

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

SiteID: WEL-14-0003 **USGS Hydrologic Unit:** 051202081407
Stream Name: East Fork White River **County:** Martin
Description: CR 3 (Abel Hill Rd) **Latitude:** 38 32 28.27577 **Longitude:** -86 49 3.69373
Drainage: **Site Number:** 18T-001

SiteID: WEL-14-0003 **Sample Date:** 2/19/2018 **IDEM Sample #:** AB31799
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	91.4 %		ASTM D888-09(C)
DO	10.87 mg/L		ASTM D888-09(C)
pH (Field)	7.98 SU		EPA 150.2
Specific Conductance (Field)	324.8 umho/cm		SM2510B
Temperature	7.819 °C		SM2550B(2)
Turbidity (Hach)	204 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	4 Lookup		Observation

<u>Lab ID #</u> 500-141179-1	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	120 mg/L	5	SM2320B
Chloride	19 mg/L	1	EPA 300.0
Hardness (as CaCO3)	150 mg/L	1.3	SM2340B
Solids, Suspended Total, (TSS)	160 mg/L	9.1	SM2540D
Solids, Total (TS)	450 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	230 mg/L	10	SM2540C
Sulfate	18 mg/L	0.4	EPA 300.0
Calcium (Total)	40 mg/L	0.2	EPA 200.7
Magnesium (Total)	11 mg/L	0.1	EPA 200.7
COD	31 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.7 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.27 mg/L	0.05	SM4500P-E
TKN	0.75 mg/L	0.4	SM4500N(Org)-D
TOC	5 mg/L	1	SM5310C

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SiteID: WEL-14-0003 **Sample Date:** 3/12/2018 **IDEM Sample #:** AB32006
Water Flow Type Run **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #	Result	Reporting Limit	Method
	% Sat	91.8 %	ASTM D888-09(C)
	DO	11.15 mg/L	ASTM D888-09(C)
	pH (Field)	8.31 SU	EPA 150.2
	Specific Conductance (Field)	420.5 umho/cm	SM2510B
	Temperature	6.947 °C	SM2550B(2)
	Turbidity (Hach)	25.7 NTU	EPA 180.1
	Air Temp	2 Lookup	Observation
	Sky Conditions	4 Lookup	Observation
	Wind Direction	0 Lookup	Observation
	Wind Strength	1 Lookup	Observation

Lab ID # 500-142177-1	Result	Reporting Limit	Method	
	Alkalinity (as CaCO3)	170 mg/L	5	SM2320B
	Chloride	19 mg/L	1	EPA 300.0
	Hardness (as CaCO3)	210 mg/L	1.3	SM2340B
	Solids, Suspended Total, (TSS)	31 mg/L	5	SM2540D
	Solids, Total (TS)	270 mg/L	10	SM2540B
	Solids, Total Dissolved (TDS)	240 mg/L	10	SM2540C
	Sulfate	25 mg/L	1	EPA 300.0
	Calcium (Total)	57 mg/L	0.2	EPA 200.7
	Magnesium (Total)	15 mg/L	0.1	EPA 200.7
	COD	14 mg/L	10	SM5220C
	Nitrogen, Ammonia	< 0.2 mg/L	0.2	SM4500NH3-G
	Nitrogen, Nitrate+Nitrite	1.8 mg/L	0.1	SM4500NO3-F
	Phosphorus, Total	0.1 mg/L	0.05	SM4500P-E
	TKN	0.45 mg/L	0.4	SM4500N(Org)-D
	TOC	2.8 mg/L	1	SM5310C

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

**Indiana Department of Environmental Management
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SiteID: WEL-15-0008 **USGS Hydrologic Unit:** 051202081503
Stream Name: Slate Creek **County:** Martin
Description: CR 22 **Latitude:** 38 32 14.20475 **Longitude:** -86 54 16.36733
Drainage: **Site Number:** 18T-002

SiteID: WEL-15-0008 **Sample Date:** 4/9/2018 **IDEM Sample #:** AB32625
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	110.7 %		ASTM D888-09(C)
DO	12.69 mg/L		ASTM D888-09(C)
pH (Field)	7.7 SU		EPA 150.2
Specific Conductance (Field)	532 umho/cm		SM2510B
Temperature	9.133 °C		SM2550B(2)
Turbidity (Hach)	7.41 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #</u> 500-143653-8	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	66 mg/L	5	SM2320B
Chloride	12 mg/L	0.4	EPA 300.0
Hardness (as CaCO3)	220 mg/L	1.3	SM2340B
Solids, Suspended Total, (TSS)	6 mg/L	5	SM2540D
Solids, Total (TS)	350 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	310 mg/L	10	SM2540C
Sulfate	160 mg/L	4	EPA 300.0
Calcium (Total)	54 mg/L	0.2	EPA 200.7
Magnesium (Total)	21 mg/L	0.1	EPA 200.7
COD	11 mg/L	10	SM5220C
Nitrogen, Ammonia	0.92 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	3.7 mg/L	0.2	SM4500NO3-F
Phosphorus, Total	0.078 mg/L	0.05	SM4500P-E
TKN	1.3 mg/L	0.4	SM4500N(Org)-D
TOC	3.2 mg/L	1	SM5310C

<u>Lab ID #</u> AB32625	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	648.8 MPN/100mL	1	SM9223B
E. coli	44.1 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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SiteID: WEL-15-0021 **USGS Hydrologic Unit:** 051202081503
Stream Name: Tributary of Slate Cr **County:** Daviess
Description: CR 800 S **Latitude:** 38 32 22.37901 **Longitude:** -86 55 57.04122
Drainage: **Site Number:** 18T-003

SiteID: WEL-15-0021 **Sample Date:** 4/9/2018 **IDEM Sample #:** AB32626
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	111.1 %		ASTM D888-09(C)
DO	12.81 mg/L		ASTM D888-09(C)
pH (Field)	7.94 SU		EPA 150.2
Specific Conductance (Field)	297.5 umho/cm		SM2510B
Temperature	9.103 °C		SM2550B(2)
Turbidity (Hach)	7.83 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #</u> 500-143653-9	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	42 mg/L	5	SM2320B
Chloride	11 mg/L	1	EPA 300.0
Hardness (as CaCO3)	110 mg/L	1.3	SM2340B
Solids, Suspended Total, (TSS)	< 5 mg/L	5	SM2540D
Solids, Total (TS)	180 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	140 mg/L	10	SM2540C
Sulfate	60 mg/L	2	EPA 300.0
Calcium (Total)	29 mg/L	0.2	EPA 200.7
Magnesium (Total)	10 mg/L	0.1	EPA 200.7
COD	6.8 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	3.6 mg/L	0.2	SM4500NO3-F
Phosphorus, Total	0.045 mg/L	0.05	SM4500P-E
TKN	0.47 mg/L	0.4	SM4500N(Org)-D
TOC	1.9 mg/L	1	SM5310C

<u>Lab ID #</u> AB32626	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	461.1 MPN/100mL	1	SM9223B
E. coli	18.5 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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SiteID: WEL-15-0007 **USGS Hydrologic Unit:** 051202081503
Stream Name: Slate Creek **County:** Daviess
Description: CR 1250 E **Latitude:** 38 30 45.00625 **Longitude:** -86 56 0.06098
Drainage: **Site Number:** 18T-004

SiteID: WEL-15-0007 **Sample Date:** 2/19/2018 **IDEM Sample #:** AB31800
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	93.2 %		ASTM D888-09(C)
DO	10.63 mg/L		ASTM D888-09(C)
pH (Field)	7.49 SU		EPA 150.2
Specific Conductance (Field)	412.8 umho/cm		SM2510B
Temperature	9.314 °C		SM2550B(2)
Turbidity (Hach)	27.1 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	3 Lookup		Observation

<u>Lab ID #</u> 500-141179-2	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	57 mg/L	5	SM2320B
Chloride	18 mg/L	1	EPA 300.0
Hardness (as CaCO3)	150 mg/L	1.3	SM2340B
Solids, Suspended Total, (TSS)	23 mg/L	5	SM2540D
Solids, Total (TS)	350 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	270 mg/L	10	SM2540C
Sulfate	79 mg/L	4	EPA 300.0
Calcium (Total)	39 mg/L	0.2	EPA 200.7
Magnesium (Total)	13 mg/L	0.1	EPA 200.7
COD	15 mg/L	10	SM5220C
Nitrogen, Ammonia	0.18 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	8.5 mg/L	0.5	SM4500NO3-F
Phosphorus, Total	0.14 mg/L	0.05	SM4500P-E
TKN	0.78 mg/L	0.4	SM4500N(Org)-D
TOC	3.4 mg/L	1	SM5310C

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

SiteID: WEL-15-0007 Sample Date: 3/12/2018 IDEM Sample #: AB32007
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #	Result	Reporting Limit	Method
% Sat	88.8 %		ASTM D888-09(C)
DO	11.56 mg/L		ASTM D888-09(C)
pH (Field)	7.97 SU		EPA 150.2
Specific Conductance (Field)	526 umho/cm		SM2510B
Temperature	4.212 °C		SM2550B(2)
Turbidity (Hach)	11.4 NTU		EPA 180.1
Air Temp	2 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID # 500-142177-2	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	74 mg/L	5	SM2320B
Chloride	18 mg/L	2	EPA 300.0
Hardness (as CaCO3)	220 mg/L	1.3	SM2340B
Solids, Suspended Total, (TSS)	11 mg/L	5	SM2540D
Solids, Total (TS)	360 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	330 mg/L	10	SM2540C
Sulfate	140 mg/L	4	EPA 300.0
Calcium (Total)	57 mg/L	0.2	EPA 200.7
Magnesium (Total)	20 mg/L	0.1	EPA 200.7
COD	9 mg/L	10	SM5220C
Nitrogen, Ammonia	0.13 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	4.7 mg/L	0.5	SM4500NO3-F
Phosphorus, Total	0.09 mg/L	0.05	SM4500P-E
TKN	0.51 mg/L	0.4	SM4500N(Org)-D
TOC	2.9 mg/L	1	SM5310C

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

SiteID: WEL-15-0007

Sample Date: 4/9/2018

IDEM Sample #: AB32627

Water Flow Type Flood

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	85.9 %	ASTM D888-09(C)
	DO	9.88 mg/L	ASTM D888-09(C)
	pH (Field)	7.8 SU	EPA 150.2
	Specific Conductance (Field)	340.4 umho/cm	SM2510B
	Temperature	9.131 °C	SM2550B(2)
	Turbidity (Hach)	15.9 NTU	EPA 180.1
	Air Temp	3 Lookup	Observation
	Sky Conditions	1 Lookup	Observation
	Wind Direction	18 Lookup	Observation
	Wind Strength	1 Lookup	Observation

Lab ID # 500-143653-10	Result	Reporting Limit	Method
	Alkalinity (as CaCO3)	57 mg/L	5 SM2320B
	Chloride	12 mg/L	1 EPA 300.0
	Hardness (as CaCO3)	140 mg/L	1.3 SM2340B
	Solids, Suspended Total, (TSS)	8.5 mg/L	5 SM2540D
	Solids, Total (TS)	210 mg/L	10 SM2540B
	Solids, Total Dissolved (TDS)	180 mg/L	10 SM2540C
	Sulfate	68 mg/L	2 EPA 300.0
	Calcium (Total)	36 mg/L	0.2 EPA 200.7
	Magnesium (Total)	11 mg/L	0.1 EPA 200.7
	COD	13 mg/L	10 SM5220C
	Nitrogen, Ammonia	0.15 mg/L	0.2 SM4500NH3-G
	Nitrogen, Nitrate+Nitrite	5.5 mg/L	0.5 SM4500NO3-F
	Phosphorus, Total	0.11 mg/L	0.05 SM4500P-E
	TKN	0.81 mg/L	0.4 SM4500N(Org)-D
	TOC	3.4 mg/L	1 SM5310C

Lab ID # AB32627	Result	Reporting Limit	Method
	Coliforms (Total)	816.4 MPN/100mL	1 SM9223B
	E. coli	28.1 MPN/100mL	1 SM9223B

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

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

SiteID: WEL-15-0011 **USGS Hydrologic Unit:** 051202081501
Stream Name: Mill Creek **County:** Dubois
Description: N Portersville Rd **Latitude:** 38 26 40.65871 **Longitude:** -86 57 26.15257
Drainage: **Site Number:** 18T-005

SiteID: WEL-15-0011 **Sample Date:** 4/9/2018 **IDEM Sample #:** AB32628
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	145.6 %		ASTM D888-09(C)
DO	15.57 mg/L		ASTM D888-09(C)
pH (Field)	8.62 SU		EPA 150.2
Specific Conductance (Field)	426.6 umho/cm		SM2510B
Temperature	12.207 °C		SM2550B(2)
Turbidity (Hach)	6.41 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #</u> 500-143653-11	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	130 mg/L	5	SM2320B
Chloride	29 mg/L	1	EPA 300.0
Hardness (as CaCO3)	160 mg/L	1.3	SM2340B
Solids, Suspended Total, (TSS)	3.5 mg/L	5	SM2540D
Solids, Total (TS)	240 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	250 mg/L	10	SM2540C
Sulfate	36 mg/L	1	EPA 300.0
Calcium (Total)	45 mg/L	0.2	EPA 200.7
Magnesium (Total)	13 mg/L	0.1	EPA 200.7
COD	14 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	5.1 mg/L	0.5	SM4500NO3-F
Phosphorus, Total	0.069 mg/L	0.05	SM4500P-E
TKN	0.45 mg/L	0.4	SM4500N(Org)-D
TOC	2.4 mg/L	1	SM5310C

<u>Lab ID #</u> AB32628	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	920.8 MPN/100mL	1	SM9223B
E. coli	31.3 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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SiteID: WEL-15-0012 **USGS Hydrologic Unit:** 051202081501
Stream Name: Mill Creek **County:** Dubois
Description: CR 700 N **Latitude:** 38 28 52.34422 **Longitude:** -86 57 11.67299
Drainage: **Site Number:** 18T-006

SiteID: WEL-15-0012 **Sample Date:** 2/19/2018 **IDEM Sample #:** AB31801
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	92.2 %		ASTM D888-09(C)
DO	10.78 mg/L		ASTM D888-09(C)
pH (Field)	7.68 SU		EPA 150.2
Specific Conductance (Field)	322.5 umho/cm		SM2510B
Temperature	8.515 °C		SM2550B(2)
Turbidity (Hach)	36.8 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	8 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	3 Lookup		Observation

<u>Lab ID #</u> 500-141179-3	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	83 mg/L	5	SM2320B
Chloride	22 mg/L	1	EPA 300.0
Hardness (as CaCO3)	120 mg/L	1.3	SM2340B
Solids, Suspended Total, (TSS)	35 mg/L	5	SM2540D
Solids, Total (TS)	290 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	180 mg/L	10	SM2540C
Sulfate	26 mg/L	1	EPA 300.0
Calcium (Total)	32 mg/L	0.2	EPA 200.7
Magnesium (Total)	9.8 mg/L	0.1	EPA 200.7
COD	19 mg/L	10	SM5220C
Nitrogen, Ammonia	0.16 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	5.5 mg/L	0.5	SM4500NO3-F
Phosphorus, Total	0.11 mg/L	0.05	SM4500P-E
TKN	0.75 mg/L	0.4	SM4500N(Org)-D
TOC	3.4 mg/L	1	SM5310C

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SiteID: WEL-15-0012 **Sample Date:** 3/12/2018 **IDEM Sample #:** AB32008
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #	Result	Reporting Limit	Method
	% Sat	92.2 %	ASTM D888-09(C)
	DO	12.06 mg/L	ASTM D888-09(C)
	pH (Field)	7.75 SU	EPA 150.2
	Specific Conductance (Field)	351.4 umho/cm	SM2510B
	Temperature	4.01 °C	SM2550B(2)
	Turbidity (Hach)	20.5 NTU	EPA 180.1
	Air Temp	2 Lookup	Observation
	Sky Conditions	3 Lookup	Observation
	Wind Direction	0 Lookup	Observation
	Wind Strength	1 Lookup	Observation

Lab ID # 500-142177-3	Result	Reporting Limit	Method	
	Alkalinity (as CaCO3)	96 mg/L	5	SM2320B
	Chloride	28 mg/L	1	EPA 300.0
	Hardness (as CaCO3)	130 mg/L	1.3	SM2340B
	Solids, Suspended Total, (TSS)	22 mg/L	5	SM2540D
	Solids, Total (TS)	240 mg/L	10	SM2540B
	Solids, Total Dissolved (TDS)	220 mg/L	10	SM2540C
	Sulfate	25 mg/L	1	EPA 300.0
	Calcium (Total)	35 mg/L	0.2	EPA 200.7
	Magnesium (Total)	9.7 mg/L	0.1	EPA 200.7
	COD	14 mg/L	10	SM5220C
	Nitrogen, Ammonia	0.1 mg/L	0.2	SM4500NH3-G
	Nitrogen, Nitrate+Nitrite	3.7 mg/L	0.5	SM4500NO3-F
	Phosphorus, Total	0.097 mg/L	0.05	SM4500P-E
	TKN	0.58 mg/L	0.4	SM4500N(Org)-D
	TOC	3.9 mg/L	1	SM5310C

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: WEL-15-0010 **USGS Hydrologic Unit:** 051202081504
Stream Name: East Fork White River **County:** Dubois
Description: CR 1100 E **Latitude:** 38 30 8.97869 **Longitude:** -86 58 25.60926
Drainage: **Site Number:** 18T-007

SiteID: WEL-15-0010 **Sample Date:** 2/19/2018 **IDEM Sample #:** AB31802
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	91.9 %		ASTM D888-09(C)
DO	10.74 mg/L		ASTM D888-09(C)
pH (Field)	7.84 SU		EPA 150.2
Specific Conductance (Field)	312.8 umho/cm		SM2510B
Temperature	8.534 °C		SM2550B(2)
Turbidity (Hach)	200 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	4 Lookup		Observation

<u>Lab ID #</u> 500-141179-4	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	110 mg/L	5	SM2320B
Chloride	16 mg/L	1	EPA 300.0
Hardness (as CaCO3)	140 mg/L	1.3	SM2340B
Solids, Suspended Total, (TSS)	210 mg/L	11	SM2540D
Solids, Total (TS)	440 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	220 mg/L	10	SM2540C
Sulfate	17 mg/L	0.4	EPA 300.0
Calcium (Total)	40 mg/L	0.2	EPA 200.7
Magnesium (Total)	10 mg/L	0.1	EPA 200.7
COD	33 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.6 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.26 mg/L	0.05	SM4500P-E
TKN	0.75 mg/L	0.4	SM4500N(Org)-D
TOC	4.9 mg/L	1	SM5310C

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

SiteID: WEL-15-0010

Sample Date: 3/12/2018

IDEM Sample #: AB32009

Water Flow Type Run

Water Appearance Brown

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #	Result	Reporting Limit	Method
% Sat	92.1 %		ASTM D888-09(C)
DO	11.25 mg/L		ASTM D888-09(C)
pH (Field)	8.08 SU		EPA 150.2
Specific Conductance (Field)	415.3 umho/cm		SM2510B
Temperature	6.688 °C		SM2550B(2)
Turbidity (Hach)	28.9 NTU		EPA 180.1
Air Temp	2 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	3 Lookup		Observation
Lab ID # 500-142177-4	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	160 mg/L	5	SM2320B
Chloride	18 mg/L	1	EPA 300.0
Hardness (as CaCO3)	200 mg/L	1.3	SM2340B
Solids, Suspended Total, (TSS)	38 mg/L	5	SM2540D
Solids, Total (TS)	290 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	240 mg/L	10	SM2540C
Sulfate	22 mg/L	1	EPA 300.0
Calcium (Total)	56 mg/L	0.2	EPA 200.7
Magnesium (Total)	14 mg/L	0.1	EPA 200.7
COD	9 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.8 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.096 mg/L	0.05	SM4500P-E
TKN	0.39 mg/L	0.4	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: WEL-15-0010 Sample Date: 4/9/2018 IDEM Sample #: AB32630
 Water Flow Type Flood Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #	Result	Reporting Limit	Method
% Sat	85.6 %		ASTM D888-09(C)
DO	9.72 mg/L		ASTM D888-09(C)
pH (Field)	8.03 SU		EPA 150.2
Specific Conductance (Field)	217.2 umho/cm		SM2510B
Temperature	9.695 °C		SM2550B(2)
Turbidity (Hach)	205 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID # 500-143653-12	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	87 mg/L	5	SM2320B
Chloride	9.3 mg/L	0.4	EPA 300.0
Hardness (as CaCO3)	110 mg/L	1.3	SM2340B
Solids, Suspended Total, (TSS)	110 mg/L	7.1	SM2540D
Solids, Total (TS)	260 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	160 mg/L	10	SM2540C
Sulfate	7.2 mg/L	0.4	EPA 300.0
Calcium (Total)	31 mg/L	0.2	EPA 200.7
Magnesium (Total)	8.6 mg/L	0.1	EPA 200.7
COD	29 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.84 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.33 mg/L	0.05	SM4500P-E
TKN	0.77 mg/L	0.4	SM4500N(Org)-D
TOC	4 mg/L	1	SM5310C

Lab ID # AB32630	Result	Reporting Limit	Method
E. coli	71.7 MPN/100mL	1	SM9223B

Lab ID # AB32630a	Result	Reporting Limit	Method
Coliforms (Total)	850 MPN/100mL	100	SM9223B

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

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

SiteID: WEL-15-0018 **USGS Hydrologic Unit:** 051202081504
Stream Name: Sugar Cr **County:** Daviess
Description: CR 600 S **Latitude:** 38 34 2.99378 **Longitude:** -86 57 37.11420
Drainage: **Site Number:** 18T-008

SiteID: WEL-15-0018 **Sample Date:** 4/9/2018 **IDEM Sample #:** AB32631
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	100.9 %		ASTM D888-09(C)
DO	12.03 mg/L		ASTM D888-09(C)
pH (Field)	7.95 SU		EPA 150.2
Specific Conductance (Field)	410.7 umho/cm		SM2510B
Temperature	7.669 °C		SM2550B(2)
Turbidity (Hach)	8.93 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID # 500-143653-13</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	100 mg/L	5	SM2320B
Chloride	8.7 mg/L	0.4	EPA 300.0
Hardness (as CaCO3)	190 mg/L	1.3	SM2340B
Solids, Suspended Total, (TSS)	5.5 mg/L	5	SM2540D
Solids, Total (TS)	280 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	230 mg/L	10	SM2540C
Sulfate	94 mg/L	4	EPA 300.0
Calcium (Total)	44 mg/L	0.2	EPA 200.7
Magnesium (Total)	19 mg/L	0.1	EPA 200.7
COD	8.3 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.1 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.07 mg/L	0.05	SM4500P-E
TKN	0.38 mg/L	0.4	SM4500N(Org)-D
TOC	3 mg/L	1	SM5310C

<u>Lab ID # AB32631</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	1986.3 MPN/100mL	1	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: WEL-15-0022 **USGS Hydrologic Unit:** 051202081504
Stream Name: West Fork Sugar Creek **County:** Daviess
Description: CR 700 S **Latitude:** 38 33 15.20091 **Longitude:** -86 59 33.89621
Drainage: **Site Number:** 18T-009

SiteID: WEL-15-0022 **Sample Date:** 4/9/2018 **IDEM Sample #:** AB32632
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	104 %		ASTM D888-09(C)
DO	12.16 mg/L		ASTM D888-09(C)
pH (Field)	8.05 SU		EPA 150.2
Specific Conductance (Field)	473 umho/cm		SM2510B
Temperature	8.525 °C		SM2550B(2)
Turbidity (Hach)	13.5 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID # 500-143653-14</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	120 mg/L	5	SM2320B
Chloride	5.7 mg/L	0.2	EPA 300.0
Hardness (as CaCO3)	200 mg/L	1.3	SM2340B
Solids, Suspended Total, (TSS)	7.5 mg/L	5	SM2540D
Solids, Total (TS)	300 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	280 mg/L	10	SM2540C
Sulfate	120 mg/L	4	EPA 300.0
Calcium (Total)	47 mg/L	0.2	EPA 200.7
Magnesium (Total)	21 mg/L	0.1	EPA 200.7
COD	20 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.34 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.067 mg/L	0.05	SM4500P-E
TKN	0.48 mg/L	0.4	SM4500N(Org)-D
TOC	4.5 mg/L	1	SM5310C

<u>Lab ID # AB32632</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	1299.7 MPN/100mL	1	SM9223B
E. coli	76.3 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: WEL-15-0009 **USGS Hydrologic Unit:** 051202081504
Stream Name: Sugar Cr **County:** Daviess
Description: CR 900 S **Latitude:** 38 31 29.97021 **Longitude:** -86 58 33.65921
Drainage: **Site Number:** 18T-010

SiteID: WEL-15-0009 **Sample Date:** 2/19/2018 **IDEM Sample #:** AB31803
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	96.5 %		ASTM D888-09(C)
DO	11.11 mg/L		ASTM D888-09(C)
pH (Field)	7.81 SU		EPA 150.2
Specific Conductance (Field)	388 umho/cm		SM2510B
Temperature	9.125 °C		SM2550B(2)
Turbidity (Hach)	33.8 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	3 Lookup		Observation

<u>Lab ID #</u> 500-141179-5	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	100 mg/L	5	SM2320B
Chloride	10 mg/L	0.4	EPA 300.0
Hardness (as CaCO3)	160 mg/L	1.3	SM2340B
Solids, Suspended Total, (TSS)	25 mg/L	5	SM2540D
Solids, Total (TS)	320 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	260 mg/L	10	SM2540C
Sulfate	74 mg/L	4	EPA 300.0
Calcium (Total)	38 mg/L	0.2	EPA 200.7
Magnesium (Total)	16 mg/L	0.1	EPA 200.7
COD	32 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.9 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.12 mg/L	0.05	SM4500P-E
TKN	0.71 mg/L	0.4	SM4500N(Org)-D
TOC	4.9 mg/L	1	SM5310C

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

SiteID: WEL-15-0009 Sample Date: 3/12/2018 IDEM Sample #: AB32010
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #	Result	Reporting Limit	Method
% Sat	93.8 %		ASTM D888-09(C)
DO	12.28 mg/L		ASTM D888-09(C)
pH (Field)	7.88 SU		EPA 150.2
Specific Conductance (Field)	557 umho/cm		SM2510B
Temperature	3.983 °C		SM2550B(2)
Turbidity (Hach)	11.3 NTU		EPA 180.1
Air Temp	2 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID # 500-142177-5	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	150 mg/L	5	SM2320B
Chloride	13 mg/L	0.4	EPA 300.0
Hardness (as CaCO3)	250 mg/L	1.3	SM2340B
Solids, Suspended Total, (TSS)	7.5 mg/L	5	SM2540D
Solids, Total (TS)	380 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	370 mg/L	10	SM2540C
Sulfate	120 mg/L	4	EPA 300.0
Calcium (Total)	60 mg/L	0.2	EPA 200.7
Magnesium (Total)	23 mg/L	0.1	EPA 200.7
COD	12 mg/L	10	SM5220C
Nitrogen, Ammonia	0.1 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.3 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.062 mg/L	0.05	SM4500P-E
TKN	0.39 mg/L	0.4	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: WEL-15-0009

Sample Date: 4/9/2018

IDEM Sample #: AB32617

Water Flow Type Flood

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	96.2 %	ASTM D888-09(C)
	DO	11.16 mg/L	ASTM D888-09(C)
	pH (Field)	7.98 SU	EPA 150.2
	Specific Conductance (Field)	308.3 umho/cm	SM2510B
	Temperature	8.815 °C	SM2550B(2)
	Turbidity (Hach)	13.8 NTU	EPA 180.1
	Air Temp	3 Lookup	Observation
	Sky Conditions	1 Lookup	Observation
	Wind Direction	18 Lookup	Observation
	Wind Strength	1 Lookup	Observation

Lab ID # 500-143653-1	Result	Reporting Limit	Method
	Alkalinity (as CaCO3)	110 mg/L	5 SM2320B
	Chloride	8.7 mg/L	1 EPA 300.0
	Hardness (as CaCO3)	170 mg/L	1.3 SM2340B
	Solids, Suspended Total, (TSS)	8 mg/L	5 SM2540D
	Solids, Total (TS)	240 mg/L	10 SM2540B
	Solids, Total Dissolved (TDS)	210 mg/L	10 SM2540C
	Sulfate	73 mg/L	2 EPA 300.0
	Calcium (Total)	41 mg/L	0.2 EPA 200.7
	Magnesium (Total)	16 mg/L	0.1 EPA 200.7
	COD	12 mg/L	10 SM5220C
	Nitrogen, Ammonia	< 0.2 mg/L	0.2 SM4500NH3-G
	Nitrogen, Nitrate+Nitrite	1.2 mg/L	0.1 SM4500NO3-F
	Phosphorus, Total	0.075 mg/L	0.05 SM4500P-E
	TKN	0.43 mg/L	0.4 SM4500N(Org)-D
	TOC	3.9 mg/L	1 SM5310C

Lab ID # AB32617	Result	Reporting Limit	Method
	Coliforms (Total)	613.1 MPN/100mL	1 SM9223B
	E. coli	18.7 MPN/100mL	1 SM9223B

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

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

SiteID: WEL-15-0013 **USGS Hydrologic Unit:** 051202081506
Stream Name: Birch Creek **County:** Dubois
Description: CR 460 N **Latitude:** 38 26 46.78659 **Longitude:** -87 1 9.39666
Drainage: **Site Number:** 18T-011

SiteID: WEL-15-0013 **Sample Date:** 4/10/2018 **IDEM Sample #:** AB32618
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	91.3 %		ASTM D888-09(C)
DO	10.8 mg/L		ASTM D888-09(C)
pH (Field)	7.85 SU		EPA 150.2
Specific Conductance (Field)	340.8 umho/cm		SM2510B
Temperature	7.904 °C		SM2550B(2)
Turbidity (Hach)	19.1 NTU		EPA 180.1
Air Temp	2 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #</u> 500-143653-2	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	96 mg/L	5	SM2320B
Chloride	21 mg/L	1	EPA 300.0
Hardness (as CaCO3)	130 mg/L	1.3	SM2340B
Solids, Suspended Total, (TSS)	39 mg/L	5	SM2540D
Solids, Total (TS)	270 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	210 mg/L	10	SM2540C
Sulfate	20 mg/L	1	EPA 300.0
Calcium (Total)	33 mg/L	0.2	EPA 200.7
Magnesium (Total)	11 mg/L	0.1	EPA 200.7
COD	12 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	10 mg/L	1	SM4500NO3-F
Phosphorus, Total	0.11 mg/L	0.05	SM4500P-E
TKN	0.66 mg/L	0.4	SM4500N(Org)-D
TOC	2.1 mg/L	1	SM5310C

<u>Lab ID #</u> AB32618	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	83.3 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: WEL-15-0014 **USGS Hydrologic Unit:** 051202081506
Stream Name: Birch Creek **County:** Dubois
Description: W Portersville Rd **Latitude:** 38 29 22.92610 **Longitude:** -87 1 13.46040
Drainage: **Site Number:** 18T-012

SiteID: WEL-15-0014 **Sample Date:** 2/19/2018 **IDEM Sample #:** AB31804
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	94.5 %		ASTM D888-09(C)
DO	10.83 mg/L		ASTM D888-09(C)
pH (Field)	7.68 SU		EPA 150.2
Specific Conductance (Field)	361.9 umho/cm		SM2510B
Temperature	9.325 °C		SM2550B(2)
Turbidity (Hach)	45.7 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	3 Lookup		Observation

Lab ID # 500-141179-6	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	92 mg/L	5	SM2320B
Chloride	21 mg/L	1	EPA 300.0
Hardness (as CaCO3)	130 mg/L	1.3	SM2340B
Solids, Suspended Total, (TSS)	24 mg/L	5	SM2540D
Solids, Total (TS)	320 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	250 mg/L	10	SM2540C
Sulfate	29 mg/L	1	EPA 300.0
Calcium (Total)	35 mg/L	0.2	EPA 200.7
Magnesium (Total)	12 mg/L	0.1	EPA 200.7
COD	15 mg/L	10	SM5220C
Nitrogen, Ammonia	0.19 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	7.6 mg/L	0.5	SM4500NO3-F
Phosphorus, Total	0.21 mg/L	0.05	SM4500P-E
TKN	0.72 mg/L	0.4	SM4500N(Org)-D
TOC	3.6 mg/L	1	SM5310C

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

SiteID: WEL-15-0014

Sample Date: 3/12/2018

IDEM Sample #: AB32011

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	91.7 %		ASTM D888-09(C)
DO	11.94 mg/L		ASTM D888-09(C)
pH (Field)	7.79 SU		EPA 150.2
Specific Conductance (Field)	362.3 umho/cm		SM2510B
Temperature	4.197 °C		SM2550B(2)
Turbidity (Hach)	20 NTU		EPA 180.1
Air Temp	2 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID # 500-142177-6	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	98 mg/L	5	SM2320B
Chloride	21 mg/L	1	EPA 300.0
Hardness (as CaCO3)	130 mg/L	1.3	SM2340B
Solids, Suspended Total, (TSS)	11 mg/L	5	SM2540D
Solids, Total (TS)	270 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	220 mg/L	10	SM2540C
Sulfate	30 mg/L	1	EPA 300.0
Calcium (Total)	35 mg/L	0.2	EPA 200.7
Magnesium (Total)	11 mg/L	0.1	EPA 200.7
COD	14 mg/L	10	SM5220C
Nitrogen, Ammonia	0.15 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	6.4 mg/L	0.5	SM4500NO3-F
Phosphorus, Total	0.11 mg/L	0.05	SM4500P-E
TKN	0.69 mg/L	0.4	SM4500N(Org)-D
TOC	3.9 mg/L	1	SM5310C

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

SiteID: WEL-15-0014

Sample Date: 4/10/2018

IDEM Sample #: AB32619

Water Flow Type Flood

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	9.83 mg/L	ASTM D888-09(C)
	pH (Field)	7.88 SU	EPA 150.2
	Specific Conductance (Field)	311.1 umho/cm	SM2510B
	Temperature	9.402 °C	SM2550B(2)
	Turbidity (Hach)	54.6 NTU	EPA 180.1
	Air Temp	2 Lookup	Observation
	Sky Conditions	1 Lookup	Observation
	Wind Direction	18 Lookup	Observation
	Wind Strength	1 Lookup	Observation

Lab ID # 500-143653-3	Result	Reporting Limit	Method
	Alkalinity (as CaCO3)	83 mg/L	5 SM2320B
	Chloride	13 mg/L	0.4 EPA 300.0
	Hardness (as CaCO3)	110 mg/L	1.3 SM2340B
	Solids, Suspended Total, (TSS)	20 mg/L	5 SM2540D
	Solids, Total (TS)	200 mg/L	10 SM2540B
	Solids, Total Dissolved (TDS)	180 mg/L	10 SM2540C
	Sulfate	19 mg/L	0.4 EPA 300.0
	Calcium (Total)	31 mg/L	0.2 EPA 200.7
	Magnesium (Total)	8.3 mg/L	0.1 EPA 200.7
	COD	23 mg/L	10 SM5220C
	Nitrogen, Ammonia	< 0.2 mg/L	0.2 SM4500NH3-G
	Nitrogen, Nitrate+Nitrite	4.1 mg/L	0.2 SM4500NO3-F
	Phosphorus, Total	0.55 mg/L	0.05 SM4500P-E
	TKN	0.76 mg/L	0.4 SM4500N(Org)-D
	TOC	3.9 mg/L	1 SM5310C

Lab ID # AB32619	Result	Reporting Limit	Method
	Coliforms (Total)	2419.6 MPN/100mL	1 SM9223B
	E. coli	35 MPN/100mL	1 SM9223B

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

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

SiteID: WEL-15-0015 **USGS Hydrologic Unit:** 051202081508
Stream Name: Bear Creek **County:** Pike
Description: CR 550 N **Latitude:** 38 30 10.17157 **Longitude:** -87 6 2.09326
Drainage: **Site Number:** 18T-014

SiteID: WEL-15-0015 **Sample Date:** 4/10/2018 **IDEM Sample #:** AB32620
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	98.5 %		ASTM D888-09(C)
DO	11.79 mg/L		ASTM D888-09(C)
pH (Field)	8.21 SU		EPA 150.2
Specific Conductance (Field)	509 umho/cm		SM2510B
Temperature	7.523 °C		SM2550B(2)
Turbidity (Hach)	7.58 NTU		EPA 180.1
Air Temp	2 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #</u> 500-143653-4	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	190 mg/L	5	SM2320B
Chloride	26 mg/L	1	EPA 300.0
Hardness (as CaCO3)	220 mg/L	1.3	SM2340B
Solids, Suspended Total, (TSS)	5 mg/L	5	SM2540D
Solids, Total (TS)	300 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	290 mg/L	10	SM2540C
Sulfate	38 mg/L	1	EPA 300.0
Calcium (Total)	56 mg/L	0.2	EPA 200.7
Magnesium (Total)	20 mg/L	0.1	EPA 200.7
COD	9.7 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	4 mg/L	0.2	SM4500NO3-F
Phosphorus, Total	0.059 mg/L	0.05	SM4500P-E
TKN	0.48 mg/L	0.4	SM4500N(Org)-D
TOC	2.1 mg/L	1	SM5310C

<u>Lab ID #</u> AB32620	<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**

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: WEL-15-0016 **USGS Hydrologic Unit:** 051202081508
Stream Name: Beech Creek **County:** Pike
Description: CR 550 N **Latitude:** 38 30 9.46944 **Longitude:** -87 7 44.51491
Drainage: **Site Number:** 18T-015

SiteID: WEL-15-0016 **Sample Date:** 4/10/2018 **IDEM Sample #:** AB32621
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	100.3 %		ASTM D888-09(C)
DO	12.15 mg/L		ASTM D888-09(C)
pH (Field)	8.29 SU		EPA 150.2
Specific Conductance (Field)	544 umho/cm		SM2510B
Temperature	7.052 °C		SM2550B(2)
Turbidity (Hach)	8.78 NTU		EPA 180.1
Air Temp	2 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #</u> 500-143653-5	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	220 mg/L	5	SM2320B
Chloride	24 mg/L	1	EPA 300.0
Hardness (as CaCO3)	250 mg/L	1.3	SM2340B
Solids, Suspended Total, (TSS)	11 mg/L	5	SM2540D
Solids, Total (TS)	310 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	300 mg/L	10	SM2540C
Sulfate	36 mg/L	1	EPA 300.0
Calcium (Total)	64 mg/L	0.2	EPA 200.7
Magnesium (Total)	22 mg/L	0.1	EPA 200.7
COD	6.6 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	3.1 mg/L	0.2	SM4500NO3-F
Phosphorus, Total	0.055 mg/L	0.05	SM4500P-E
TKN	0.38 mg/L	0.4	SM4500N(Org)-D
TOC	1.9 mg/L	1	SM5310C

<u>Lab ID #</u> AB32621	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	1553.1 MPN/100mL	1	SM9223B
E. coli	86 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: WEL170-0008 **USGS Hydrologic Unit:** 051202081507
Stream Name: Aikman Creek **County:** Daviess
Description: Alex Hill Rd **Latitude:** 38 34 15.42672 **Longitude:** -87 10 2.38580
Drainage: 20 **Site Number:** 18T-016

SiteID: WEL170-0008 **Sample Date:** 2/19/2018 **IDEM Sample #:** AB31805
Water Flow Type Riffle **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	93.1 %		ASTM D888-09(C)
DO	10.96 mg/L		ASTM D888-09(C)
pH (Field)	7.75 SU		EPA 150.2
Specific Conductance (Field)	434.5 umho/cm		SM2510B
Temperature	8.231 °C		SM2550B(2)
Turbidity (Hach)	54.6 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	4 Lookup		Observation

<u>Lab ID #</u> 500-141179-7	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	110 mg/L	5	SM2320B
Chloride	22 mg/L	1	EPA 300.0
Hardness (as CaCO3)	170 mg/L	1.3	SM2340B
Solids, Suspended Total, (TSS)	32 mg/L	5	SM2540D
Solids, Total (TS)	370 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	300 mg/L	10	SM2540C
Sulfate	63 mg/L	2	EPA 300.0
Calcium (Total)	42 mg/L	0.2	EPA 200.7
Magnesium (Total)	15 mg/L	0.1	EPA 200.7
COD	22 mg/L	10	SM5220C
Nitrogen, Ammonia	0.12 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	4 mg/L	0.5	SM4500NO3-F
Phosphorus, Total	0.2 mg/L	0.05	SM4500P-E
TKN	0.78 mg/L	0.4	SM4500N(Org)-D
TOC	5.3 mg/L	1	SM5310C

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

SiteID: WEL170-0008

Sample Date: 3/12/2018

IDEM Sample #: AB32012

Water Flow Type Riffle

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	90.6 %		ASTM D888-09(C)
DO	11.47 mg/L		ASTM D888-09(C)
pH (Field)	7.95 SU		EPA 150.2
Specific Conductance (Field)	603 umho/cm		SM2510B
Temperature	5.241 °C		SM2550B(2)
Turbidity (Hach)	12.6 NTU		EPA 180.1
Air Temp	2 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID # 500-142177-7	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	160 mg/L	5	SM2320B
Chloride	27 mg/L	1	EPA 300.0
Hardness (as CaCO3)	240 mg/L	1.3	SM2340B
Solids, Suspended Total, (TSS)	8 mg/L	5	SM2540D
Solids, Total (TS)	410 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	360 mg/L	10	SM2540C
Sulfate	94 mg/L	4	EPA 300.0
Calcium (Total)	61 mg/L	0.2	EPA 200.7
Magnesium (Total)	21 mg/L	0.1	EPA 200.7
COD	20 mg/L	10	SM5220C
Nitrogen, Ammonia	0.1 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	2.9 mg/L	0.2	SM4500NO3-F
Phosphorus, Total	0.086 mg/L	0.05	SM4500P-E
TKN	0.52 mg/L	0.4	SM4500N(Org)-D
TOC	4.3 mg/L	1	SM5310C

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

SiteID: WEL170-0008 Sample Date: 4/10/2018 IDEM Sample #: AB32622
 Water Flow Type Flood Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #	Result	Reporting Limit	Method
% Sat	83 %		ASTM D888-09(C)
DO	9.67 mg/L		ASTM D888-09(C)
pH (Field)	8.07 SU		EPA 150.2
Specific Conductance (Field)	350.1 umho/cm		SM2510B
Temperature	8.537 °C		SM2550B(2)
Turbidity (Hach)	61.2 NTU		EPA 180.1
Air Temp	2 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID # 500-143653-6	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	97 mg/L	5	SM2320B
Chloride	11 mg/L	1	EPA 300.0
Hardness (as CaCO3)	120 mg/L	1.3	SM2340B
Solids, Suspended Total, (TSS)	20 mg/L	5	SM2540D
Solids, Total (TS)	200 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	150 mg/L	10	SM2540C
Sulfate	22 mg/L	1	EPA 300.0
Calcium (Total)	33 mg/L	0.2	EPA 200.7
Magnesium (Total)	9.3 mg/L	0.1	EPA 200.7
COD	14 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.3 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.18 mg/L	0.05	SM4500P-E
TKN	0.57 mg/L	0.4	SM4500N(Org)-D
TOC	4 mg/L	1	SM5310C

Lab ID # AB32622	Result	Reporting Limit	Method
Coliforms (Total)	1732.9 MPN/100mL	1	SM9223B
E. coli	43.2 MPN/100mL	1	SM9223B

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

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

SiteID: WEL-15-0017 **USGS Hydrologic Unit:** 051202081509
Stream Name: Mud Creek **County:** Pike
Description: CR 725 N **Latitude:** 38 31 37.93847 **Longitude:** -87 13 11.17811
Drainage: **Site Number:** 18T-017

SiteID: WEL-15-0017 **Sample Date:** 2/19/2018 **IDEM Sample #:** AB31806
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	92.1 %		ASTM D888-09(C)
DO	10.78 mg/L		ASTM D888-09(C)
pH (Field)	7.84 SU		EPA 150.2
Specific Conductance (Field)	688 umho/cm		SM2510B
Temperature	8.297 °C		SM2550B(2)
Turbidity (Hach)	32.6 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	3 Lookup		Observation

<u>Lab ID #</u> 500-141179-8	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	140 mg/L	5	SM2320B
Chloride	23 mg/L	2	EPA 300.0
Hardness (as CaCO3)	270 mg/L	1.3	SM2340B
Solids, Suspended Total, (TSS)	25 mg/L	5	SM2540D
Solids, Total (TS)	520 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	430 mg/L	10	SM2540C
Sulfate	160 mg/L	10	EPA 300.0
Calcium (Total)	59 mg/L	0.2	EPA 200.7
Magnesium (Total)	30 mg/L	0.1	EPA 200.7
COD	21 mg/L	10	SM5220C
Nitrogen, Ammonia	0.14 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	3.7 mg/L	0.2	SM4500NO3-F
Phosphorus, Total	0.16 mg/L	0.05	SM4500P-E
TKN	0.74 mg/L	0.4	SM4500N(Org)-D
TOC	4.7 mg/L	1	SM5310C

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

SiteID: WEL-15-0017

Sample Date: 3/12/2018

IDEM Sample #: AB32013

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	11.47 mg/L	ASTM D888-09(C)
	pH (Field)	7.92 SU	EPA 150.2
	Specific Conductance (Field)	793 umho/cm	SM2510B
	Temperature	4.818 °C	SM2550B(2)
	Turbidity (Hach)	20.2 NTU	EPA 180.1
	Air Temp	2 Lookup	Observation
	Sky Conditions	4 Lookup	Observation
	Wind Direction	0 Lookup	Observation
	Wind Strength	1 Lookup	Observation

Lab ID # 500-142177-8	Result	Reporting Limit	Method	
	Alkalinity (as CaCO3)	190 mg/L	5	SM2320B
	Chloride	22 mg/L	2	EPA 300.0
	Hardness (as CaCO3)	340 mg/L	1.3	SM2340B
	Solids, Suspended Total, (TSS)	14 mg/L	5	SM2540D
	Solids, Total (TS)	540 mg/L	10	SM2540B
	Solids, Total Dissolved (TDS)	530 mg/L	10	SM2540C
	Sulfate	210 mg/L	5	EPA 300.0
	Calcium (Total)	79 mg/L	0.2	EPA 200.7
	Magnesium (Total)	36 mg/L	0.1	EPA 200.7
	COD	10 mg/L	10	SM5220C
	Nitrogen, Ammonia	0.11 mg/L	0.2	SM4500NH3-G
	Nitrogen, Nitrate+Nitrite	1.9 mg/L	0.1	SM4500NO3-F
	Phosphorus, Total	0.07 mg/L	0.05	SM4500P-E
	TKN	0.65 mg/L	0.4	SM4500N(Org)-D
	TOC	4.2 mg/L	1	SM5310C

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

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

SiteID: WEL-15-0020 **USGS Hydrologic Unit:** 051202081509
Stream Name: East Fork White River **County:** Pike
Description: SR 57 **Latitude:** 38 32 19.71102 **Longitude:** -87 13 23.17826
Drainage: **Site Number:** 18T-018

SiteID: WEL-15-0020 **Sample Date:** 4/10/2018 **IDEM Sample #:** AB32624
Water Flow Type Run **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	85.2 %		ASTM D888-09(C)
DO	9.75 mg/L		ASTM D888-09(C)
pH (Field)	8.19 SU		EPA 150.2
Specific Conductance (Field)	217.9 umho/cm		SM2510B
Temperature	9.09 °C		SM2550B(2)
Turbidity (Hach)	172 NTU		EPA 180.1
Air Temp	2 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #</u> 500-143653-7	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	89 mg/L	5	SM2320B
Chloride	9.7 mg/L	0.4	EPA 300.0
Hardness (as CaCO3)	110 mg/L	1.3	SM2340B
Solids, Suspended Total, (TSS)	87 mg/L	5	SM2540D
Solids, Total (TS)	210 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	140 mg/L	10	SM2540C
Sulfate	7.5 mg/L	0.4	EPA 300.0
Calcium (Total)	29 mg/L	0.2	EPA 200.7
Magnesium (Total)	7.9 mg/L	0.1	EPA 200.7
COD	21 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.83 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.31 mg/L	0.05	SM4500P-E
TKN	0.67 mg/L	0.4	SM4500N(Org)-D
TOC	3.9 mg/L	1	SM5310C

<u>Lab ID #</u> AB32624	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
E. coli	20.9 MPN/100mL	1	SM9223B

<u>Lab ID #</u> AB32624a	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	1730 MPN/100mL	100	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	