli	261.3 MPN/100mL	1	SM9223B

SiteID: LMG-05-0020 **Sample Date:** 9/10/2013 **IDEM Sample #:** AB12828
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Covered in duckweed

Lab ID #:	Result	Reporting Limit	Method
% Sat	7.9 %		ASTM D888-09(C)
DO	0.67 mg/L		ASTM D888-09(C)
pH (Field)	7.41 SU		EPA 150.2
Specific Conductance (Field)	534 umho/cm		SM2510B
Temperature	23.05 °C		SM2550B(2)
Turbidity	14.4 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12828	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	70.3 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0020

Sample Date: 9/10/2013

IDEM Sample #: AB14619

Water Flow Type Stagnant

Water Appearance Murky

Water Depth

Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	18 %		ASTM D888-09(C)
DO	1.54 mg/L		ASTM D888-09(C)
pH (Field)	7.43 SU		EPA 150.2
Specific Conductance (Field)	654 umho/cm		SM2510B
Temperature	22.29 °C		SM2550B(2)
Turbidity (Hach)	6.97 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 #: A994709	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	260 mg/L	50	EPA 310.2
Chloride	50 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	270 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	25 mg/L	1	SM2540D
Solids, Total (TS)	420 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	390 mg/L	10	SM2540C
Sulfate	11 mg/L	0.25	EPA 300.0
COD	61 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.19 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.013 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.42 mg/L	0.05	EPA 365.1
TKN	2.6 mg/L	0.3	SM4500N(Org)-D
TOC	17 mg/L	1	SM5310C

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

SiteID: LMG-05-0020 Sample Date: 9/17/2013 IDEM Sample #: AB12867
 Water Flow Type Stagnant Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: Covered in duckweed

Lab ID #:	Result	Reporting Limit	Method
% Sat	17.3 %		ASTM D888-09(C)
DO	1.81 mg/L		ASTM D888-09(C)
pH (Field)	7.5 SU		EPA 150.2
Specific Conductance (Field)	836 umho/cm		SM2510B
Temperature	13.95 °C		SM2550B(2)
Turbidity	19.6 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12867	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	71.2 MPN/100mL	1	SM9223B

SiteID: LMG-05-0020 Sample Date: 9/24/2013 IDEM Sample #: AB12906
 Water Flow Type Stagnant Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: Covered in duckweed

Lab ID #:	Result	Reporting Limit	Method
% Sat	18.9 %		ASTM D888-09(C)
DO	2.01 mg/L		ASTM D888-09(C)
pH (Field)	7.46 SU		EPA 150.2
Specific Conductance (Field)	858 umho/cm		SM2510B
Temperature	12.5 °C		SM2550B(2)
Turbidity	17.1 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	9 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12906	Result	Reporting Limit	Method
Coliforms (Total)	1299.7 MPN/100mL	1	SM9223B
E. coli	64.5 MPN/100mL	1	SM9223B

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

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

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

SiteID: LMG-05-0021 **USGS Hydrologic Unit:** 040400010501
Stream Name: Tributary of Main Beaver Dam Ditch **County:** Lake
Description: 101st Avenue **Latitude:** 41 26 5.82644 **Longitude:** -87 24 10.89102
Drainage: 1.536 **Site Number:** 13T-026

SiteID: LMG-05-0021 **Sample Date:** 7/9/2013 **IDEM Sample #:** AB13597
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	8.1 %		ASTM D888-09(C)
DO	0.71 mg/L		ASTM D888-09(C)
pH (Field)	7.2 SU		EPA 150.2
Specific Conductance (Field)	667 umho/cm		SM2510B
Temperature	22.91 °C		SM2550B(2)
Turbidity (Hach)	37 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> A988986	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	140 mg/L	10	EPA 310.2
Chloride	96 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	210 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	89 mg/L	1	SM2540D
Solids, Total (TS)	520 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	380 mg/L	10	SM2540C
Sulfate	23 mg/L	1.3	EPA 300.0
COD	57 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.14 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.25 mg/L	0.05	EPA 365.1
TKN	1.6 mg/L	0.3	SM4500N(Org)-D
TOC	16 mg/L	5	SM5310C

<u>Lab ID #:</u> AB13597	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

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

SiteID: LMG-05-0021

Sample Date: 7/23/2013

IDEM Sample #: AB11744

Water Flow Type

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	6.2 %		SM4500-OG
DO	0.54 mg/L		SM4500-OG
pH (Field)	7.46 SU		EPA 150.2
Specific Conductance (Field)	637 umho/cm		SM2510B
Temperature	22.82 °C		SM2550B(2)
Turbidity (Hach)	43.9 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

SiteID: LMG-05-0021

Sample Date: 8/6/2013

IDEM Sample #: AB14004

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	25.7 %		ASTM D888-09(C)
DO	2.25 mg/L		ASTM D888-09(C)
pH (Field)	7.35 SU		EPA 150.2
Specific Conductance (Field)	541 umho/cm		SM2510B
Temperature	20.55 °C		SM2550B(2)
Turbidity (Hach)	19.5 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 #: A991493	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	190 mg/L	10	EPA 310.2
Chloride	57 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	220 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	22 mg/L	1	SM2540D
Solids, Total (TS)	390 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	330 mg/L	10	SM2540C
Sulfate	11 mg/L	1.3	EPA 300.0
COD	71 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.025 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.38 mg/L	0.05	EPA 365.1
TKN	1.2 mg/L	0.3	SM4500N(Org)-D
TOC	13 mg/L	1	SM5310C

Lab ID #: AB14004	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	152.9 MPN/100mL	1	SM9223B

SiteID: LMG-05-0021 **Sample Date:** 9/10/2013 **IDEM Sample #:** AB12829
Water Flow Type Stagnant **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Covered in duckweed

Lab ID #:	Result	Reporting Limit	Method
% Sat	16.3 %		ASTM D888-09(C)
DO	1.41 mg/L		ASTM D888-09(C)
pH (Field)	7.36 SU		EPA 150.2
Specific Conductance (Field)	635 umho/cm		SM2510B
Temperature	22.77 °C		SM2550B(2)
Turbidity	8.4 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: AB12829	Result	Reporting Limit	Method
Coliforms (Total)	2419.6 MPN/100mL	1	SM9223B
E. coli	19.7 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0021

Sample Date: 9/10/2013

IDEM Sample #: AB14620

Water Flow Type Stagnant

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	8.5 %		ASTM D888-09(C)
DO	0.74 mg/L		ASTM D888-09(C)
pH (Field)	7.56 SU		EPA 150.2
Specific Conductance (Field)	588 umho/cm		SM2510B
Temperature	23.12 °C		SM2550B(2)
Turbidity (Hach)	8.68 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 #: A994710	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	210 mg/L	20	EPA 310.2
Chloride	63 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	230 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	11 mg/L	1	SM2540D
Solids, Total (TS)	350 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	340 mg/L	10	SM2540C
Sulfate	4.5 mg/L	0.25	EPA 300.0
COD	59 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	< 0.01 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.36 mg/L	0.05	EPA 365.1
TKN	1.6 mg/L	0.3	SM4500N(Org)-D
TOC	17 mg/L	10	SM5310C

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

SiteID: LMG-05-0021 Sample Date: 9/17/2013 IDEM Sample #: AB12868
 Water Flow Type Stagnant Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	22.3 %		ASTM D888-09(C)
DO	2.27 mg/L		ASTM D888-09(C)
pH (Field)	7.5 SU		EPA 150.2
Specific Conductance (Field)	626 umho/cm		SM2510B
Temperature	14.57 °C		SM2550B(2)
Turbidity	22.2 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	2 Lookup		Observation
Lab ID #: AB12868	Result	Reporting Limit	Method
Coliforms (Total)	2419.6 MPN/100mL	1	SM9223B
E. coli	42.2 MPN/100mL	1	SM9223B

SiteID: LMG-05-0021 Sample Date: 9/24/2013 IDEM Sample #: AB12907
 Water Flow Type Stagnant Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: Covered in duckweed

Lab ID #:	Result	Reporting Limit	Method
% Sat	14.5 %		ASTM D888-09(C)
DO	1.5 mg/L		ASTM D888-09(C)
pH (Field)	7.28 SU		EPA 150.2
Specific Conductance (Field)	664 umho/cm		SM2510B
Temperature	13.62 °C		SM2550B(2)
Turbidity	12.1 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	9 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12907	Result	Reporting Limit	Method
Coliforms (Total)	980.4 MPN/100mL	1	SM9223B
E. coli	34.1 MPN/100mL	1	SM9223B

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

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

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

SiteID: LMG-05-0022 **USGS Hydrologic Unit:** 040400010501
Stream Name: Main Beaver Dam Ditch **County:** Lake
Description: Blaine Street **Latitude:** 41 26 53.56478 **Longitude:** -87 25 35.34004
Drainage: 2.347 **Site Number:** 13T-027

SiteID: LMG-05-0022 **Sample Date:** 7/9/2013 **IDEM Sample #:** AB13598
Water Flow Type Pool **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	51.3 %	ASTM D888-09(C)
	DO	4.25 mg/L	ASTM D888-09(C)
	pH (Field)	7.48 SU	EPA 150.2
	Specific Conductance (Field)	630 umho/cm	SM2510B
	Temperature	24.92 °C	SM2550B(2)
	Turbidity (Hach)	13 NTU	EPA 180.1
	Air Temp	5 Lookup	Observation
	Sky Conditions	4 Lookup	Observation
	Wind Direction	27 Lookup	Observation
	Wind Strength	1 Lookup	Observation

<u>Lab ID #:</u> A988987	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
	Alkalinity (as CaCO3)	160 mg/L	EPA 310.2
	Chloride	62 mg/L	EPA 300.0
	Hardness (as CaCO3)	230 mg/L	SM2340B
	Solids, Suspended Total, (TSS)	9 mg/L	SM2540D
	Solids, Total (TS)	380 mg/L	SM2540B
	Solids, Total Dissolved (TDS)	370 mg/L	SM2540C
	Sulfate	39 mg/L	EPA 300.0
	COD	38 mg/L	EPA 410.4
	Nitrogen, Ammonia	< 0.1 mg/L	SM4500NH3-G
	Nitrogen, Nitrate+Nitrite	< 0.01 mg/L	EPA 353.2
	Phosphorus, Total	0.16 mg/L	EPA 365.1
	TKN	1.1 mg/L	SM4500N(Org)-D
	TOC	9.4 mg/L	SM5310C

<u>Lab ID #:</u> AB13598	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
	Coliforms (Total)	> 2419.6 MPN/100mL	2419.6
	E. coli	816.4 MPN/100mL	1

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

SiteID: LMG-05-0022 **Sample Date:** 7/23/2013 **IDEM Sample #:** AB11745
Water Flow Type Run **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	22.5 %		SM4500-OG
DO	1.19 mg/L		SM4500-OG
pH (Field)	7.32 SU		EPA 150.2
Specific Conductance (Field)	786 umho/cm		SM2510B
Temperature	25.6 °C		SM2550B(2)
Turbidity (Hach)	490 NTU		EPA 180.1
Air Temp	Lookup		Observation
Sky Conditions	Lookup		Observation
Wind Direction	Lookup		Observation
Wind Strength	Lookup		Observation

SiteID: LMG-05-0022 **Sample Date:** 8/6/2013 **IDEM Sample #:** AB14005
Water Flow Type Glide **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	47.9 %		ASTM D888-09(C)
DO	4.2 mg/L		ASTM D888-09(C)
pH (Field)	7.24 SU		EPA 150.2
Specific Conductance (Field)	623 umho/cm		SM2510B
Temperature	21.6 °C		SM2550B(2)
Turbidity (Hach)	20.4 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 #: A991494	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	170 mg/L	10	EPA 310.2
Chloride	66 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	250 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	14 mg/L	1	SM2540D
Solids, Total (TS)	440 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	360 mg/L	10	SM2540C
Sulfate	42 mg/L	1.3	EPA 300.0
COD	38 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.016 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.11 mg/L	0.05	EPA 365.1
TKN	0.76 mg/L	0.3	SM4500N(Org)-D
TOC	10 mg/L	1	SM5310C

Lab ID #: AB14005	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	90.6 MPN/100mL	1	SM9223B

SiteID: LMG-05-0022 **Sample Date:** 9/10/2013 **IDEM Sample #:** AB12830
Water Flow Type Stagnant **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Covered in duckweed

Lab ID #:	Result	Reporting Limit	Method
% Sat	12.9 %		ASTM D888-09(C)
DO	1.11 mg/L		ASTM D888-09(C)
pH (Field)	7.47 SU		EPA 150.2
Specific Conductance (Field)	765 umho/cm		SM2510B
Temperature	22.91 °C		SM2550B(2)
Turbidity	20.8 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: AB12830	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	275.5 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0022

Sample Date: 9/10/2013

IDEM Sample #: AB14621

Water Flow Type Glide

Water Appearance Murky

Water Depth

Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	21.4 %		ASTM D888-09(C)
DO	1.79 mg/L		ASTM D888-09(C)
pH (Field)	7.38 SU		EPA 150.2
Specific Conductance (Field)	773 umho/cm		SM2510B
Temperature	23.53 °C		SM2550B(2)
Turbidity (Hach)	52.7 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 #: A994711	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	190 mg/L	20	EPA 310.2
Chloride	110 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	260 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	78 mg/L	1	SM2540D
Solids, Total (TS)	520 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	400 mg/L	10	SM2540C
Sulfate	21 mg/L	0.25	EPA 300.0
COD	100 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.12 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.01 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.74 mg/L	0.05	EPA 365.1
TKN	1.5 mg/L	0.3	SM4500N(Org)-D
TOC	17 mg/L	10	SM5310C

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

SiteID: LMG-05-0022 **Sample Date:** 9/17/2013 **IDEM Sample #:** AB12869
Water Flow Type Stagnant **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Covered in duckweed

Lab ID #:	Result	Reporting Limit	Method
% Sat	33.7 %		ASTM D888-09(C)
DO	3.44 mg/L		ASTM D888-09(C)
pH (Field)	7.81 SU		EPA 150.2
Specific Conductance (Field)	807 umho/cm		SM2510B
Temperature	14.33 °C		SM2550B(2)
Turbidity	15 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12869			
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	52.8 MPN/100mL	1	SM9223B

SiteID: LMG-05-0022 **Sample Date:** 9/24/2013 **IDEM Sample #:** AB12908
Water Flow Type Stagnant **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Covered in duckweed

Lab ID #:	Result	Reporting Limit	Method
% Sat	40.8 %		ASTM D888-09(C)
DO	4.24 mg/L		ASTM D888-09(C)
pH (Field)	7.65 SU		EPA 150.2
Specific Conductance (Field)	798 umho/cm		SM2510B
Temperature	13.57 °C		SM2550B(2)
Turbidity	10.4 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	9 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12908			
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	517.2 MPN/100mL	1	SM9223B

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

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: LMG-05-0023 **USGS Hydrologic Unit:** 040400010503
Stream Name: Tributary of Turkey Creek **County:** Lake
Description: 77th Avenue **Latitude:** 41 28 43.21702 **Longitude:** -87 26 17.78891
Drainage: 2.840 **Site Number:** 13T-028

SiteID: LMG-05-0023 **Sample Date:** 7/10/2013 **IDEM Sample #:** AB13599
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	21.4 %		ASTM D888-09(C)
DO	1.82 mg/L		ASTM D888-09(C)
pH (Field)	7.32 SU		EPA 150.2
Specific Conductance (Field)	657 umho/cm		SM2510B
Temperature	23.15 °C		SM2550B(2)
Turbidity (Hach)	2.28 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> A988988	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	190 mg/L	10	EPA 310.2
Chloride	69 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	230 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	1 mg/L	1	SM2540D
Solids, Total (TS)	390 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	360 mg/L	10	SM2540C
Sulfate	13 mg/L	1.3	EPA 300.0
COD	50 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	< 0.01 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.16 mg/L	0.05	EPA 365.1
TKN	1.1 mg/L	0.3	SM4500N(Org)-D
TOC	15 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13599	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	90.8 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0023

Sample Date: 8/7/2013

IDEM Sample #: AB14006

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	23.3 %		ASTM D888-09(C)
DO	2.04 mg/L		ASTM D888-09(C)
pH (Field)	7.27 SU		EPA 150.2
Specific Conductance (Field)	825 umho/cm		SM2510B
Temperature	21.09 °C		SM2550B(2)
Turbidity (Hach)	5.34 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: A991495	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	180 mg/L	50	EPA 310.2
Chloride	100 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	290 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	5 mg/L	1	SM2540D
Solids, Total (TS)	540 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	460 mg/L	10	SM2540C
Sulfate	40 mg/L	1.3	EPA 300.0
COD	39 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.11 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.011 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.086 mg/L	0.05	EPA 365.1
TKN	0.89 mg/L	0.3	SM4500N(Org)-D
TOC	15 mg/L	10	SM5310C
Lab ID #: AB14006	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	87.8 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0023 Sample Date: 9/10/2013 IDEM Sample #: AB12831
 Water Flow Type Stagnant Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: Isolated pool

Lab ID #:	Result	Reporting Limit	Method
% Sat	17.4 %		ASTM D888-09(C)
DO	1.51 mg/L		ASTM D888-09(C)
pH (Field)	7.47 SU		EPA 150.2
Specific Conductance (Field)	1001 umho/cm		SM2510B
Temperature	22.3 °C		SM2550B(2)
Turbidity	64.4 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12831	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	344.8 MPN/100mL	1	SM9223B

SiteID: LMG-05-0023 Sample Date: 9/10/2013 IDEM Sample #: AB14622
 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	30.3 %		ASTM D888-09(C)
DO	2.61 mg/L		ASTM D888-09(C)
pH (Field)	7.49 SU		EPA 150.2
Specific Conductance (Field)	967 umho/cm		SM2510B
Temperature	22.83 °C		SM2550B(2)
Turbidity (Hach)	127 NTU		EPA 180.1
Air Temp	6 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 #: A994712	Result	Reporting Limit	Method	
	Alkalinity (as CaCO3)	210 mg/L	20	EPA 310.2
	Chloride	110 mg/L	2.5	EPA 300.0
	Hardness (as CaCO3)	360 mg/L	1	SM2340B
	Solids, Suspended Total, (TSS)	130 mg/L	1	SM2540D
	Solids, Total (TS)	760 mg/L	10	SM2540B
	Solids, Total Dissolved (TDS)	620 mg/L	10	SM2540C
	Sulfate	120 mg/L	2.5	EPA 300.0
	COD	120 mg/L	10	EPA 410.4
	Nitrogen, Ammonia	2.6 mg/L	0.5	SM4500NH3-G
	Nitrogen, Nitrate+Nitrite	< 0.01 mg/L	0.01	EPA 353.2
	Phosphorus, Total	2.8 mg/L	0.25	EPA 365.1
	TKN	2.9 mg/L	0.3	SM4500N(Org)-D
	TOC	22 mg/L	10	SM5310C

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: LMG-05-0024 **USGS Hydrologic Unit:** 040400010503
Stream Name: Turkey Creek **County:** Lake
Description: Broad Street **Latitude:** 41 29 52.83355 **Longitude:** -87 25 39.23606
Drainage: 5.543 **Site Number:** 13T-029

SiteID: LMG-05-0024 **Sample Date:** 7/10/2013 **IDEM Sample #:** AB13600
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	70 %		ASTM D888-09(C)
DO	6.02 mg/L		ASTM D888-09(C)
pH (Field)	7.63 SU		EPA 150.2
Specific Conductance (Field)	726 umho/cm		SM2510B
Temperature	22.86 °C		SM2550B(2)
Turbidity (Hach)	9.27 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> A988989	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	190 mg/L	10	EPA 310.2
Chloride	78 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	260 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	6 mg/L	1	SM2540D
Solids, Total (TS)	440 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	390 mg/L	10	SM2540C
Sulfate	37 mg/L	1.3	EPA 300.0
COD	41 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.17 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.13 mg/L	0.05	EPA 365.1
TKN	0.94 mg/L	0.3	SM4500N(Org)-D
TOC	12 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13600	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1986.3 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0024 **Sample Date:** 7/23/2013 **IDEM Sample #:** AB11747
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	78.1 %		SM4500-OG
DO	6.92 mg/L		SM4500-OG
pH (Field)	7.8 SU		EPA 150.2
Specific Conductance (Field)	940 umho/cm		SM2510B
Temperature	20.82 °C		SM2550B(2)
Turbidity (Hach)	14.5 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

SiteID: LMG-05-0024 **Sample Date:** 8/7/2013 **IDEM Sample #:** AB14007
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	63.9 %		ASTM D888-09(C)
DO	5.82 mg/L		ASTM D888-09(C)
pH (Field)	7.54 SU		EPA 150.2
Specific Conductance (Field)	919 umho/cm		SM2510B
Temperature	19.87 °C		SM2550B(2)
Turbidity (Hach)	6.83 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
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

Lab ID #: A991496	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	220 mg/L	50	EPA 310.2
Chloride	84 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	370 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	4 mg/L	1	SM2540D
Solids, Total (TS)	630 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	530 mg/L	10	SM2540C
Sulfate	110 mg/L	1.3	EPA 300.0
COD	23 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.12 mg/L	0.01	EPA 353.2
Phosphorus, Total	< 0.05 mg/L	0.05	EPA 365.1
TKN	0.51 mg/L	0.3	SM4500N(Org)-D
TOC	6.8 mg/L	1	SM5310C

Lab ID #: AB14007	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	517.2 MPN/100mL	1	SM9223B

SiteID: LMG-05-0024 **Sample Date:** 9/10/2013 **IDEM Sample #:** AB12832
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	49.6 %		ASTM D888-09(C)
DO	4.44 mg/L		ASTM D888-09(C)
pH (Field)	7.72 SU		EPA 150.2
Specific Conductance (Field)	1182 umho/cm		SM2510B
Temperature	20.62 °C		SM2550B(2)
Turbidity	0.8 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12832	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	142.1 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0024

Sample Date: 9/10/2013

IDEM Sample #: AB14623

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	89.7 %		ASTM D888-09(C)
DO	7.78 mg/L		ASTM D888-09(C)
pH (Field)	7.82 SU		EPA 150.2
Specific Conductance (Field)	1169 umho/cm		SM2510B
Temperature	22.25 °C		SM2550B(2)
Turbidity (Hach)	2.2 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 #: A994713	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	390 mg/L	50	EPA 310.2
Chloride	91 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	540 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	2 mg/L	1	SM2540D
Solids, Total (TS)	740 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	720 mg/L	10	SM2540C
Sulfate	130 mg/L	1.3	EPA 300.0
COD	14 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.2 mg/L	0.01	EPA 353.2
Phosphorus, Total	< 0.05 mg/L	0.05	EPA 365.1
TKN	0.33 mg/L	0.3	SM4500N(Org)-D
TOC	3.5 mg/L	1	SM5310C

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

SiteID: LMG-05-0024 Sample Date: 9/17/2013 IDEM Sample #: AB12871
 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 %		ASTM D888-09(C)
DO	6.94 mg/L		ASTM D888-09(C)
pH (Field)	7.82 SU		EPA 150.2
Specific Conductance (Field)	1200 umho/cm		SM2510B
Temperature	13.01 °C		SM2550B(2)
Turbidity	1.4 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12871	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	123.6 MPN/100mL	1	SM9223B

SiteID: LMG-05-0024 Sample Date: 9/24/2013 IDEM Sample #: AB12910
 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	64.8 %		ASTM D888-09(C)
DO	6.77 mg/L		ASTM D888-09(C)
pH (Field)	7.61 SU		EPA 150.2
Specific Conductance (Field)	1065 umho/cm		SM2510B
Temperature	13.33 °C		SM2550B(2)
Turbidity	5.5 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	9 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12910	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1553.1 MPN/100mL	1	SM9223B

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

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: LMG-05-0025 **USGS Hydrologic Unit:** 040400010503
Stream Name: Johnson Ditch **County:** Lake
Description: Oak Ridge Prairie County Park **Latitude:** 41 31 2.36617 **Longitude:** -87 23 45.32733
Drainage: 2.131 **Site Number:** 13T-030

SiteID: LMG-05-0025 **Sample Date:** 7/10/2013 **IDEM Sample #:** AB13602
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	63.8 %		ASTM D888-09(C)
DO	5.43 mg/L		ASTM D888-09(C)
pH (Field)	7.67 SU		EPA 150.2
Specific Conductance (Field)	586 umho/cm		SM2510B
Temperature	24.58 °C		SM2550B(2)
Turbidity (Hach)	2.66 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> A988990	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	190 mg/L	10	EPA 310.2
Chloride	32 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	230 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	< 1 mg/L	1	SM2540D
Solids, Total (TS)	330 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	330 mg/L	10	SM2540C
Sulfate	41 mg/L	1.3	EPA 300.0
COD	30 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.045 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.056 mg/L	0.05	EPA 365.1
TKN	0.57 mg/L	0.3	SM4500N(Org)-D
TOC	9.7 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13602	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	178.9 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0025 **Sample Date:** 7/23/2013 **IDEM Sample #:** AB11748
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Turbidity taken with Hach

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	107.7 %		SM4500-OG
DO	8.49 mg/L		SM4500-OG
pH (Field)	8.16 SU		EPA 150.2
Specific Conductance (Field)	488 umho/cm		SM2510B
Temperature	26.74 °C		SM2550B(2)
Turbidity	NTU		SM2130B Mod
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

SiteID: LMG-05-0025 **Sample Date:** 8/7/2013 **IDEM Sample #:** AB14009
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	50 %		ASTM D888-09(C)
DO	4.3 mg/L		ASTM D888-09(C)
pH (Field)	7.72 SU		EPA 150.2
Specific Conductance (Field)	568 umho/cm		SM2510B
Temperature	22.68 °C		SM2550B(2)
Turbidity (Hach)	4.87 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 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 #: A991497	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	210 mg/L	50	EPA 310.2
Chloride	19 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	260 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	3 mg/L	1	SM2540D
Solids, Total (TS)	380 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	310 mg/L	10	SM2540C
Sulfate	60 mg/L	1.3	EPA 300.0
COD	19 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.018 mg/L	0.01	EPA 353.2
Phosphorus, Total	< 0.05 mg/L	0.05	EPA 365.1
TKN	0.33 mg/L	0.3	SM4500N(Org)-D
TOC	4.9 mg/L	1	SM5310C

Lab ID #: AB14009	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	178.2 MPN/100mL	1	SM9223B

SiteID: LMG-05-0025 **Sample Date:** 9/10/2013 **IDEM Sample #:** AB12834
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	45.1 %		ASTM D888-09(C)
DO	3.78 mg/L		ASTM D888-09(C)
pH (Field)	7.79 SU		EPA 150.2
Specific Conductance (Field)	579 umho/cm		SM2510B
Temperature	24.2 °C		SM2550B(2)
Turbidity	2.9 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	3 Lookup		Observation

Lab ID #: AB12834	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	195.6 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0025

Sample Date: 9/11/2013

IDEM Sample #: AB14625

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	107.6 %		ASTM D888-09(C)
DO	8.85 mg/L		ASTM D888-09(C)
pH (Field)	8.14 SU		EPA 150.2
Specific Conductance (Field)	565 umho/cm		SM2510B
Temperature	25.17 °C		SM2550B(2)
Turbidity (Hach)	6 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 #: A994714	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	250 mg/L	50	EPA 310.2
Chloride	17 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	250 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	5 mg/L	1	SM2540D
Solids, Total (TS)	350 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	310 mg/L	10	SM2540C
Sulfate	50 mg/L	1.3	EPA 300.0
COD	17 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.24 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	< 0.01 mg/L	0.01	EPA 353.2
Phosphorus, Total	< 0.05 mg/L	0.05	EPA 365.1
TKN	0.38 mg/L	0.3	SM4500N(Org)-D
TOC	5.5 mg/L	1	SM5310C

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

SiteID: LMG-05-0025 Sample Date: 9/17/2013 IDEM Sample #: AB12873
 Water Flow Type Stagnant Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	54.1 %		ASTM D888-09(C)
DO	5.37 mg/L		ASTM D888-09(C)
pH (Field)	7.88 SU		EPA 150.2
Specific Conductance (Field)	587 umho/cm		SM2510B
Temperature	15.68 °C		SM2550B(2)
Turbidity	2.8 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12873	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	96 MPN/100mL	1	SM9223B

SiteID: LMG-05-0025 Sample Date: 9/24/2013 IDEM Sample #: AB12912
 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	50 %		ASTM D888-09(C)
DO	4.92 mg/L		ASTM D888-09(C)
pH (Field)	7.8 SU		EPA 150.2
Specific Conductance (Field)	583 umho/cm		SM2510B
Temperature	16.11 °C		SM2550B(2)
Turbidity	6 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	9 Lookup		Observation
Wind Strength	2 Lookup		Observation
Lab ID #: AB12912	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	344.8 MPN/100mL	1	SM9223B

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

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

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

SiteID: LMG-05-0026 **USGS Hydrologic Unit:** 040400010503
Stream Name: Tributary of Turkey Creek **County:** Lake
Description: W Old Lincoln Hwy **Latitude:** 41 29 9.86802 **Longitude:** -87 23 36.21233
Drainage: 2.642 **Site Number:** 13T-031

SiteID: LMG-05-0026 **Sample Date:** 7/10/2013 **IDEM Sample #:** AB13603
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	75.5 %		ASTM D888-09(C)
DO	6.32 mg/L		ASTM D888-09(C)
pH (Field)	7.8 SU		EPA 150.2
Specific Conductance (Field)	456 umho/cm		SM2510B
Temperature	24.27 °C		SM2550B(2)
Turbidity (Hach)	39.2 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> A988991	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	150 mg/L	10	EPA 310.2
Chloride	35 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	180 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	27 mg/L	1	SM2540D
Solids, Total (TS)	300 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	250 mg/L	10	SM2540C
Sulfate	22 mg/L	0.25	EPA 300.0
COD	41 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.23 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.18 mg/L	0.05	EPA 365.1
TKN	0.73 mg/L	0.3	SM4500N(Org)-D
TOC	11 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13603	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1553.1 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0026 **Sample Date:** 7/23/2013 **IDEM Sample #:** AB11749
Water Flow Type Pool **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Turbidity with Hach = 30.4

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	69.1 %		SM4500-OG
DO	5.84 mg/L		SM4500-OG
pH (Field)	7.89 SU		EPA 150.2
Specific Conductance (Field)	411 umho/cm		SM2510B
Temperature	23.3 °C		SM2550B(2)
Turbidity (Hach)	30.4 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: LMG-05-0026 **Sample Date:** 8/7/2013 **IDEM Sample #:** AB14010
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	81.5 %		ASTM D888-09(C)
DO	7.25 mg/L		ASTM D888-09(C)
pH (Field)	7.68 SU		EPA 150.2
Specific Conductance (Field)	81.5 umho/cm		SM2510B
Temperature	21.05 °C		SM2550B(2)
Turbidity (Hach)	34.5 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 #: A991498	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	110 mg/L	10	EPA 310.2
Chloride	34 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	170 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	15 mg/L	1	SM2540D
Solids, Total (TS)	290 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	230 mg/L	10	SM2540C
Sulfate	29 mg/L	1.3	EPA 300.0
COD	24 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.14 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.18 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.11 mg/L	0.05	EPA 365.1
TKN	0.62 mg/L	0.3	SM4500N(Org)-D
TOC	6.5 mg/L	1	SM5310C

Lab ID #: AB14010	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	488.4 MPN/100mL	1	SM9223B

SiteID: LMG-05-0026 **Sample Date:** 9/10/2013 **IDEM Sample #:** AB12835
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	82.3 %		ASTM D888-09(C)
DO	7.4 mg/L		ASTM D888-09(C)
pH (Field)	7.79 SU		EPA 150.2
Specific Conductance (Field)	339 umho/cm		SM2510B
Temperature	20.48 °C		SM2550B(2)
Turbidity	4.3 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: AB12835	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	24.9 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0026

Sample Date: 9/11/2013

IDEM Sample #: AB14626

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	86.5 %		ASTM D888-09(C)
DO	7.88 mg/L		ASTM D888-09(C)
pH (Field)	7.56 SU		EPA 150.2
Specific Conductance (Field)	317 umho/cm		SM2510B
Temperature	19.86 °C		SM2550B(2)
Turbidity (Hach)	2.53 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 #: A994715	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	130 mg/L	10	EPA 310.2
Chloride	20 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	140 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	1 mg/L	1	SM2540D
Solids, Total (TS)	180 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	180 mg/L	10	SM2540C
Sulfate	21 mg/L	0.25	EPA 300.0
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.22 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.08 mg/L	0.05	EPA 365.1
TKN	0.46 mg/L	0.3	SM4500N(Org)-D
TOC	2.5 mg/L	1	SM5310C

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

SiteID: LMG-05-0026 Sample Date: 9/17/2013 IDEM Sample #: AB12874
 Water Flow Type Stagnant 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	80.3 %		ASTM D888-09(C)
DO	7.76 mg/L		ASTM D888-09(C)
pH (Field)	7.9 SU		EPA 150.2
Specific Conductance (Field)	389 umho/cm		SM2510B
Temperature	17.24 °C		SM2550B(2)
Turbidity	3.5 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	2 Lookup		Observation
Lab ID #: AB12874	Result	Reporting Limit	Method
Coliforms (Total)	686.7 MPN/100mL	1	SM9223B
E. coli	6.3 MPN/100mL	1	SM9223B

SiteID: LMG-05-0026 Sample Date: 9/24/2013 IDEM Sample #: AB12913
 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	80.8 %		ASTM D888-09(C)
DO	8.09 mg/L		ASTM D888-09(C)
pH (Field)	7.82 SU		EPA 150.2
Specific Conductance (Field)	409 umho/cm		SM2510B
Temperature	15.3 °C		SM2550B(2)
Turbidity	20.4 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	9 Lookup		Observation
Wind Strength	2 Lookup		Observation
Lab ID #: AB12913	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1046.2 MPN/100mL	1	SM9223B

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

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: LMG-05-0027 **USGS Hydrologic Unit:** 040400010503
Stream Name: Turkey Creek **County:** Lake
Description: SR 55 **Latitude:** 41 29 55.14927 **Longitude:** -87 21 53.14879
Drainage: 21.179 **Site Number:** 13T-032

SiteID: LMG-05-0027 **Sample Date:** 7/10/2013 **IDEM Sample #:** AB13604
Water Flow Type: Glide **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	61.1 %		ASTM D888-09(C)
DO	5.2 mg/L		ASTM D888-09(C)
pH (Field)	7.62 SU		EPA 150.2
Specific Conductance (Field)	638 umho/cm		SM2510B
Temperature	23.32 °C		SM2550B(2)
Turbidity (Hach)	16.6 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Flow	20.7778 cf/sec		TM D5389-95/D3858
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> A988992	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	180 mg/L	10	EPA 310.2
Chloride	42 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	260 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	17 mg/L	1	SM2540D
Solids, Total (TS)	410 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	350 mg/L	10	SM2540C
Sulfate	50 mg/L	1.3	EPA 300.0
COD	38 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.66 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.092 mg/L	0.05	EPA 365.1
TKN	0.83 mg/L	0.3	SM4500N(Org)-D
TOC	9.1 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13604	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	517.2 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0027 **Sample Date:** 7/23/2013 **IDEM Sample #:** AB11750
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	54.3 %		SM4500-OG
DO	4.58 mg/L		SM4500-OG
pH (Field)	7.75 SU		EPA 150.2
Specific Conductance (Field)	682 umho/cm		SM2510B
Temperature	23.63 °C		SM2550B(2)
Turbidity (Hach)	10.1 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	Lookup		Observation
Wind Direction	Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: LMG-05-0027 **Sample Date:** 8/7/2013 **IDEM Sample #:** AB14011
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	62.4 %		ASTM D888-09(C)
DO	5.47 mg/L		ASTM D888-09(C)
pH (Field)	7.75 SU		EPA 150.2
Specific Conductance (Field)	811 umho/cm		SM2510B
Temperature	21.82 °C		SM2550B(2)
Turbidity (Hach)	5.93 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Flow	3.2559 cf/sec		TM D5389-95/D3858
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 #: A991499	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	240 mg/L	20	EPA 310.2
Chloride	53 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	370 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	5 mg/L	1	SM2540D
Solids, Total (TS)	560 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	490 mg/L	10	SM2540C
Sulfate	140 mg/L	1.3	EPA 300.0
COD	18 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.038 mg/L	0.01	EPA 353.2
Phosphorus, Total	< 0.05 mg/L	0.05	EPA 365.1
TKN	0.53 mg/L	0.3	SM4500N(Org)-D
TOC	5.5 mg/L	1	SM5310C

Lab ID #: AB14011	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	866.4 MPN/100mL	1	SM9223B

SiteID: LMG-05-0027 **Sample Date:** 9/10/2013 **IDEM Sample #:** AB12836
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	63 %		ASTM D888-09(C)
DO	5.29 mg/L		ASTM D888-09(C)
pH (Field)	7.91 SU		EPA 150.2
Specific Conductance (Field)	819 umho/cm		SM2510B
Temperature	24.02 °C		SM2550B(2)
Turbidity	7.3 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12836	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	107.6 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0027

Sample Date: 9/11/2013

IDEM Sample #: AB14627

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	71.8 %		ASTM D888-09(C)
DO	6.09 mg/L		ASTM D888-09(C)
pH (Field)	7.83 SU		EPA 150.2
Specific Conductance (Field)	791 umho/cm		SM2510B
Temperature	23.55 °C		SM2550B(2)
Turbidity (Hach)	6.93 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Flow	2.427 cf/sec		TM D5389-95/D3858
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: A994716	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	300 mg/L	50	EPA 310.2
Chloride	29 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	390 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	5 mg/L	1	SM2540D
Solids, Total (TS)	520 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	500 mg/L	10	SM2540C
Sulfate	110 mg/L	1.3	EPA 300.0
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.022 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.058 mg/L	0.05	EPA 365.1
TKN	0.35 mg/L	0.3	SM4500N(Org)-D
TOC	4.6 mg/L	1	SM5310C

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

SiteID: LMG-05-0027 Sample Date: 9/17/2013 IDEM Sample #: AB12875
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	71.9 %		ASTM D888-09(C)
DO	7.28 mg/L		ASTM D888-09(C)
pH (Field)	8.04 SU		EPA 150.2
Specific Conductance (Field)	757 umho/cm		SM2510B
Temperature	14.67 °C		SM2550B(2)
Turbidity	7.9 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12875	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	185 MPN/100mL	1	SM9223B

SiteID: LMG-05-0027 Sample Date: 9/24/2013 IDEM Sample #: AB12914
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	74.4 %		ASTM D888-09(C)
DO	7.59 mg/L		ASTM D888-09(C)
pH (Field)	7.89 SU		EPA 150.2
Specific Conductance (Field)	793 umho/cm		SM2510B
Temperature	14.35 °C		SM2550B(2)
Turbidity	7.1 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12914	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	125 MPN/100mL	1	SM9223B

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

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

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

SiteID: LMG-05-0028 **USGS Hydrologic Unit:** 040400010503
Stream Name: Tributary of Turkey Creek **County:** Lake
Description: 73rd Avenue **Latitude:** 41 29 8.36566 **Longitude:** -87 22 25.01390
Drainage: 1.731 **Site Number:** 13T-033

SiteID: LMG-05-0028 **Sample Date:** 7/10/2013 **IDEM Sample #:** AB13605
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	83.1 %		ASTM D888-09(C)
DO	7.14 mg/L		ASTM D888-09(C)
pH (Field)	7.9 SU		EPA 150.2
Specific Conductance (Field)	483 umho/cm		SM2510B
Temperature	22.85 °C		SM2550B(2)
Turbidity (Hach)	32.6 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> A988993	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	160 mg/L	10	EPA 310.2
Chloride	30 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	200 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	14 mg/L	1	SM2540D
Solids, Total (TS)	320 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	260 mg/L	10	SM2540C
Sulfate	21 mg/L	1.3	EPA 300.0
COD	34 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.75 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.13 mg/L	0.05	EPA 365.1
TKN	0.86 mg/L	0.3	SM4500N(Org)-D
TOC	7.9 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13605	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	2419.6 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0028 **Sample Date:** 7/23/2013 **IDEM Sample #:** AB11751
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Turbidity taken with Hach = 23.1

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	17.2 %		SM4500-OG
DO	1.46 mg/L		SM4500-OG
pH (Field)	7.51 SU		EPA 150.2
Specific Conductance (Field)	702 umho/cm		SM2510B
Temperature	23.55 °C		SM2550B(2)
Turbidity (Hach)	23.1 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: LMG-05-0028 **Sample Date:** 8/7/2013 **IDEM Sample #:** AB14012
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	21.7 %		ASTM D888-09(C)
DO	1.97 mg/L		ASTM D888-09(C)
pH (Field)	7.56 SU		EPA 150.2
Specific Conductance (Field)	967 umho/cm		SM2510B
Temperature	20.74 °C		SM2550B(2)
Turbidity (Hach)	7.1 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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

Lab ID #: A991500	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	190 mg/L	50	EPA 310.2
Chloride	54 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	290 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	3 mg/L	1	SM2540D
Solids, Total (TS)	430 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	360 mg/L	10	SM2540C
Sulfate	36 mg/L	1.3	EPA 300.0
COD	24 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.013 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.071 mg/L	0.05	EPA 365.1
TKN	0.79 mg/L	0.3	SM4500N(Org)-D
TOC	6.9 mg/L	1	SM5310C

Lab ID #: AB14012	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	866.4 MPN/100mL	1	SM9223B

SiteID: LMG-05-0028 **Sample Date:** 9/10/2013 **IDEM Sample #:** AB12837
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Rip rap dam upstream of site

Lab ID #:	Result	Reporting Limit	Method
% Sat	24.8 %		ASTM D888-09(C)
DO	2.14 mg/L		ASTM D888-09(C)
pH (Field)	7.5 SU		EPA 150.2
Specific Conductance (Field)	1241 umho/cm		SM2510B
Temperature	22.52 °C		SM2550B(2)
Turbidity	34.5 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: AB12837	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	103.9 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0028

Sample Date: 9/11/2013

IDEM Sample #: AB14628

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	26.5 %		ASTM D888-09(C)
DO	2.26 mg/L		ASTM D888-09(C)
pH (Field)	7.47 SU		EPA 150.2
Specific Conductance (Field)	1356 umho/cm		SM2510B
Temperature	22.32 °C		SM2550B(2)
Turbidity (Hach)	16.1 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 #: A994717	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	390 mg/L	50	EPA 310.2
Chloride	73 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	430 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	44 mg/L	1	SM2540D
Solids, Total (TS)	630 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	540 mg/L	10	SM2540C
Sulfate	33 mg/L	0.25	EPA 300.0
COD	36 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	< 0.01 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.14 mg/L	0.05	EPA 365.1
TKN	1.3 mg/L	0.3	SM4500N(Org)-D
TOC	7.6 mg/L	5	SM5310C

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

SiteID: LMG-05-0028 **Sample Date:** 9/17/2013 **IDEM Sample #:** AB12876
Water Flow Type Stagnant **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Rip rap dam upstream of site

Lab ID #:	Result	Reporting Limit	Method
% Sat	49.7 %		ASTM D888-09(C)
DO	5.2 mg/L		ASTM D888-09(C)
pH (Field)	7.75 SU		EPA 150.2
Specific Conductance (Field)	877 umho/cm		SM2510B
Temperature	13.28 °C		SM2550B(2)
Turbidity	19.5 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12876			
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	920.8 MPN/100mL	1	SM9223B

SiteID: LMG-05-0028 **Sample Date:** 9/24/2013 **IDEM Sample #:** AB12915
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Rip rap dam upstream of site

Lab ID #:	Result	Reporting Limit	Method
% Sat	86.4 %		ASTM D888-09(C)
DO	9.13 mg/L		ASTM D888-09(C)
pH (Field)	7.87 SU		EPA 150.2
Specific Conductance (Field)	620 umho/cm		SM2510B
Temperature	12.77 °C		SM2550B(2)
Turbidity	7.4 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation
Lab ID #: AB12915			
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	344.8 MPN/100mL	1	SM9223B

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

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

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

SiteID: LMG-05-0029 **USGS Hydrologic Unit:** 040400010505
Stream Name: Tributary of Turkey Creek **County:** Lake
Description: Arthur Street **Latitude:** 41 30 21.17193 **Longitude:** -87 21 31.34692
Drainage: 5.595 **Site Number:** 13T-034

SiteID: LMG-05-0029 **Sample Date:** 7/10/2013 **IDEM Sample #:** AB13606
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	35.8 %		ASTM D888-09(C)
DO	3.04 mg/L		ASTM D888-09(C)
pH (Field)	7.31 SU		EPA 150.2
Specific Conductance (Field)	536 umho/cm		SM2510B
Temperature	23.38 °C		SM2550B(2)
Turbidity (Hach)	3.83 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> A988994	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	150 mg/L	10	EPA 310.2
Chloride	56 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	170 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	3 mg/L	1	SM2540D
Solids, Total (TS)	340 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	280 mg/L	10	SM2540C
Sulfate	18 mg/L	1.3	EPA 300.0
COD	36 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.15 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.18 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.13 mg/L	0.05	EPA 365.1
TKN	1 mg/L	0.3	SM4500N(Org)-D
TOC	10 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13606	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	125.9 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0029 **Sample Date:** 7/23/2013 **IDEM Sample #:** AB11752
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	4.7 %		SM4500-OG
DO	0.41 mg/L		SM4500-OG
pH (Field)	7.5 SU		EPA 150.2
Specific Conductance (Field)	783 umho/cm		SM2510B
Temperature	23.15 °C		SM2550B(2)
Turbidity (Hach)	58.9 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: LMG-05-0029 **Sample Date:** 8/7/2013 **IDEM Sample #:** AB14013
Water Flow Type Glide **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	24.4 %		ASTM D888-09(C)
DO	2.14 mg/L		ASTM D888-09(C)
pH (Field)	7.4 SU		EPA 150.2
Specific Conductance (Field)	535 umho/cm		SM2510B
Temperature	22.51 °C		SM2550B(2)
Turbidity (Hach)	12.5 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 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 #: A991501	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	100 mg/L	10	EPA 310.2
Chloride	85 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	140 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	9 mg/L	1	SM2540D
Solids, Total (TS)	350 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	280 mg/L	10	SM2540C
Sulfate	23 mg/L	1.3	EPA 300.0
COD	34 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.3 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.059 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.19 mg/L	0.05	EPA 365.1
TKN	1.7 mg/L	0.3	SM4500N(Org)-D
TOC	9.2 mg/L	5	SM5310C

Lab ID #: AB14013	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	686.7 MPN/100mL	1	SM9223B

SiteID: LMG-05-0029 **Sample Date:** 9/10/2013 **IDEM Sample #:** AB12838
Water Flow Type Stagnant **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	8.4 %		ASTM D888-09(C)
DO	0.71 mg/L		ASTM D888-09(C)
pH (Field)	7.4 SU		EPA 150.2
Specific Conductance (Field)	833 umho/cm		SM2510B
Temperature	23.89 °C		SM2550B(2)
Turbidity	97.2 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: AB12838	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	131.4 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0029

Sample Date: 9/11/2013

IDEM Sample #: AB14629

Water Flow Type Glide

Water Appearance Brown

Water Depth

Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	12.2 %		ASTM D888-09(C)
DO	0.98 mg/L		ASTM D888-09(C)
pH (Field)	7.3 SU		EPA 150.2
Specific Conductance (Field)	812 umho/cm		SM2510B
Temperature	23.71 °C		SM2550B(2)
Turbidity (Hach)	141 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 #: A994718	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	140 mg/L	10	EPA 310.2
Chloride	150 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	200 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	100 mg/L	1	SM2540D
Solids, Total (TS)	560 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	470 mg/L	10	SM2540C
Sulfate	25 mg/L	0.25	EPA 300.0
COD	28 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.59 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	< 0.01 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.39 mg/L	0.05	EPA 365.1
TKN	1.1 mg/L	0.3	SM4500N(Org)-D
TOC	9.1 mg/L	5	SM5310C

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

SiteID: LMG-05-0029 Sample Date: 9/17/2013 IDEM Sample #: AB12877
 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	21.8 %		ASTM D888-09(C)
DO	2.26 mg/L		ASTM D888-09(C)
pH (Field)	7.62 SU		EPA 150.2
Specific Conductance (Field)	752 umho/cm		SM2510B
Temperature	13.75 °C		SM2550B(2)
Turbidity	69.2 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12877	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	118.7 MPN/100mL	1	SM9223B

SiteID: LMG-05-0029 Sample Date: 9/24/2013 IDEM Sample #: AB12916
 Water Flow Type Run Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: Pipe discharging upstream of site; discharge is foamy and picture was taken

Lab ID #:	Result	Reporting Limit	Method
% Sat	44.7 %		ASTM D888-09(C)
DO	4.46 mg/L		ASTM D888-09(C)
pH (Field)	7.53 SU		EPA 150.2
Specific Conductance (Field)	560 umho/cm		SM2510B
Temperature	15.38 °C		SM2550B(2)
Turbidity	18.7 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12916	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	461.1 MPN/100mL	1	SM9223B

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

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: LMG-05-0030 **USGS Hydrologic Unit:** 040400010505
Stream Name: Tributary of Turkey Creek **County:** Lake
Description: 73rd Avenue **Latitude:** 41 29 7.67421 **Longitude:** -87 20 25.37089
Drainage: 3.973 **Site Number:** 13T-035

SiteID: LMG-05-0030 **Sample Date:** 7/10/2013 **IDEM Sample #:** AB13607
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	77.5 %		ASTM D888-09(C)
DO	6.5 mg/L		ASTM D888-09(C)
pH (Field)	7.78 SU		EPA 150.2
Specific Conductance (Field)	814 umho/cm		SM2510B
Temperature	24.08 °C		SM2550B(2)
Turbidity (Hach)	24 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> A988995	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	110 mg/L	10	EPA 310.2
Chloride	160 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	160 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	16 mg/L	1	SM2540D
Solids, Total (TS)	450 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	410 mg/L	10	SM2540C
Sulfate	37 mg/L	2.5	EPA 300.0
COD	22 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.36 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.07 mg/L	0.05	EPA 365.1
TKN	0.55 mg/L	0.3	SM4500N(Org)-D
TOC	5 mg/L	5	SM5310C

<u>Lab ID #:</u> AB13607	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

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

SiteID: LMG-05-0030 **Sample Date:** 7/22/2013 **IDEM Sample #:** AB11753
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Turbidity taken with Hach = 8.05

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	71.2 %		SM4500-OG
DO	5.78 mg/L		SM4500-OG
pH (Field)	7.9 SU		EPA 150.2
Specific Conductance (Field)	881 umho/cm		SM2510B
Temperature	25.12 °C		SM2550B(2)
Turbidity (Hach)	8.05 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	Lookup		Observation
Wind Direction	Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: LMG-05-0030 **Sample Date:** 8/7/2013 **IDEM Sample #:** AB14014
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	75.4 %		ASTM D888-09(C)
DO	6.61 mg/L		ASTM D888-09(C)
pH (Field)	7.81 SU		EPA 150.2
Specific Conductance (Field)	911 umho/cm		SM2510B
Temperature	21.81 °C		SM2550B(2)
Turbidity (Hach)	12.4 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 #: A991502	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	100 mg/L	10	EPA 310.2
Chloride	200 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	190 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	6 mg/L	1	SM2540D
Solids, Total (TS)	560 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	480 mg/L	10	SM2540C
Sulfate	65 mg/L	2.5	EPA 300.0
COD	18 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.24 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.052 mg/L	0.05	EPA 365.1
TKN	0.67 mg/L	0.3	SM4500N(Org)-D
TOC	6 mg/L	5	SM5310C

Lab ID #: AB14014	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1299.7 MPN/100mL	1	SM9223B

SiteID: LMG-05-0030 **Sample Date:** 9/10/2013 **IDEM Sample #:** AB12839
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	71 %		ASTM D888-09(C)
DO	6.04 mg/L		ASTM D888-09(C)
pH (Field)	7.89 SU		EPA 150.2
Specific Conductance (Field)	846 umho/cm		SM2510B
Temperature	23.38 °C		SM2550B(2)
Turbidity	13.3 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12839	Result	Reporting Limit	Method
E. coli	648.8 MPN/100mL	1	SM9223B

Lab ID #: AB12839a	Result	Reporting Limit	Method
Coliforms (Total)	24196 MPN/100mL	10	SM9223B

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

SiteID: LMG-05-0030

Sample Date: 9/11/2013

IDEM Sample #: AB14630

Water Flow Type Glide

Water Appearance Brown

Water Depth

Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments: Exceptionally turbid based on previous sampling.

Lab ID #:	Result	Reporting Limit	Method
% Sat	75.1 %		ASTM D888-09(C)
DO	6.51 mg/L		ASTM D888-09(C)
pH (Field)	7.91 SU		EPA 150.2
Specific Conductance (Field)	439 umho/cm		SM2510B
Temperature	22.34 °C		SM2550B(2)
Turbidity (Hach)	408 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 #: A994719	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	67 mg/L	10	EPA 310.2
Chloride	41 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	170 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	150 mg/L	1	SM2540D
Solids, Total (TS)	480 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	260 mg/L	10	SM2540C
Sulfate	29 mg/L	0.25	EPA 300.0
COD	15 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.13 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.34 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.37 mg/L	0.05	EPA 365.1
TKN	0.96 mg/L	0.3	SM4500N(Org)-D
TOC	3.2 mg/L	1	SM5310C

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

SiteID: LMG-05-0030 Sample Date: 9/17/2013 IDEM Sample #: AB12878
 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	82.8 %		ASTM D888-09(C)
DO	8.35 mg/L		ASTM D888-09(C)
pH (Field)	8.12 SU		EPA 150.2
Specific Conductance (Field)	886 umho/cm		SM2510B
Temperature	14.88 °C		SM2550B(2)
Turbidity	11.9 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12878	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1119.9 MPN/100mL	1	SM9223B

SiteID: LMG-05-0030 Sample Date: 9/24/2013 IDEM Sample #: AB12917
 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	84.7 %		ASTM D888-09(C)
DO	8.35 mg/L		ASTM D888-09(C)
pH (Field)	7.99 SU		EPA 150.2
Specific Conductance (Field)	786 umho/cm		SM2510B
Temperature	15.96 °C		SM2550B(2)
Turbidity	24.4 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12917	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1299.7 MPN/100mL	1	SM9223B

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

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: LMG-05-0031 **USGS Hydrologic Unit:** 040400010505
Stream Name: Turkey Creek **County:** Lake
Description: Liverpool Road **Latitude:** 41 30 43.24502 **Longitude:** -87 18 24.97031
Drainage: 37.922 **Site Number:** 13T-036

SiteID: LMG-05-0031 **Sample Date:** 7/10/2013 **IDEM Sample #:** AB13608
Water Flow Type: Glide **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	59.8 %		ASTM D888-09(C)
DO	5.07 mg/L		ASTM D888-09(C)
pH (Field)	7.57 SU		EPA 150.2
Specific Conductance (Field)	643 umho/cm		SM2510B
Temperature	23.58 °C		SM2550B(2)
Turbidity (Hach)	18.6 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Flow	51.662 cf/sec		TM D5389-95/D3858
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> A988996	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	170 mg/L	10	EPA 310.2
Chloride	64 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	230 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	14 mg/L	1	SM2540D
Solids, Total (TS)	380 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	370 mg/L	10	SM2540C
Sulfate	46 mg/L	1.3	EPA 300.0
COD	33 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.11 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.58 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.1 mg/L	0.05	EPA 365.1
TKN	0.5 mg/L	0.3	SM4500N(Org)-D
TOC	8.1 mg/L	1	SM5310C

<u>Lab ID #:</u> AB13608	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1046.2 MPN/100mL	1	SM9223B

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

SiteID: LMG-05-0031 Sample Date: 7/23/2013 IDEM Sample #: AB11754
 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	56.6 %		SM4500-OG
DO	4.63 mg/L		SM4500-OG
pH (Field)	7.76 SU		EPA 150.2
Specific Conductance (Field)	722 umho/cm		SM2510B
Temperature	24.27 °C		SM2550B(2)
Turbidity (Hach)	17 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

SiteID: LMG-05-0031 Sample Date: 8/7/2013 IDEM Sample #: AB14015
 Water Flow Type Glide Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	62.2 %		ASTM D888-09(C)
DO	5.52 mg/L		ASTM D888-09(C)
pH (Field)	7.72 SU		EPA 150.2
Specific Conductance (Field)	840 umho/cm		SM2510B
Temperature	21.12 °C		SM2550B(2)
Turbidity (Hach)	23.4 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Flow	12.67 cf/sec		TM D5389-95/D3858
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 #: A991503	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	190 mg/L	50	EPA 310.2
Chloride	74 mg/L	1.3	EPA 300.0
Hardness (as CaCO3)	340 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	13 mg/L	1	SM2540D
Solids, Total (TS)	580 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	490 mg/L	10	SM2540C
Sulfate	89 mg/L	1.3	EPA 300.0
COD	23 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.094 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.064 mg/L	0.05	EPA 365.1
TKN	0.62 mg/L	0.3	SM4500N(Org)-D
TOC	5.1 mg/L	1	SM5310C

Lab ID #: AB14015	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

SiteID: LMG-05-0031 **Sample Date:** 9/10/2013 **IDEM Sample #:** AB12840
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	60.7 %		ASTM D888-09(C)
DO	5.23 mg/L		ASTM D888-09(C)
pH (Field)	7.82 SU		EPA 150.2
Specific Conductance (Field)	926 umho/cm		SM2510B
Temperature	22.64 °C		SM2550B(2)
Turbidity	8.2 NTU		SM2130B Mod
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB12840	Result	Reporting Limit	Method
E. coli	686.7 MPN/100mL	1	SM9223B

Lab ID #: AB12840a	Result	Reporting Limit	Method
Coliforms (Total)	24196 MPN/100mL	10	SM9223B

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

SiteID: LMG-05-0031

Sample Date: 9/11/2013

IDEM Sample #: AB14631

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	87 %		ASTM D888-09(C)
DO	4.9 mg/L		ASTM D888-09(C)
pH (Field)	7.82 SU		EPA 150.2
Specific Conductance (Field)	884 umho/cm		SM2510B
Temperature	22.82 °C		SM2550B(2)
Turbidity (Hach)	7.14 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Flow	14.519 cf/sec		TM D5389-95/D3858
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: A994720	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	320 mg/L	50	EPA 310.2
Chloride	64 mg/L	2.5	EPA 300.0
Hardness (as CaCO3)	390 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	2 mg/L	1	SM2540D
Solids, Total (TS)	560 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	540 mg/L	10	SM2540C
Sulfate	100 mg/L	2.5	EPA 300.0
COD	16 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.046 mg/L	0.01	EPA 353.2
Phosphorus, Total	0.063 mg/L	0.05	EPA 365.1
TKN	0.67 mg/L	0.3	SM4500N(Org)-D
TOC	4.1 mg/L	1	SM5310C

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

SiteID: LMG-05-0031 Sample Date: 9/17/2013 IDEM Sample #: AB12879
 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	73.1 %		ASTM D888-09(C)
DO	7.22 mg/L		ASTM D888-09(C)
pH (Field)	7.95 SU		EPA 150.2
Specific Conductance (Field)	868 umho/cm		SM2510B
Temperature	15.88 °C		SM2550B(2)
Turbidity	18.4 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12879	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	2419.6 MPN/100mL	1	SM9223B

SiteID: LMG-05-0031 Sample Date: 9/24/2013 IDEM Sample #: AB12918
 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	63.7 %		ASTM D888-09(C)
DO	6.42 mg/L		ASTM D888-09(C)
pH (Field)	7.78 SU		EPA 150.2
Specific Conductance (Field)	806 umho/cm		SM2510B
Temperature	14.98 °C		SM2550B(2)
Turbidity	19.6 NTU		SM2130B Mod
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB12918	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1986.3 MPN/100mL	1	SM9223B

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

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	