



2020 White River Mainstem Project Surface Water Results Summaries

PREPARED BY

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**2020 WHITE RIVER MAINSTEM PROJECT
SURFACE WATER RESULTS SUMMARIES**

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

SiteID: WWU-01-0018 **USGS Hydrologic Unit:** 051202010101
Stream Name: West Fork White River **County:** Randolph
Description: CR 100 South **Latitude:** 40 9 0.23371 **Longitude:** -84 55 11.23225
Drainage: 13.247 **Site Number:** 20WR001

SiteID: WWU-01-0018 **Sample Date:** 6/8/2020 **IDEM Sample #:** AB42837
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Photos taken at ~10:12 us,ds, cyanide collected at 13:58, NaOH added upon return to lab (~18:00).
 Recollected nutrients at 15:30 because bottle broke. All other bottles were collected and preservatives added at 10:08 am.

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	69.8 %		ASTM D888-09(C)
DO	6.72 mg/L		ASTM D888-09(C)
pH (Field)	7.69 SU		EPA 150.2
Specific Conductance (Field)	625 umho/cm		SM2510B
Temperature	17.1 °C		SM2550B(2)
Turbidity (Hach)	14.3 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 2006006-01	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	280 mg/L	20	SM2320B
Chloride	18 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	330 mg/L	2.07	SM2340B
Sulfate	26.9 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	81.2 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	0.54 ug/L	0.5	EPA 200.8
Magnesium (Total)	30.8 mg/L	0.2	EPA 200.7
Nickel (Total)	1.97 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006006-01RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.2 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50259643001	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	11.6 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.11 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.055 mg/L	0.05	EPA 365.1
TKN	0.67 mg/L	0.5	EPA 351.2
TOC	2.6 mg/L	1	SM5310C

SiteID: WWU-01-0018 **Sample Date:** 6/30/2020 **IDEM Sample #:** AB42816
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	72.9 %		ASTM D888-09(C)
DO	6.36 mg/L		ASTM D888-09(C)
pH (Field)	7.73 SU		EPA 150.2
Specific Conductance (Field)	584 umho/cm		SM2510B
Temperature	21.8 °C		SM2550B(2)
Turbidity (Hach)	2.98 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
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Surface Water Results Summary**

SiteID: WWU-01-0018 Sample Date: 7/13/2020 IDEM Sample #: AB43278
 Water Flow Type Pool Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: US: 233
 DS: 234

Lab ID #:	Result	Reporting Limit	Method
% Sat	36.7 %		ASTM D888-09(C)
DO	3.33 mg/L		ASTM D888-09(C)
pH (Field)	7.73 SU		EPA 150.2
Specific Conductance (Field)	639 umho/cm		SM2510B
Temperature	20.2 °C		SM2550B(2)
Turbidity (Hach)	13.1 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2007010-01	Result	Reporting Limit	Method
Hardness (as CaCO3)	315 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	4.09 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	77.1 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	29.7 mg/L	0.2	EPA 200.7
Nickel (Total)	1.7 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007010-01RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	3.46 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.27 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

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Surface Water Results Summary**

Lab ID #: 2007011-01	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	300 mg/L	20	SM2320B
Chloride	17.3 mg/L	0.12	EPA 300.0
Sulfate	28.2 mg/L	0.12	EPA 300.0

Lab ID #: 50262268001	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	14.5 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.23 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.12 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	3.2 mg/L	1	SM5310C

SiteID: WWU-01-0018 **Sample Date:** 10/26/2020 **IDEM Sample #:** AB44466
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	58.1 %		ASTM D888-09(C)
DO	6.55 mg/L		ASTM D888-09(C)
pH (Field)	7.65 SU		EPA 150.2
Specific Conductance (Field)	716 umho/cm		SM2510B
Temperature	9.9 °C		SM2550B(2)
Turbidity (Hach)	12 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2010014-01	Result	Reporting Limit	Method
Hardness (as CaCO3)	378 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.32 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	97.2 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	33 mg/L	0.2	EPA 200.7
Nickel (Total)	2.34 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2010014-01RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.9 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50271482001	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	284 mg/L	2	SM2320B
Chloride	22.9 mg/L	5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	10 mg/L	2.5	SM2540D
Solids, Total (TS)	443 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	426 mg/L	10	SM2540C
Sulfate	71.1 mg/L	5	EPA 300.0
COD	22.7 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.1 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.14 mg/L	0.05	EPA 365.1
TKN	0.76 mg/L	0.5	EPA 351.2
TOC	5.1 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	18 South (180 Degrees)	3 - Moderate	4 - 61-75
5 - Mist	27 West (270 Degrees)	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: WWU-01-0019 **USGS Hydrologic Unit:** 051202010102
Stream Name: West Fork White River **County:** Randolph
Description: US 27 **Latitude:** 40 10 55.78574 **Longitude:** -84 58 6.95521
Drainage: 33.928 **Site Number:** 20WR002

SiteID: WWU-01-0019 **Sample Date:** 6/8/2020 **IDEM Sample #:** AB42838
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Photos at 11:15 2us, 1ds. Cyanide collected at 13:35, NaOH added later upon return to lab, All other bottles collected and preserve added at 11:15. Seemed more turbid when returned for cyanide.

Lab ID #:	Result	Reporting Limit	Method
% Sat	100.4 %		ASTM D888-09(C)
DO	8.86 mg/L		ASTM D888-09(C)
pH (Field)	7.96 SU		EPA 150.2
Specific Conductance (Field)	708 umho/cm		SM2510B
Temperature	21.4 °C		SM2550B(2)
Turbidity (Hach)	9.28 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	9 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2006006-02	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	270 mg/L	20	SM2320B
Chloride	26.9 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	359 mg/L	2.07	SM2340B
Sulfate	60.9 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.36 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	86.7 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	34.7 mg/L	0.2	EPA 200.7
Nickel (Total)	1.87 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006006-02RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.07 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.45 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50259643002	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.1 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.094 mg/L	0.05	EPA 365.1
TKN	0.7 mg/L	0.5	EPA 351.2
TOC	2.9 mg/L	1	SM5310C

SiteID: WWU-01-0019 **Sample Date:** 6/17/2020 **IDEM Sample #:** AB42821
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	101.8 %		ASTM D888-09(C)
DO	9 mg/L		ASTM D888-09(C)
pH (Field)	8.12 SU		EPA 150.2
Specific Conductance (Field)	759 umho/cm		SM2510B
Temperature	21.3 °C		SM2550B(2)
Turbidity (Hach)	8.35 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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

SiteID: WWU-01-0019 Sample Date: 7/13/2020 IDEM Sample #: AB43285
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: US: 235
 DS: 236

Lab ID #:	Result	Reporting Limit	Method
% Sat	110.1 %		ASTM D888-09(C)
DO	9.26 mg/L		ASTM D888-09(C)
pH (Field)	8.29 SU		EPA 150.2
Specific Conductance (Field)	777 umho/cm		SM2510B
Temperature	23.9 °C		SM2550B(2)
Turbidity (Hach)	12.8 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2007010-02	Result	Reporting Limit	Method
Hardness (as CaCO3)	369 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	4.05 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	88.6 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	35.9 mg/L	0.2	EPA 200.7
Nickel (Total)	2.09 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007010-02RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	4.02 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.71 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2007011-02	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	260 mg/L	20	SM2320B
Chloride	35.7 mg/L	0.12	EPA 300.0
Lab ID #: 2007011-02RE1			
Result	Reporting Limit	Method	
Sulfate	115 mg/L	0.25	EPA 300.0
Lab ID #: 50262268002			
Result	Reporting Limit	Method	
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	13.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.58 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.17 mg/L	0.05	EPA 365.1
TKN	0.62 mg/L	0.5	EPA 351.2
TOC	4.4 mg/L	1	SM5310C

SiteID: WWU-01-0019 **Sample Date:** 10/26/2020 **IDEM Sample #:** AB44477
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	80.3 %		ASTM D888-09(C)
DO	8.93 mg/L		ASTM D888-09(C)
pH (Field)	7.9 SU		EPA 150.2
Specific Conductance (Field)	734 umho/cm		SM2510B
Temperature	10.5 °C		SM2550B(2)
Turbidity (Hach)	6.57 NTU		EPA 180.1
Air Temp	2 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 #: 2010014-02	Result	Reporting Limit	Method
Hardness (as CaCO3)	377 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	3.03 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	92.2 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	35.7 mg/L	0.2	EPA 200.7
Nickel (Total)	1.91 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2010014-02RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.95 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.64 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50271482002	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	273 mg/L	2	SM2320B
Chloride	31.2 mg/L	5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	453 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	429 mg/L	10	SM2540C
Sulfate	80.6 mg/L	5	EPA 300.0
COD	22.2 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.34 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.18 mg/L	0.05	EPA 365.1
TKN	0.67 mg/L	0.5	EPA 351.2
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**

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: WWU-01-0020 **USGS Hydrologic Unit:** 051202010103
Stream Name: West Fork White River **County:** Randolph
Description: CR 300 West **Latitude:** 40 10 48.09088 **Longitude:** -85 2 6.67527
Drainage: 55.923 **Site Number:** 20WR003

SiteID: WWU-01-0020 **Sample Date:** 6/8/2020 **IDEM Sample #:** AB42839
Water Flow Type Riffle **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: NaOH added to cyanide on return to lab
Riffle at bridge, shallow
Weather codes missing from datasheet

Lab ID #:	Result	Reporting Limit	Method
% Sat	100.9 %		ASTM D888-09(C)
DO	8.72 mg/L		ASTM D888-09(C)
pH (Field)	7.94 SU		EPA 150.2
Specific Conductance (Field)	764 umho/cm		SM2510B
Temperature	22.5 °C		SM2550B(2)
Turbidity (Hach)	7.87 NTU		EPA 180.1

Lab ID #: 2006006-03	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	280 mg/L	20	SM2320B
Chloride	49.4 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	346 mg/L	2.07	SM2340B
Sulfate	50.3 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.11 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	83.8 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	33.1 mg/L	0.2	EPA 200.7
Nickel (Total)	1.93 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006006-03RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.68 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50259643003	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	14 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.12 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.8 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.14 mg/L	0.05	EPA 365.1
TKN	0.78 mg/L	0.5	EPA 351.2
TOC	2.9 mg/L	1	SM5310C

SiteID: WWU-01-0020 **Sample Date:** 6/17/2020 **IDEM Sample #:** AB42820
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	123.8 %		ASTM D888-09(C)
DO	10.73 mg/L		ASTM D888-09(C)
pH (Field)	8.2 SU		EPA 150.2
Specific Conductance (Field)	805 umho/cm		SM2510B
Temperature	22.5 °C		SM2550B(2)
Turbidity (Hach)	14.3 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

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

SiteID: WWU-01-0020 Sample Date: 7/13/2020 IDEM Sample #: AB43288
 Water Flow Type Run Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: US: 237
 DS: 238

Lab ID #:	Result	Reporting Limit	Method
% Sat	85.4 %		ASTM D888-09(C)
DO	7.24 mg/L		ASTM D888-09(C)
pH (Field)	7.99 SU		EPA 150.2
Specific Conductance (Field)	562 umho/cm		SM2510B
Temperature	23.6 °C		SM2550B(2)
Turbidity (Hach)	10.4 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: 2007009-01	Result	Reporting Limit	Method
Hardness (as CaCO3)	223 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.83 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	53.5 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	0.55 ug/L	0.5	EPA 200.8
Magnesium (Total)	21.6 mg/L	0.2	EPA 200.7
Nickel (Total)	2.06 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007009-01RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.64 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.56 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2007011-03	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	170 mg/L	20	SM2320B
Chloride	43.8 mg/L	0.12	EPA 300.0
Sulfate	51.8 mg/L	0.12	EPA 300.0

Lab ID #: 50262268003	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	17.6 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.97 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.19 mg/L	0.05	EPA 365.1
TKN	0.83 mg/L	0.5	EPA 351.2
TOC	3.8 mg/L	1	SM5310C

SiteID: WWU-01-0020 **Sample Date:** 10/26/2020 **IDEM Sample #:** AB44480
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	79.1 %		ASTM D888-09(C)
DO	8.78 mg/L		ASTM D888-09(C)
pH (Field)	7.9 SU		EPA 150.2
Specific Conductance (Field)	757 umho/cm		SM2510B
Temperature	10.6 °C		SM2550B(2)
Turbidity (Hach)	4.78 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2010014-03	Result	Reporting Limit	Method
Hardness (as CaCO3)	342 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.66 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	85.2 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	31.3 mg/L	0.2	EPA 200.7
Nickel (Total)	2.11 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

**Indiana Department of Environmental Management
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Lab ID #: 2010014-03RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.62 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.77 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50271482003	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	259 mg/L	2	SM2320B
Chloride	63.8 mg/L	5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	440 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	423 mg/L	10	SM2540C
Sulfate	55.2 mg/L	5	EPA 300.0
COD	21.4 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.5 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.18 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	4.1 mg/L	1	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: WWU-01-0021 **USGS Hydrologic Unit:** 051202010103
Stream Name: West Fork White River **County:** Randolph
Description: CR 500 West **Latitude:** 40 10 46.03906 **Longitude:** -85 4 23.06634
Drainage: 63.111 **Site Number:** 20WR004

SiteID: WWU-01-0021 **Sample Date:** 6/8/2020 **IDEM Sample #:** AB42840
Water Flow Type Pool **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: NaOH added to CN at lab

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	117.6 %		ASTM D888-09(C)
DO	9.72 mg/L		ASTM D888-09(C)
pH (Field)	8.01 SU		EPA 150.2
Specific Conductance (Field)	747 umho/cm		SM2510B
Temperature	24.9 °C		SM2550B(2)
Turbidity (Hach)	11.2 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> 2006006-04	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	280 mg/L	20	SM2320B
Chloride	44.7 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	342 mg/L	2.07	SM2340B
Sulfate	48.7 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.1 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	83.3 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.84 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	32.6 mg/L	0.2	EPA 200.7
Nickel (Total)	2.05 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006006-04RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.69 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50259643004	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	14.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.7 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.13 mg/L	0.05	EPA 365.1
TKN	0.71 mg/L	0.5	EPA 351.2
TOC	2.8 mg/L	1	SM5310C

SiteID: WWU-01-0021 **Sample Date:** 6/30/2020 **IDEM Sample #:** AB42815
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	78 %		ASTM D888-09(C)
DO	6.44 mg/L		ASTM D888-09(C)
pH (Field)	7.98 SU		EPA 150.2
Specific Conductance (Field)	641 umho/cm		SM2510B
Temperature	25 °C		SM2550B(2)
Turbidity (Hach)	25.6 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

SiteID: WWU-01-0021 Sample Date: 7/13/2020 IDEM Sample #: AB43289
 Water Flow Type Pool Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: US: 239
 DS: 240

Lab ID #:	Result	Reporting Limit	Method
% Sat	93.8 %		ASTM D888-09(C)
DO	7.88 mg/L		ASTM D888-09(C)
pH (Field)	8.11 SU		EPA 150.2
Specific Conductance (Field)	733 umho/cm		SM2510B
Temperature	24.1 °C		SM2550B(2)
Turbidity (Hach)	17.3 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2007009-02	Result	Reporting Limit	Method
Hardness (as CaCO3)	291 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	3.14 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	69.8 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.28 ug/L	2	EPA 200.8
Lead (Total)	0.78 ug/L	0.5	EPA 200.8
Magnesium (Total)	28.4 mg/L	0.2	EPA 200.7
Nickel (Total)	2.54 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007009-02RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	3.07 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.9 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2007011-04	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	230 mg/L	20	SM2320B
Chloride	59.3 mg/L	0.12	EPA 300.0
Sulfate	60.4 mg/L	0.12	EPA 300.0

Lab ID #: 50262268004	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	17.6 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.3 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.22 mg/L	0.05	EPA 365.1
TKN	1.1 mg/L	0.5	EPA 351.2
TOC	4 mg/L	1	SM5310C

SiteID: WWU-01-0021 **Sample Date:** 10/26/2020 **IDEM Sample #:** AB44481
Water Flow Type Pool **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	82.6 %		ASTM D888-09(C)
DO	9.16 mg/L		ASTM D888-09(C)
pH (Field)	8 SU		EPA 150.2
Specific Conductance (Field)	742 umho/cm		SM2510B
Temperature	10.7 °C		SM2550B(2)
Turbidity (Hach)	11.1 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2010014-04	Result	Reporting Limit	Method
Hardness (as CaCO3)	342 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.67 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	85 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	31.4 mg/L	0.2	EPA 200.7
Nickel (Total)	2.17 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2010014-04RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.46 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.7 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50271482004	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	263 mg/L	2	SM2320B
Chloride	58.9 mg/L	5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	34 mg/L	5	SM2540D
Solids, Total (TS)	438 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	416 mg/L	10	SM2540C
Sulfate	53.5 mg/L	5	EPA 300.0
COD	24 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.4 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.16 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	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: WWU-01-0022 **USGS Hydrologic Unit:** 051202010105
Stream Name: West Fork White River **County:** Randolph
Description: CR 900 West **Latitude:** 40 10 7.50696 **Longitude:** -85 8 47.83066
Drainage: 86.810 **Site Number:** 20WR005

SiteID: WWU-01-0022 **Sample Date:** 6/8/2020 **IDEM Sample #:** AB42841
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: riffle upstream of bridge, mild effluent smell, rusty deposits on edge near bridge. NaOH added upon return to lab.

Lab ID #:	Result	Reporting Limit	Method
% Sat	127 %		ASTM D888-09(C)
DO	10.56 mg/L		ASTM D888-09(C)
pH (Field)	8.19 SU		EPA 150.2
Specific Conductance (Field)	702 umho/cm		SM2510B
Temperature	24.6 °C		SM2550B(2)
Turbidity (Hach)	6.73 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 2006006-05	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	280 mg/L	20	SM2320B
Chloride	38.6 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	332 mg/L	2.07	SM2340B
Sulfate	43.3 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.17 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	79.8 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	32.3 mg/L	0.2	EPA 200.7
Nickel (Total)	1.7 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006006-05RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.47 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50259643005	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.7 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.11 mg/L	0.05	EPA 365.1
TKN	0.53 mg/L	0.5	EPA 351.2
TOC	2.7 mg/L	1	SM5310C

SiteID: WWU-01-0022 **Sample Date:** 7/8/2020 **IDEM Sample #:** AB42814
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	75.7 %		ASTM D888-09(C)
DO	6.28 mg/L		ASTM D888-09(C)
pH (Field)	8.04 SU		EPA 150.2
Specific Conductance (Field)	724 umho/cm		SM2510B
Temperature	24.6 °C		SM2550B(2)
Turbidity (Hach)	7.08 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**

SiteID: WWU-01-0022 Sample Date: 7/13/2020 IDEM Sample #: AB43290
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: US: 241
 DS: 242

Lab ID #:	Result	Reporting Limit	Method
% Sat	97.2 %		ASTM D888-09(C)
DO	8.19 mg/L		ASTM D888-09(C)
pH (Field)	8.25 SU		EPA 150.2
Specific Conductance (Field)	819 umho/cm		SM2510B
Temperature	23.9 °C		SM2550B(2)
Turbidity (Hach)	11.1 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2007010-03	Result	Reporting Limit	Method
Hardness (as CaCO3)	324 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	4.04 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	77.3 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	31.7 mg/L	0.2	EPA 200.7
Nickel (Total)	2.33 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007010-03RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	4.2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.14 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2007011-05	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	260 mg/L	20	SM2320B
Chloride	74 mg/L	0.12	EPA 300.0
Sulfate	62 mg/L	0.12	EPA 300.0

Lab ID #: 50262268005	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	15.9 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.9 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.2 mg/L	0.05	EPA 365.1
TKN	0.69 mg/L	0.5	EPA 351.2
TOC	3.9 mg/L	1	SM5310C

SiteID: WWU-01-0022 **Sample Date:** 10/26/2020 **IDEM Sample #:** AB44482
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	9.82 mg/L		ASTM D888-09(C)
pH (Field)	8.09 SU		EPA 150.2
Specific Conductance (Field)	717 umho/cm		SM2510B
Temperature	10.8 °C		SM2550B(2)
Turbidity (Hach)	4.74 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2010014-05	Result	Reporting Limit	Method
Hardness (as CaCO3)	337 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.46 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	83.3 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	31.4 mg/L	0.2	EPA 200.7
Nickel (Total)	1.85 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2010014-05RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.49 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.72 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50271482005	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	246 mg/L	2	SM2320B
Chloride	54.4 mg/L	5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	416 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	410 mg/L	10	SM2540C
Sulfate	53.9 mg/L	5	EPA 300.0
COD	22.7 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.1 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.18 mg/L	0.05	EPA 365.1
TKN	0.6 mg/L	0.5	EPA 351.2
TOC	4.1 mg/L	1	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: WWU-01-0023 **USGS Hydrologic Unit:** 051202010109
Stream Name: West Fork White River **County:** Randolph
Description: CR 1250 West **Latitude:** 40 9 42.82414 **Longitude:** -85 12 46.70163
Drainage: 121.428 **Site Number:** 20WR006

SiteID: WWU-01-0023 **Sample Date:** 6/8/2020 **IDEM Sample #:** AB42842
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: weir us + bridge ds. Unionid shells on bank. pipe or culvert? discharge at bridge. oil on plants on bank.
 Photo's taken. corbicula shells. canoers at bridge. NaOH added for cyanide upon return to lab.

Lab ID #:	Result	Reporting Limit	Method
% Sat	134.6 %		ASTM D888-09(C)
DO	11.12 mg/L		ASTM D888-09(C)
pH (Field)	8.22 SU		EPA 150.2
Specific Conductance (Field)	673 umho/cm		SM2510B
Temperature	24.9 °C		SM2550B(2)
Turbidity (Hach)	7.6 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 2006006-06	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	270 mg/L	20	SM2320B
Chloride	31.6 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	332 mg/L	2.07	SM2340B
Sulfate	40.2 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.1 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	79.8 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	32.3 mg/L	0.2	EPA 200.7
Nickel (Total)	1.79 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006006-06RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.54 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50259643006	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	14 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.3 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.1 mg/L	0.05	EPA 365.1
TKN	0.59 mg/L	0.5	EPA 351.2
TOC	2.8 mg/L	1	SM5310C

SiteID: WWU-01-0023 **Sample Date:** 6/18/2020 **IDEM Sample #:** AB42813
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	121.5 %		ASTM D888-09(C)
DO	10.65 mg/L		ASTM D888-09(C)
pH (Field)	8.21 SU		EPA 150.2
Specific Conductance (Field)	668 umho/cm		SM2510B
Temperature	21.8 °C		SM2550B(2)
Turbidity (Hach)	6.91 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**

SiteID: WWU-01-0023 Sample Date: 7/13/2020 IDEM Sample #: AB43291
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: US: 243
 DS: 244

Lab ID #:	Result	Reporting Limit	Method
% Sat	112.5 %		ASTM D888-09(C)
DO	9.25 mg/L		ASTM D888-09(C)
pH (Field)	8.3 SU		EPA 150.2
Specific Conductance (Field)	707 umho/cm		SM2510B
Temperature	25.1 °C		SM2550B(2)
Turbidity (Hach)	6.92 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: 2007010-04	Result	Reporting Limit	Method
Hardness (as CaCO3)	308 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	3.68 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	73.3 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	30.3 mg/L	0.2	EPA 200.7
Nickel (Total)	2.29 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007010-04RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	3.69 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.79 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2007011-06	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	270 mg/L	20	SM2320B
Chloride	46.5 mg/L	0.12	EPA 300.0
Sulfate	52.1 mg/L	0.12	EPA 300.0

Lab ID #: 50262268006	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	16 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.2 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.18 mg/L	0.05	EPA 365.1
TKN	0.53 mg/L	0.5	EPA 351.2
TOC	3.5 mg/L	1	SM5310C

SiteID: WWU-01-0023 **Sample Date:** 10/26/2020 **IDEM Sample #:** AB44483
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	89.9 %		ASTM D888-09(C)
DO	9.9 mg/L		ASTM D888-09(C)
pH (Field)	7.99 SU		EPA 150.2
Specific Conductance (Field)	711 umho/cm		SM2510B
Temperature	11 °C		SM2550B(2)
Turbidity (Hach)	4.79 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2010014-06	Result	Reporting Limit	Method
Hardness (as CaCO3)	353 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.71 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	86.3 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	33.3 mg/L	0.2	EPA 200.7
Nickel (Total)	1.89 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2010014-06RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.82 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.73 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50271482006	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	264 mg/L	2	SM2320B
Chloride	40.7 mg/L	5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	422 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	390 mg/L	10	SM2540C
Sulfate	60.9 mg/L	5	EPA 300.0
COD	20.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.5 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.16 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	4 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: WWU-01-0024 **USGS Hydrologic Unit:** 051202010109
Stream Name: West Fork White River **County:** Delaware
Description: White River Woods **Latitude:** 40 9 11.65623 **Longitude:** -85 17 40.59763
Drainage: 191.122 **Site Number:** 20WR007

SiteID: WWU-01-0024 **Sample Date:** 6/9/2020 **IDEM Sample #:** AB42843
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	78.8 %		ASTM D888-09(C)
DO	6.81 mg/L		ASTM D888-09(C)
pH (Field)	7.98 SU		EPA 150.2
Specific Conductance (Field)	656 umho/cm		SM2510B
Temperature	22.5 °C		SM2550B(2)
Turbidity (Hach)	8.13 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> 2006006-07	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	280 mg/L	20	SM2320B
Chloride	26.5 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	329 mg/L	2.07	SM2340B
Sulfate	35.6 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	78.9 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	32 mg/L	0.2	EPA 200.7
Nickel (Total)	1.69 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006006-07RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.36 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50259643007	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	13.4 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.8 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.073 mg/L	0.05	EPA 365.1
TKN	0.66 mg/L	0.5	EPA 351.2
TOC	2.5 mg/L	1	SM5310C

SiteID: WWU-01-0024 **Sample Date:** 6/18/2020 **IDEM Sample #:** AB42781
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	80.4 %		ASTM D888-09(C)
DO	7.09 mg/L		ASTM D888-09(C)
pH (Field)	8.11 SU		EPA 150.2
Specific Conductance (Field)	649 umho/cm		SM2510B
Temperature	21.5 °C		SM2550B(2)
Turbidity (Hach)	8.9 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	7 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**

SiteID: WWU-01-0024 Sample Date: 7/13/2020 IDEM Sample #: AB43292
 Water Flow Type Run Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: US: 245
 DS: 246

Lab ID #:	Result	Reporting Limit	Method
% Sat	99.5 %		ASTM D888-09(C)
DO	8.27 mg/L		ASTM D888-09(C)
pH (Field)	8.26 SU		EPA 150.2
Specific Conductance (Field)	646 umho/cm		SM2510B
Temperature	24.6 °C		SM2550B(2)
Turbidity (Hach)	9.29 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2007010-05	Result	Reporting Limit	Method
Hardness (as CaCO3)	307 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	3.28 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	73.3 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	30.1 mg/L	0.2	EPA 200.7
Nickel (Total)	1.77 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007010-05RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	3.23 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.5 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2007011-07	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	270 mg/L	20	SM2320B
Chloride	29.9 mg/L	0.12	EPA 300.0
Sulfate	41.5 mg/L	0.12	EPA 300.0

Lab ID #: 50262268007	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	13.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.75 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.16 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	3.1 mg/L	1	SM5310C

SiteID: WWU-01-0024 **Sample Date:** 10/26/2020 **IDEM Sample #:** AB44484
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	9.06 mg/L		ASTM D888-09(C)
pH (Field)	7.96 SU		EPA 150.2
Specific Conductance (Field)	669 umho/cm		SM2510B
Temperature	11.1 °C		SM2550B(2)
Turbidity (Hach)	7.04 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2010014-07	Result	Reporting Limit	Method
Hardness (as CaCO3)	347 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.98 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	85.6 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	32.4 mg/L	0.2	EPA 200.7
Nickel (Total)	1.93 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2010014-07RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.53 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.63 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50271482007	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	255 mg/L	2	SM2320B
Chloride	32.7 mg/L	5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	6 mg/L	2.5	SM2540D
Solids, Total (TS)	409 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	372 mg/L	10	SM2540C
Sulfate	60.6 mg/L	5	EPA 300.0
COD	25.5 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.2 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.12 mg/L	0.05	EPA 365.1
TKN	0.51 mg/L	0.5	EPA 351.2
TOC	4.3 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: WWU-01-0012 **USGS Hydrologic Unit:** 051202010110
Stream Name: White River **County:** Delaware
Description: Windsor Road **Latitude:** 40 8 55.61251 **Longitude:** -85 18 47.80161
Drainage: 213.022 **Site Number:** INRB20-014

SiteID: WWU-01-0012 **Sample Date:** 5/25/2020 **IDEM Sample #:** AB42170
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	85.4 %		ASTM D888-09(C)
DO	7.61 mg/L		ASTM D888-09(C)
pH (Field)	7.97 SU		EPA 150.2
Specific Conductance (Field)	527 umho/cm		SM2510B
Temperature	21 °C		SM2550B(2)
Turbidity (Hach)	16.4 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 #:	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	125.9 MPN/100mL	1	SM9223B

SiteID: WWU-01-0012 **Sample Date:** 6/1/2020 **IDEM Sample #:** AB42192
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	89.6 %		ASTM D888-09(C)
DO	8.53 mg/L		ASTM D888-09(C)
pH (Field)	7.93 SU		EPA 150.2
Specific Conductance (Field)	563 umho/cm		SM2510B
Temperature	17.6 °C		SM2550B(2)
Turbidity (Hach)	19.7 NTU		EPA 180.1
Air Temp	4 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 #: AB42192	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	155.3 MPN/100mL	1	SM9223B

SiteID: WWU-01-0012 **Sample Date:** 6/8/2020 **IDEM Sample #:** AB42214
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	87.2 %		ASTM D888-09(C)
DO	7.59 mg/L		ASTM D888-09(C)
pH (Field)	7.93 SU		EPA 150.2
Specific Conductance (Field)	602 umho/cm		SM2510B
Temperature	22.1 °C		SM2550B(2)
Turbidity (Hach)	14.6 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: AB42214	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	88.2 MPN/100mL	1	SM9223B

SiteID: WWU-01-0012 **Sample Date:** 6/8/2020 **IDEM Sample #:** AB41878
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	94.4 %		ASTM D888-09(C)
DO	8.02 mg/L		ASTM D888-09(C)
pH (Field)	7.99 SU		EPA 150.2
Specific Conductance (Field)	609 umho/cm		SM2510B
Temperature	23.338 °C		SM2550B(2)
Turbidity (Hach)	25.3 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 #: 50259461004	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	238 mg/L	2	SM2320B
Chloride	23.5 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	319 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	10 mg/L	2.5	SM2540D
Solids, Total (TS)	369 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	314 mg/L	10	SM2540C
Sulfate	33 mg/L	2.5	EPA 300.0
Aluminum (Total)	0.25 mg/L	0.01	EPA 200.8
Aluminum (Dissolved)	< 0.01 mg/L	0.01	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	1.6 ug/L	1	EPA 200.8
Arsenic (Total)	1.8 ug/L	1	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	76.5 mg/L	1	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	1.2 ug/L	1	EPA 200.8
Copper (Total)	1.5 ug/L	1	EPA 200.8
Lead (Total)	< 1 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Magnesium (Total)	31.1 mg/L	1	EPA 200.7
Nickel (Total)	1.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.2 ug/L	0.5	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Total)	< 3 ug/L	3	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
COD	11.4 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.6 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.084 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	3.1 mg/L	0.5	SM5310C

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

SiteID: WWU-01-0012 Sample Date: 6/15/2020 IDEM Sample #: AB42236
 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	92.1 %		ASTM D888-09(C)
DO	8.49 mg/L		ASTM D888-09(C)
pH (Field)	8.09 SU		EPA 150.2
Specific Conductance (Field)	636 umho/cm		SM2510B
Temperature	19.6 °C		SM2550B(2)
Turbidity (Hach)	14.1 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB42236	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	122.3 MPN/100mL	1	SM9223B

SiteID: WWU-01-0012 Sample Date: 6/22/2020 IDEM Sample #: AB42258
 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	78.1 %		ASTM D888-09(C)
DO	6.68 mg/L		ASTM D888-09(C)
pH (Field)	8.04 SU		EPA 150.2
Specific Conductance (Field)	649 umho/cm		SM2510B
Temperature	23 °C		SM2550B(2)
Turbidity (Hach)	15.7 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 #: AB42258	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	123.4 MPN/100mL	1	SM9223B

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

SiteID: WWU-01-0012 Sample Date: 6/24/2020 IDEM Sample #: AB42279
 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	78.9 %		ASTM D888-09(C)
DO	6.99 mg/L		ASTM D888-09(C)
pH (Field)	7.98 SU		EPA 150.2
Specific Conductance (Field)	609 umho/cm		SM2510B
Temperature	21.231 °C		SM2550B(2)
Turbidity (Hach)	17.4 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 702100	Result	Reporting Limit	Method
Phosphorus, ortho	0.059 mg/L	0.002	EPA 365.1

SiteID: WWU-01-0012 Sample Date: 6/29/2020 IDEM Sample #: AB42120
 Water Flow Type Run Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	76.7 %		ASTM D888-09(C)
DO	6.52 mg/L		ASTM D888-09(C)
pH (Field)	8.07 SU		EPA 150.2
Specific Conductance (Field)	519 umho/cm		SM2510B
Temperature	23.2 °C		SM2550B(2)
Turbidity (Hach)	18.7 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**

SiteID: WWU-01-0012 Sample Date: 7/20/2020 IDEM Sample #: AB41933
 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	84.5 %		ASTM D888-09(C)
DO	7.03 mg/L		ASTM D888-09(C)
pH (Field)	8.01 SU		EPA 150.2
Specific Conductance (Field)	654 umho/cm		SM2510B
Temperature	24.77 °C		SM2550B(2)
Turbidity (Hach)	13.4 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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

Lab ID #: 50262903004	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	253 mg/L	2	SM2320B
Chloride	28.1 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	322 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	15 mg/L	3.1	SM2540D
Solids, Total (TS)	410 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	359 mg/L	10	SM2540C
Sulfate	43.2 mg/L	2.5	EPA 300.0
Aluminum (Dissolved)	< 0.01 mg/L	0.01	EPA 200.8
Aluminum (Total)	0.32 mg/L	0.01	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	3.3 ug/L	1	EPA 200.8
Arsenic (Dissolved)	3.2 ug/L	1	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	74.5 mg/L	1	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	1 ug/L	1	EPA 200.8
Copper (Total)	1.5 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Lead (Total)	< 1 ug/L	1	EPA 200.8
Magnesium (Total)	33.1 mg/L	1	EPA 200.7
Nickel (Total)	1.8 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.4 ug/L	0.5	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
Zinc (Total)	< 3 ug/L	3	EPA 200.8
COD	21.9 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.44 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.23 mg/L	0.05	EPA 365.1
TKN	1.1 mg/L	0.5	EPA 351.2
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: WWU-01-0012 **Sample Date:** 8/3/2020 **IDEM Sample #:** AB43009
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Dressedid mussel shell on bank, but no live Dressedids observed. Unionid mussel shells seen at site, but no live Unionid mussels observed.

Lab ID #:	Result	Reporting Limit	Method
% Sat	90.2 %		ASTM D888-09(C)
DO	7.79 mg/L		ASTM D888-09(C)
pH (Field)	8.14 SU		EPA 150.2
Specific Conductance (Field)	536 umho/cm		SM2510B
Temperature	22.57 °C		SM2550B(2)
Turbidity (Hach)	25.4 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

SiteID: WWU-01-0012 **Sample Date:** 8/12/2020 **IDEM Sample #:** AB42299
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: HOBO #6
SN: 10932931

Lab ID #:	Result	Reporting Limit	Method
% Sat	81.3 %		ASTM D888-09(C)
DO	6.93 mg/L		ASTM D888-09(C)
pH (Field)	7.99 SU		EPA 150.2
Specific Conductance (Field)	643 umho/cm		SM2510B
Temperature	23.269 °C		SM2550B(2)
Turbidity (Hach)	23.2 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

Lab ID #: 50268233002	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	226 mg/L	2	SM2320B
Chloride	32.7 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	278 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	10 mg/L	2.8	SM2540D
Solids, Total (TS)	357 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	328 mg/L	10	SM2540C
Sulfate	44.4 mg/L	2.5	EPA 300.0
Aluminum (Dissolved)	< 0.01 mg/L	0.01	EPA 200.8
Aluminum (Total)	0.22 mg/L	0.01	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.4 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2 ug/L	1	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	62.2 mg/L	1	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Total)	1.1 ug/L	1	EPA 200.8
Copper (Dissolved)	< 1 ug/L	1	EPA 200.8
Lead (Total)	< 1 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Magnesium (Total)	29.9 mg/L	1	EPA 200.7
Nickel (Total)	1.4 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1 ug/L	0.5	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
Zinc (Total)	< 3 ug/L	3	EPA 200.8
COD	12.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.24 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.05 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	3 mg/L	1	SM5310C

Lab ID #: AB41988 peri	Result	Reporting Limit	Method
Chlorophyll a	1860.15 ug/L	0.95	EPA 445M
Periphyton Algal Biomass	27.65 mg/M2	0.95	EPA 445M

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

SiteID: WWU-01-0012

Sample Date: 11/4/2020

IDEM Sample #: AB42337

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	85.7 %		ASTM D888-09(C)
DO	10.31 mg/L		ASTM D888-09(C)
pH (Field)	8 SU		EPA 150.2
Specific Conductance (Field)	661 umho/cm		SM2510B
Temperature	7.299 °C		SM2550B(2)
Turbidity (Hach)	10.6 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: 712840	Result	Reporting Limit	Method
Phosphorus, ortho	0.049 mg/L	0.002	EPA 365.1

Weather Code Definitions			
SC Sky Conditions	WD Wind Direction	WS Wind Strength	AT 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: WWU-01-0013 **USGS Hydrologic Unit:** 051202010111
Stream Name: White River **County:** Delaware
Description: Bunch Boulevard **Latitude:** 40 11 47.59799 **Longitude:** -85 22 2.08437
Drainage: 227.092 **Site Number:** INRB20-046

SiteID: WWU-01-0013 **Sample Date:** 5/25/2020 **IDEM Sample #:** AB42160
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	96.1 %		ASTM D888-09(C)
DO	8.46 mg/L		ASTM D888-09(C)
pH (Field)	8.07 SU		EPA 150.2
Specific Conductance (Field)	531 umho/cm		SM2510B
Temperature	21.6 °C		SM2550B(2)
Turbidity (Hach)	8.7 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

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

SiteID: WWU-01-0013 **Sample Date:** 6/1/2020 **IDEM Sample #:** AB42182
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	102.6 %		ASTM D888-09(C)
DO	9.56 mg/L		ASTM D888-09(C)
pH (Field)	8 SU		EPA 150.2
Specific Conductance (Field)	563 umho/cm		SM2510B
Temperature	18.7 °C		SM2550B(2)
Turbidity (Hach)	15.2 NTU		EPA 180.1
Air Temp	4 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 #: AB42182	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	98.4 MPN/100mL	1	SM9223B

SiteID: WWU-01-0013 **Sample Date:** 6/8/2020 **IDEM Sample #:** AB42204
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	106.5 %		ASTM D888-09(C)
DO	9.15 mg/L		ASTM D888-09(C)
pH (Field)	7.92 SU		EPA 150.2
Specific Conductance (Field)	615 umho/cm		SM2510B
Temperature	22.8 °C		SM2550B(2)
Turbidity (Hach)	8.69 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: AB42204	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	43.2 MPN/100mL	1	SM9223B

SiteID: WWU-01-0013 **Sample Date:** 6/8/2020 **IDEM Sample #:** AB41869
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	136.7 %		ASTM D888-09(C)
DO	11.18 mg/L		ASTM D888-09(C)
pH (Field)	8.22 SU		EPA 150.2
Specific Conductance (Field)	606 umho/cm		SM2510B
Temperature	25.404 °C		SM2550B(2)
Turbidity (Hach)	11.6 NTU		EPA 180.1
Air Temp	6 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 #: 50259461010	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	237 mg/L	2	SM2320B
Chloride	23.7 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	324 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	7 mg/L	2.5	SM2540D
Solids, Total (TS)	364 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	319 mg/L	10	SM2540C
Sulfate	32.3 mg/L	2.5	EPA 300.0
Aluminum (Dissolved)	< 0.01 mg/L	0.01	EPA 200.8
Aluminum (Total)	0.19 mg/L	0.01	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	1.6 ug/L	1	EPA 200.8
Arsenic (Total)	1.7 ug/L	1	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	78.2 mg/L	1	EPA 200.7
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	1.2 ug/L	1	EPA 200.8
Copper (Total)	1.5 ug/L	1	EPA 200.8
Lead (Total)	< 1 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Magnesium (Total)	31.2 mg/L	1	EPA 200.7
Nickel (Total)	1.4 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.1 ug/L	0.5	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
Zinc (Total)	< 3 ug/L	3	EPA 200.8
COD	13.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.4 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.067 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.9 mg/L	0.5	SM5310C

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

SiteID: WWU-01-0013 **Sample Date:** 6/15/2020 **IDEM Sample #:** AB42226
Water Flow Type Riffle **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	111.9 %		ASTM D888-09(C)
DO	10.03 mg/L		ASTM D888-09(C)
pH (Field)	8.12 SU		EPA 150.2
Specific Conductance (Field)	631 umho/cm		SM2510B
Temperature	20.6 °C		SM2550B(2)
Turbidity (Hach)	9.68 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB42226	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	29.8 MPN/100mL	1	SM9223B

SiteID: WWU-01-0013 **Sample Date:** 6/16/2020 **IDEM Sample #:** AB42142
Water Flow Type Riffle **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	101.4 %		ASTM D888-09(C)
DO	9.04 mg/L		ASTM D888-09(C)
pH (Field)	8.2 SU		EPA 150.2
Specific Conductance (Field)	628 umho/cm		SM2510B
Temperature	20.9 °C		SM2550B(2)
Turbidity (Hach)	8.02 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**

SiteID: WWU-01-0013 **Sample Date:** 6/22/2020 **IDEM Sample #:** AB42248
Water Flow Type Riffle **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	99.5 %		ASTM D888-09(C)
DO	8.24 mg/L		ASTM D888-09(C)
pH (Field)	8.1 SU		EPA 150.2
Specific Conductance (Field)	652 umho/cm		SM2510B
Temperature	24.8 °C		SM2550B(2)
Turbidity (Hach)	15.5 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB42248	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	111.2 MPN/100mL	1	SM9223B

SiteID: WWU-01-0013 **Sample Date:** 6/24/2020 **IDEM Sample #:** AB42272
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	100.2 %		ASTM D888-09(C)
DO	8.75 mg/L		ASTM D888-09(C)
pH (Field)	8.04 SU		EPA 150.2
Specific Conductance (Field)	604 umho/cm		SM2510B
Temperature	22.616 °C		SM2550B(2)
Turbidity (Hach)	14 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: 702110	Result	Reporting Limit	Method
Phosphorus, ortho	0.071 mg/L	0.002	EPA 365.1

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

SiteID: WWU-01-0013 Sample Date: 7/20/2020 IDEM Sample #: AB41924
 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 %		ASTM D888-09(C)
DO	7.93 mg/L		ASTM D888-09(C)
pH (Field)	8.11 SU		EPA 150.2
Specific Conductance (Field)	626 umho/cm		SM2510B
Temperature	25.039 °C		SM2550B(2)
Turbidity (Hach)	24.2 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

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

Lab ID #: 50262903010	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	245 mg/L	2	SM2320B
Chloride	27.2 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	311 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	14 mg/L	2.5	SM2540D
Solids, Total (TS)	386 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	337 mg/L	10	SM2540C
Sulfate	39.1 mg/L	2.5	EPA 300.0
Aluminum (Total)	0.31 mg/L	0.01	EPA 200.8
Aluminum (Dissolved)	< 0.01 mg/L	0.01	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.9 ug/L	1	EPA 200.8
Arsenic (Total)	3 ug/L	1	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	72.9 mg/L	1	EPA 200.7
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	1 ug/L	1	EPA 200.8
Copper (Total)	1.5 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Lead (Total)	< 1 ug/L	1	EPA 200.8
Magnesium (Total)	31.3 mg/L	1	EPA 200.7
Nickel (Dissolved)	1.3 ug/L	0.5	EPA 200.8
Nickel (Total)	1.7 ug/L	0.5	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
Zinc (Total)	< 3 ug/L	3	EPA 200.8
COD	20.2 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.37 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.17 mg/L	0.05	EPA 365.1
TKN	0.67 mg/L	0.5	EPA 351.2
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: WWU-01-0013 **Sample Date:** 8/3/2020 **IDEM Sample #:** AB43030
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Live Dressenid mussels in sample.

Lab ID #:	Result	Reporting Limit	Method
% Sat	103.3 %		ASTM D888-09(C)
DO	8.81 mg/L		ASTM D888-09(C)
pH (Field)	8.25 SU		EPA 150.2
Specific Conductance (Field)	575 umho/cm		SM2510B
Temperature	23.238 °C		SM2550B(2)
Turbidity (Hach)	18.5 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: WWU-01-0013 **Sample Date:** 8/12/2020 **IDEM Sample #:** AB42292
Water Flow Type Riffle **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: HOBO #8
SN: 10932937

Lab ID #:	Result	Reporting Limit	Method
% Sat	93.5 %		ASTM D888-09(C)
DO	7.87 mg/L		ASTM D888-09(C)
pH (Field)	8.05 SU		EPA 150.2
Specific Conductance (Field)	633 umho/cm		SM2510B
Temperature	23.867 °C		SM2550B(2)
Turbidity (Hach)	19.1 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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

SiteID: WWU-01-0013 **Sample Date:** 8/26/2020 **IDEM Sample #:** AB42310
Water Flow Type Riffle **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Pickup
HOBO #8
SN: 10932937

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	94.7 %		ASTM D888-09(C)
DO	7.73 mg/L		ASTM D888-09(C)
pH (Field)	8.02 SU		EPA 150.2
Specific Conductance (Field)	686 umho/cm		SM2510B
Temperature	25.631 °C		SM2550B(2)
Turbidity (Hach)	7.46 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 707250	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Phosphorus, ortho	0.03 mg/L	0.002	EPA 365.1

SiteID: WWU-01-0013 **Sample Date:** 9/22/2020 **IDEM Sample #:** AB41979
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	105.3 %		ASTM D888-09(C)
DO	10.23 mg/L		ASTM D888-09(C)
pH (Field)	8.2 SU		EPA 150.2
Specific Conductance (Field)	589 umho/cm		SM2510B
Temperature	16.645 °C		SM2550B(2)
Turbidity (Hach)	15.5 NTU		EPA 180.1
Air Temp	4 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 #: 50268233006	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	235 mg/L	2	SM2320B
Chloride	32.1 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	286 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	8 mg/L	2.5	SM2540D
Solids, Total (TS)	336 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	335 mg/L	10	SM2540C
Sulfate	45.1 mg/L	2.5	EPA 300.0
Aluminum (Dissolved)	< 0.01 mg/L	0.01	EPA 200.8
Aluminum (Total)	0.21 mg/L	0.01	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	1.8 ug/L	1	EPA 200.8
Arsenic (Total)	1.9 ug/L	1	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	64.5 mg/L	1	EPA 200.7
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 1 ug/L	1	EPA 200.8
Copper (Total)	1.2 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Lead (Total)	< 1 ug/L	1	EPA 200.8
Magnesium (Total)	30.4 mg/L	1	EPA 200.7
Nickel (Total)	1.4 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.1 ug/L	0.5	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
Zinc (Total)	< 3 ug/L	3	EPA 200.8
COD	14.4 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.13 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.053 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.9 mg/L	1	SM5310C

Lab ID #: AB41979 peri	Result	Reporting Limit	Method
Chlorophyll a	1114.97 ug/L	0.95	EPA 445M
Periphyton Algal Biomass	120.86 mg/M2	0.95	EPA 445M

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

SiteID: WWU-01-0013

Sample Date: 11/4/2020

IDEM Sample #: AB42330

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	89.6 %		ASTM D888-09(C)
DO	10.68 mg/L		ASTM D888-09(C)
pH (Field)	8.07 SU		EPA 150.2
Specific Conductance (Field)	653 umho/cm		SM2510B
Temperature	7.643 °C		SM2550B(2)
Turbidity (Hach)	10.9 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	3 Lookup		Observation

Lab ID #: 712849	Result	Reporting Limit	Method
Phosphorus, ortho	0.053 mg/L	0.002	EPA 365.1

Weather Code Definitions			
SC Sky Conditions	WD Wind Direction	WS Wind Strength	AT 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: WWU-03-0009 **USGS Hydrologic Unit:** 051202010305
Stream Name: West Fork White River **County:** Delaware
Description: Morrow's Meadow Park **Latitude:** 40 10 42.81278 **Longitude:** -85 29 42.43093
Drainage: 248.328 **Site Number:** 20WR010

SiteID: WWU-03-0009 **Sample Date:** 6/9/2020 **IDEM Sample #:** AB42844
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	112.2 %		ASTM D888-09(C)
DO	9.56 mg/L		ASTM D888-09(C)
pH (Field)	8.02 SU		EPA 150.2
Specific Conductance (Field)	930 umho/cm		SM2510B
Temperature	23.4 °C		SM2550B(2)
Turbidity (Hach)	8.16 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

<u>Lab ID #:</u> 2006006-09	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	270 mg/L	20	SM2320B
Chloride	52.8 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	325 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	79.2 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	31 mg/L	0.2	EPA 200.7
Nickel (Total)	2.28 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006006-09RE1	Result	Reporting Limit	Method
Sulfate	134 mg/L	0.31	EPA 300.0
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.1 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50259643009	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	11.2 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	3.5 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.23 mg/L	0.05	EPA 365.1
TKN	0.56 mg/L	0.5	EPA 351.2
TOC	2.7 mg/L	1	SM5310C

SiteID: WWU-03-0009 **Sample Date:** 6/10/2020 **IDEM Sample #:** AB42819
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	66.8 %		ASTM D888-09(C)
DO	5.64 mg/L		ASTM D888-09(C)
pH (Field)	7.78 SU		EPA 150.2
Specific Conductance (Field)	871 umho/cm		SM2510B
Temperature	23.6 °C		SM2550B(2)
Turbidity (Hach)	16.45 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	3 Lookup		Observation

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

SiteID: WWU-03-0009 Sample Date: 7/13/2020 IDEM Sample #: AB43279
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: US: 248
 DS: 247

Lab ID #:	Result	Reporting Limit	Method
% Sat	140.5 %		ASTM D888-09(C)
DO	11.35 mg/L		ASTM D888-09(C)
pH (Field)	8.35 SU		EPA 150.2
Specific Conductance (Field)	1064 umho/cm		SM2510B
Temperature	26.3 °C		SM2550B(2)
Turbidity (Hach)	7.64 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2007010-06	Result	Reporting Limit	Method
Hardness (as CaCO3)	316 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.87 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	77.6 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	0.62 ug/L	0.5	EPA 200.8
Magnesium (Total)	29.8 mg/L	0.2	EPA 200.7
Nickel (Total)	2.17 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007010-06RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.91 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2007011-08	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	270 mg/L	20	SM2320B
Chloride	58.6 mg/L	0.12	EPA 300.0

Lab ID #: 2007011-08RE1	Result	Reporting Limit	Method
Sulfate	200 mg/L	0.62	EPA 300.0

Lab ID #: 50262268008	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	17.2 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	3.1 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.39 mg/L	0.05	EPA 365.1
TKN	0.72 mg/L	0.5	EPA 351.2
TOC	3.3 mg/L	1	SM5310C

SiteID: WWU-03-0009 **Sample Date:** 10/26/2020 **IDEM Sample #:** AB44467
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	113 %		ASTM D888-09(C)
DO	11.74 mg/L		ASTM D888-09(C)
pH (Field)	8.07 SU		EPA 150.2
Specific Conductance (Field)	873 umho/cm		SM2510B
Temperature	13.2 °C		SM2550B(2)
Turbidity (Hach)	5.51 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 #: 2010014-08	Result	Reporting Limit	Method
Hardness (as CaCO3)	311 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.5 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	77.1 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	28.8 mg/L	0.2	EPA 200.7
Nickel (Total)	2.06 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2010014-08RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.24 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.87 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50271482008	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	218 mg/L	2	SM2320B
Chloride	61.7 mg/L	5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	6 mg/L	2.5	SM2540D
Solids, Total (TS)	532 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	489 mg/L	10	SM2540C
Sulfate	151 mg/L	5	EPA 300.0
COD	22.9 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.7 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.25 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	4 mg/L	1	SM5310C

**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: WWU-03-0010 **USGS Hydrologic Unit:** 051202010305
Stream Name: West Fork White River **County:** Delaware
Description: CR 750 West **Latitude:** 40 9 52.04509 **Longitude:** -85 31 49.40626
Drainage: 349.580 **Site Number:** 20WR011

SiteID: WWU-03-0010 **Sample Date:** 6/9/2020 **IDEM Sample #:** AB42845
Water Flow Type Riffle **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Recon issue: no clear indication of how to access bank. Didn't seem safe to sample on bridge due to traffic, so climbed down on rip-rap.

Lab ID #:	Result	Reporting Limit	Method
% Sat	128 %		ASTM D888-09(C)
DO	11.05 mg/L		ASTM D888-09(C)
pH (Field)	8.09 SU		EPA 150.2
Specific Conductance (Field)	836 umho/cm		SM2510B
Temperature	22.5 °C		SM2550B(2)
Turbidity (Hach)	5.73 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	4 Lookup		Observation

Lab ID #: 2006006-10	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	290 mg/L	20	SM2320B
Chloride	44.8 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	335 mg/L	2.07	SM2340B
Sulfate	89.8 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	83.5 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	30.7 mg/L	0.2	EPA 200.7
Nickel (Total)	1.97 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006006-10RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.7 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50259643010	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	15.2 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.9 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.15 mg/L	0.05	EPA 365.1
TKN	0.53 mg/L	0.5	EPA 351.2
TOC	2.4 mg/L	1	SM5310C

SiteID: WWU-03-0010 **Sample Date:** 6/15/2020 **IDEM Sample #:** AB42782
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	92.9 %		ASTM D888-09(C)
DO	8.89 mg/L		ASTM D888-09(C)
pH (Field)	7.98 SU		EPA 150.2
Specific Conductance (Field)	842 umho/cm		SM2510B
Temperature	17.4 °C		SM2550B(2)
Turbidity (Hach)	7.87 NTU		EPA 180.1
Air Temp	4 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**

SiteID: WWU-03-0010 Sample Date: 7/13/2020 IDEM Sample #: AB43280
 Water Flow Type Pool Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: US: 250
 DS: 249

Lab ID #:	Result	Reporting Limit	Method
% Sat	136.2 %		ASTM D888-09(C)
DO	11.22 mg/L		ASTM D888-09(C)
pH (Field)	8.32 SU		EPA 150.2
Specific Conductance (Field)	973 umho/cm		SM2510B
Temperature	24.8 °C		SM2550B(2)
Turbidity (Hach)	6.39 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2007010-07	Result	Reporting Limit	Method
Hardness (as CaCO3)	312 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.31 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	78.1 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	0.64 ug/L	0.5	EPA 200.8
Magnesium (Total)	28.4 mg/L	0.2	EPA 200.7
Nickel (Total)	1.91 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007010-07RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.31 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.74 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2007011-09	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	280 mg/L	20	SM2320B
Chloride	54.1 mg/L	0.12	EPA 300.0

Lab ID #: 2007011-09RE1	Result	Reporting Limit	Method
Sulfate	156 mg/L	0.62	EPA 300.0

Lab ID #: 50262268009	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	13.6 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.8 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.28 mg/L	0.05	EPA 365.1
TKN	0.55 mg/L	0.5	EPA 351.2
TOC	2.8 mg/L	1	SM5310C

SiteID: WWU-03-0010 **Sample Date:** 10/26/2020 **IDEM Sample #:** AB44468
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	101.1 %		ASTM D888-09(C)
DO	10.88 mg/L		ASTM D888-09(C)
pH (Field)	8.06 SU		EPA 150.2
Specific Conductance (Field)	843 umho/cm		SM2510B
Temperature	11.9 °C		SM2550B(2)
Turbidity (Hach)	3.94 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	7 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 #: 2010014-09	Result	Reporting Limit	Method
Hardness (as CaCO3)	330 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.53 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	83.2 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	29.6 mg/L	0.2	EPA 200.7
Nickel (Total)	1.88 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2010014-09RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.04 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.78 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50271482009	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	237 mg/L	2	SM2320B
Chloride	58.5 mg/L	5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	493 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	488 mg/L	10	SM2540C
Sulfate	129 mg/L	5	EPA 300.0
COD	17.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.3 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.19 mg/L	0.05	EPA 365.1
TKN	0.58 mg/L	0.5	EPA 351.2
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**

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: WWU-03-0011 **USGS Hydrologic Unit:** 051202010306
Stream Name: West Fork White River **County:** Delaware
Description: David E. Shellabarger Park **Latitude:** 40 7 52.79579 **Longitude:** -85 33 23.85539
Drainage: 380.944 **Site Number:** 20WR012

SiteID: WWU-03-0011 **Sample Date:** 6/8/2020 **IDEM Sample #:** AB42818
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	102.4 %		ASTM D888-09(C)
DO	9.13 mg/L		ASTM D888-09(C)
pH (Field)	8.13 SU		EPA 150.2
Specific Conductance (Field)	783 umho/cm		SM2510B
Temperature	20.9 °C		SM2550B(2)
Turbidity (Hach)	11.19 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: WWU-03-0011 **Sample Date:** 6/9/2020 **IDEM Sample #:** AB42846
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Dissolved Metals: Bottle Lot # C3156040
Metals: Bottle Lot # C3127020

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	115.9 %		ASTM D888-09(C)
DO	9.99 mg/L		ASTM D888-09(C)
pH (Field)	8.08 SU		EPA 150.2
Specific Conductance (Field)	759 umho/cm		SM2510B
Temperature	22.7 °C		SM2550B(2)
Turbidity (Hach)	7.48 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	3 Lookup		Observation

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

Lab ID #: 2006006-11	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	290 mg/L	20	SM2320B
Chloride	38.6 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	337 mg/L	2.07	SM2340B
Sulfate	64.6 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	84.4 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	0.56 ug/L	0.5	EPA 200.8
Magnesium (Total)	30.7 mg/L	0.2	EPA 200.7
Nickel (Total)	1.88 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2006006-11RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.53 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50259643011	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	10.4 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.4 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.11 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.4 mg/L	1	SM5310C

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

Lab ID #: 2007011-12	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	290 mg/L	20	SM2320B
Chloride	51.1 mg/L	0.12	EPA 300.0
Lab ID #: 2007011-12RE1			
Result	Reporting Limit	Method	
Sulfate	165 mg/L	0.62	EPA 300.0
Lab ID #: 50262268012			
Result	Reporting Limit	Method	
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	12.5 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.8 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.28 mg/L	0.05	EPA 365.1
TKN	0.56 mg/L	0.5	EPA 351.2
TOC	2.7 mg/L	1	SM5310C

SiteID: WWU-03-0011 **Sample Date:** 10/26/2020 **IDEM Sample #:** AB44469
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	96.8 %		ASTM D888-09(C)
DO	10.47 mg/L		ASTM D888-09(C)
pH (Field)	8.07 SU		EPA 150.2
Specific Conductance (Field)	822 umho/cm		SM2510B
Temperature	11.7 °C		SM2550B(2)
Turbidity (Hach)	3.07 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	7 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 #: 2010014-10	Result	Reporting Limit	Method
Hardness (as CaCO3)	326 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.19 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	82.8 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	28.9 mg/L	0.2	EPA 200.7
Nickel (Total)	1.87 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2010014-10RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.01 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.74 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50271482010	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	242 mg/L	2	SM2320B
Chloride	54.8 mg/L	5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	502 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	486 mg/L	10	SM2540C
Sulfate	124 mg/L	5	EPA 300.0
COD	19.3 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.1 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.24 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
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**

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: WWU-03-0012 **USGS Hydrologic Unit:** 051202010308
Stream Name: West Fork White River **County:** Madison
Description: Mounds State Park **Latitude:** 40 6 21.89612 **Longitude:** -85 37 26.03416
Drainage: 396.460 **Site Number:** 20WR013

SiteID: WWU-03-0012 **Sample Date:** 6/9/2020 **IDEM Sample #:** AB42847
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	141.8 %		ASTM D888-09(C)
DO	12 mg/L		ASTM D888-09(C)
pH (Field)	8.27 SU		EPA 150.2
Specific Conductance (Field)	758 umho/cm		SM2510B
Temperature	23.6 °C		SM2550B(2)
Turbidity (Hach)	10.06 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> 2006006-12	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	280 mg/L	20	SM2320B
Chloride	39 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	330 mg/L	2.07	SM2340B
Sulfate	61.3 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	82.7 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	0.68 ug/L	0.5	EPA 200.8
Magnesium (Total)	30.1 mg/L	0.2	EPA 200.7
Nickel (Total)	1.89 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006006-12RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.69 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50259643012	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	13.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.1 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.12 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.4 mg/L	1	SM5310C

SiteID: WWU-03-0012 **Sample Date:** 7/14/2020 **IDEM Sample #:** AB43282
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: US: 253
 DS: 254

Lab ID #:	Result	Reporting Limit	Method
% Sat	79 %		ASTM D888-09(C)
DO	7.16 mg/L		ASTM D888-09(C)
pH (Field)	7.97 SU		EPA 150.2
Specific Conductance (Field)	877 umho/cm		SM2510B
Temperature	20.8 °C		SM2550B(2)
Turbidity (Hach)	4.92 NTU		EPA 180.1
Air Temp	4 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 #: 2007009-05	Result	Reporting Limit	Method
Hardness (as CaCO3)	324 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.22 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	81.8 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	0.58 ug/L	0.5	EPA 200.8
Magnesium (Total)	29 mg/L	0.2	EPA 200.7
Nickel (Total)	1.92 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007009-05RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.19 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	2.94 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.7 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007011-13	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	290 mg/L	20	SM2320B
Chloride	49.8 mg/L	0.12	EPA 300.0

Lab ID #: 2007011-13RE1	Result	Reporting Limit	Method
Sulfate	144 mg/L	0.62	EPA 300.0

Lab ID #: 50262268013	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	12.6 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.5 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.24 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.6 mg/L	1	SM5310C

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

SiteID: WWU-03-0012 Sample Date: 9/21/2020 IDEM Sample #: AB42812
 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	88.6 %		ASTM D888-09(C)
DO	9.04 mg/L		ASTM D888-09(C)
pH (Field)	7.94 SU		EPA 150.2
Specific Conductance (Field)	1389 umho/cm		SM2510B
Temperature	14.2 °C		SM2550B(2)
Turbidity (Hach)	6.31 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: WWU-03-0012 Sample Date: 10/27/2020 IDEM Sample #: AB44470
 Water Flow Type Eddy 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	83.5 %		ASTM D888-09(C)
DO	9.27 mg/L		ASTM D888-09(C)
pH (Field)	8.03 SU		EPA 150.2
Specific Conductance (Field)	813 umho/cm		SM2510B
Temperature	10.6 °C		SM2550B(2)
Turbidity (Hach)	4.57 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 #: 2010014-11	Result	Reporting Limit	Method
Hardness (as CaCO3)	331 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	84.6 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	29.1 mg/L	0.2	EPA 200.7
Nickel (Total)	1.82 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2010014-11RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.01 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.71 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50271482011	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	247 mg/L	2	SM2320B
Chloride	49.4 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	4 mg/L	2.5	SM2540D
Solids, Total (TS)	488 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	502 mg/L	10	SM2540C
Sulfate	106 mg/L	2.5	EPA 300.0
COD	18.5 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.19 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	4 mg/L	1	SM5310C

**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: WWU-03-0013 **USGS Hydrologic Unit:** 051202010308
Stream Name: West Fork White River **County:** Madison
Description: 8th Street **Latitude:** 40 6 27.70573 **Longitude:** -85 40 27.93698
Drainage: 406.244 **Site Number:** 20WR014

SiteID: WWU-03-0013 **Sample Date:** 6/9/2020 **IDEM Sample #:** AB42848
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	154.1 %		ASTM D888-09(C)
DO	12.88 mg/L		ASTM D888-09(C)
pH (Field)	8.4 SU		EPA 150.2
Specific Conductance (Field)	758 umho/cm		SM2510B
Temperature	24.3 °C		SM2550B(2)
Turbidity (Hach)	9.69 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> 2006006-13	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	290 mg/L	20	SM2320B
Chloride	39.2 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	328 mg/L	2.07	SM2340B
Sulfate	68.6 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	81.9 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	0.56 ug/L	0.5	EPA 200.8
Magnesium (Total)	29.9 mg/L	0.2	EPA 200.7
Nickel (Total)	2.3 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006006-13RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.48 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50259643013	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.8 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.093 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.4 mg/L	1	SM5310C

SiteID: WWU-03-0013 **Sample Date:** 7/14/2020 **IDEM Sample #:** AB43283
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: US: 255
 DS: 256

Lab ID #:	Result	Reporting Limit	Method
% Sat	92.4 %		ASTM D888-09(C)
DO	7.94 mg/L		ASTM D888-09(C)
pH (Field)	8.28 SU		EPA 150.2
Specific Conductance (Field)	938 umho/cm		SM2510B
Temperature	23 °C		SM2550B(2)
Turbidity (Hach)	8.93 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

Lab ID #: 2007009-06	Result	Reporting Limit	Method
Hardness (as CaCO3)	325 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.3 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	82.3 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	0.73 ug/L	0.5	EPA 200.8
Magnesium (Total)	29.1 mg/L	0.2	EPA 200.7
Nickel (Total)	2.05 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007009-06RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.1 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.68 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007011-14	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	290 mg/L	20	SM2320B
Chloride	50.1 mg/L	0.12	EPA 300.0

Lab ID #: 2007011-14RE1	Result	Reporting Limit	Method
Sulfate	146 mg/L	0.62	EPA 300.0

Lab ID #: 50262268014	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	19.2 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.4 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.23 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.6 mg/L	1	SM5310C

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

SiteID: WWU-03-0013 **Sample Date:** 7/29/2020 **IDEM Sample #:** AB42811
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	82.6 %		ASTM D888-09(C)
DO	6.89 mg/L		ASTM D888-09(C)
pH (Field)	8.17 SU		EPA 150.2
Specific Conductance (Field)	644 umho/cm		SM2510B
Temperature	24.3 °C		SM2550B(2)
Turbidity (Hach)	18.3 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: WWU-03-0013 **Sample Date:** 10/27/2020 **IDEM Sample #:** AB44471
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	83.8 %		ASTM D888-09(C)
DO	9.3 mg/L		ASTM D888-09(C)
pH (Field)	8.03 SU		EPA 150.2
Specific Conductance (Field)	805 umho/cm		SM2510B
Temperature	10.6 °C		SM2550B(2)
Turbidity (Hach)	5.02 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 #: 2010014-12	Result	Reporting Limit	Method
Hardness (as CaCO3)	324 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.18 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	82.6 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	28.5 mg/L	0.2	EPA 200.7
Nickel (Total)	1.91 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2010014-12RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.06 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.73 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50271482012	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	240 mg/L	2	SM2320B
Chloride	52.8 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	4 mg/L	2.5	SM2540D
Solids, Total (TS)	493 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	496 mg/L	10	SM2540C
Sulfate	109 mg/L	2.5	EPA 300.0
COD	17.1 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.9 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.21 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
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**

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: WWU-03-0014 **USGS Hydrologic Unit:** 051202010310
Stream Name: West Fork White River **County:** Madison
Description: Madison Avenue **Latitude:** 40 7 5.50865 **Longitude:** -85 41 25.72705
Drainage: 510.848 **Site Number:** 20WR015

SiteID: WWU-03-0014 **Sample Date:** 6/9/2020 **IDEM Sample #:** AB42849
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	137.5 %		ASTM D888-09(C)
DO	11.38 mg/L		ASTM D888-09(C)
pH (Field)	8.27 SU		EPA 150.2
Specific Conductance (Field)	751 umho/cm		SM2510B
Temperature	24.5 °C		SM2550B(2)
Turbidity (Hach)	10.6 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> 2006006-14	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	280 mg/L	20	SM2320B
Chloride	38 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	332 mg/L	2.07	SM2340B
Sulfate	66.2 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	83.3 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	0.91 ug/L	0.5	EPA 200.8
Magnesium (Total)	30.1 mg/L	0.2	EPA 200.7
Nickel (Total)	1.97 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2007009-07	Result	Reporting Limit	Method
Hardness (as CaCO3)	332 mg/L	2.07	SM2340B
Aluminum (Total)	0.755 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.54 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	84.4 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3.28 ug/L	2	EPA 200.8
Lead (Total)	6.03 ug/L	0.5	EPA 200.8
Magnesium (Total)	29.5 mg/L	0.2	EPA 200.7
Nickel (Total)	2.73 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	11.3 ug/L	10	EPA 200.8

Lab ID #: 2007009-07RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.22 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.68 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007011-15	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	280 mg/L	20	SM2320B
Chloride	46.9 mg/L	0.12	EPA 300.0

Lab ID #: 2007011-15RE1	Result	Reporting Limit	Method
Sulfate	131 mg/L	0.31	EPA 300.0

Lab ID #: 50262268015	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	11.1 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.21 mg/L	0.05	EPA 365.1
TKN	1 mg/L	0.5	EPA 351.2
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: WWU-03-0014 **Sample Date:** 7/29/2020 **IDEM Sample #:** AB42810
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	99 %		ASTM D888-09(C)
DO	8.11 mg/L		ASTM D888-09(C)
pH (Field)	8.24 SU		EPA 150.2
Specific Conductance (Field)	622 umho/cm		SM2510B
Temperature	25.5 °C		SM2550B(2)
Turbidity (Hach)	14.5 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: WWU-03-0014 **Sample Date:** 10/27/2020 **IDEM Sample #:** AB44472
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	78.4 %		ASTM D888-09(C)
DO	8.74 mg/L		ASTM D888-09(C)
pH (Field)	7.94 SU		EPA 150.2
Specific Conductance (Field)	771 umho/cm		SM2510B
Temperature	10.6 °C		SM2550B(2)
Turbidity (Hach)	4.38 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	7 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 #: 2010014-13	Result	Reporting Limit	Method
Hardness (as CaCO3)	320 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.62 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	81.8 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	28.1 mg/L	0.2	EPA 200.7
Nickel (Total)	1.87 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2010014-13RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.23 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.79 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50271482013	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	242 mg/L	2	SM2320B
Chloride	49 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	5 mg/L	2.5	SM2540D
Solids, Total (TS)	442 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	470 mg/L	10	SM2540C
Sulfate	94.1 mg/L	2.5	EPA 300.0
COD	14.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.6 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.2 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
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**

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: WWU-03-0015 **USGS Hydrologic Unit:** 051202010310
Stream Name: West Fork White River **County:** Madison
Description: Raible Avenue **Latitude:** 40 6 37.82692 **Longitude:** -85 42 40.03995
Drainage: 515.209 **Site Number:** 20WR016

SiteID: WWU-03-0015 **Sample Date:** 6/24/2020 **IDEM Sample #:** AB42850
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	80 %		ASTM D888-09(C)
DO	7.05 mg/L		ASTM D888-09(C)
pH (Field)	7.86 SU		EPA 150.2
Specific Conductance (Field)	617 umho/cm		SM2510B
Temperature	21.6 °C		SM2550B(2)
Turbidity (Hach)	21.6 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 2006012-02	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	200 mg/L	20	SM2320B
Chloride	34.3 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	236 mg/L	2.07	SM2340B
Sulfate	69.2 mg/L	0.12	EPA 300.0
Aluminum (Total)	0.569 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	60 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.01 ug/L	2	EPA 200.8
Lead (Total)	1.25 ug/L	0.5	EPA 200.8
Magnesium (Total)	20.9 mg/L	0.2	EPA 200.7
Nickel (Total)	1.95 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006012-02RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.34 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50260783002	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	13.2 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.12 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.8 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.19 mg/L	0.05	EPA 365.1
TKN	0.8 mg/L	0.5	EPA 351.2
TOC	3.3 mg/L	1	SM5310C

SiteID: WWU-03-0015 **Sample Date:** 7/22/2020 **IDEM Sample #:** AB43295
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: pictures: u/s-281, d/s-282

Lab ID #:	Result	Reporting Limit	Method
% Sat	71.7 %		ASTM D888-09(C)
DO	6.14 mg/L		ASTM D888-09(C)
pH (Field)	8.12 SU		EPA 150.2
Specific Conductance (Field)	764 umho/cm		SM2510B
Temperature	23.3 °C		SM2550B(2)
Turbidity (Hach)	16.1 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 #: 2007016-01	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	240 mg/L	20	SM2320B
Chloride	46.3 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	282 mg/L	2.07	SM2340B
Sulfate	83.3 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.41 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	70.9 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.94 ug/L	2	EPA 200.8
Lead (Total)	1.65 ug/L	0.5	EPA 200.8
Magnesium (Total)	25.4 mg/L	0.2	EPA 200.7
Nickel (Total)	1.98 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007016-01RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.41 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.61 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50262925001	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	14.3 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.29 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.5 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.29 mg/L	0.05	EPA 365.1
TKN	1.1 mg/L	0.5	EPA 351.2
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: WWU-03-0015 **Sample Date:** 9/21/2020 **IDEM Sample #:** AB42809
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	86.2 %		ASTM D888-09(C)
DO	8.78 mg/L		ASTM D888-09(C)
pH (Field)	8.23 SU		EPA 150.2
Specific Conductance (Field)	1213 umho/cm		SM2510B
Temperature	14.3 °C		SM2550B(2)
Turbidity (Hach)	3.96 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

SiteID: WWU-03-0015 **Sample Date:** 10/27/2020 **IDEM Sample #:** AB44473
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	89.2 %		ASTM D888-09(C)
DO	10 mg/L		ASTM D888-09(C)
pH (Field)	8.12 SU		EPA 150.2
Specific Conductance (Field)	758 umho/cm		SM2510B
Temperature	10.2 °C		SM2550B(2)
Turbidity (Hach)	6.55 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 #: 2010014-14	Result	Reporting Limit	Method
Hardness (as CaCO3)	319 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.53 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	81.3 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	28.1 mg/L	0.2	EPA 200.7
Nickel (Total)	1.76 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2010014-14RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.11 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.63 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50271482014	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	238 mg/L	2	SM2320B
Chloride	47.8 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	3 mg/L	2.5	SM2540D
Solids, Total (TS)	431 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	457 mg/L	10	SM2540C
Sulfate	91.1 mg/L	2.5	EPA 300.0
COD	18.6 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.6 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.2 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
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**

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: WWU-03-0016 **USGS Hydrologic Unit:** 051202010310
Stream Name: West Fork White River **County:** Madison
Description: Moss Island Road **Latitude:** 40 7 3.24094 **Longitude:** -85 44 4.26962
Drainage: 518.676 **Site Number:** 20WR017

SiteID: WWU-03-0016 **Sample Date:** 6/24/2020 **IDEM Sample #:** AB42851
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	71.2 %		ASTM D888-09(C)
DO	6.33 mg/L		ASTM D888-09(C)
pH (Field)	7.95 SU		EPA 150.2
Specific Conductance (Field)	625 umho/cm		SM2510B
Temperature	21 °C		SM2550B(2)
Turbidity (Hach)	19.6 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 2006012-03	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	210 mg/L	20	SM2320B
Chloride	35.8 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	248 mg/L	2.07	SM2340B
Sulfate	62 mg/L	0.12	EPA 300.0
Aluminum (Total)	0.555 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	63.3 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3.78 ug/L	2	EPA 200.8
Lead (Total)	1.48 ug/L	0.5	EPA 200.8
Magnesium (Total)	21.9 mg/L	0.2	EPA 200.7
Nickel (Total)	1.92 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006012-03RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.38 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50260783003	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	12.5 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.12 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.5 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.2 mg/L	0.05	EPA 365.1
TKN	0.99 mg/L	0.5	EPA 351.2
TOC	3.2 mg/L	1	SM5310C

SiteID: WWU-03-0016 **Sample Date:** 7/22/2020 **IDEM Sample #:** AB43296
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: pictures: u/s-283, d/s-284

Lab ID #:	Result	Reporting Limit	Method
% Sat	65.7 %		ASTM D888-09(C)
DO	5.57 mg/L		ASTM D888-09(C)
pH (Field)	7.98 SU		EPA 150.2
Specific Conductance (Field)	782 umho/cm		SM2510B
Temperature	23.6 °C		SM2550B(2)
Turbidity (Hach)	18.6 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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

Lab ID #: 2007016-02	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	250 mg/L	20	SM2320B
Chloride	46.7 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	283 mg/L	2.07	SM2340B
Sulfate	88.6 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.42 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	71.6 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.49 ug/L	2	EPA 200.8
Lead (Total)	1.88 ug/L	0.5	EPA 200.8
Magnesium (Total)	25.4 mg/L	0.2	EPA 200.7
Nickel (Total)	2.23 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007016-02RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.35 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.58 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50262925002	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.7 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.29 mg/L	0.05	EPA 365.1
TKN	0.62 mg/L	0.5	EPA 351.2
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: WWU-03-0016 **Sample Date:** 7/30/2020 **IDEM Sample #:** AB42808
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/S: 298
DS/: 299

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	70.5 %		ASTM D888-09(C)
DO	5.89 mg/L		ASTM D888-09(C)
pH (Field)	7.94 SU		EPA 150.2
Specific Conductance (Field)	615 umho/cm		SM2510B
Temperature	24.3 °C		SM2550B(2)
Turbidity (Hach)	16.3 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	8 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

SiteID: WWU-03-0016 **Sample Date:** 10/27/2020 **IDEM Sample #:** AB44474
Water Flow Type Riffle **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Cyanide bottle broken by Lab worker.

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	80.2 %		ASTM D888-09(C)
DO	8.84 mg/L		ASTM D888-09(C)
pH (Field)	7.97 SU		EPA 150.2
Specific Conductance (Field)	760 umho/cm		SM2510B
Temperature	10.9 °C		SM2550B(2)
Turbidity (Hach)	4.58 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 #: 2010014-15	Result	Reporting Limit	Method
Hardness (as CaCO3)	322 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.59 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	82.4 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	28.1 mg/L	0.2	EPA 200.7
Nickel (Total)	1.94 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2010014-15RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.14 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.66 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50271482015	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	239 mg/L	2	SM2320B
Chloride	49.8 mg/L	2.5	EPA 300.0
Solids, Suspended Total, (TSS)	4 mg/L	2.5	SM2540D
Solids, Total (TS)	460 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	476 mg/L	10	SM2540C
Sulfate	85.3 mg/L	2.5	EPA 300.0
COD	20.4 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.5 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.28 mg/L	0.05	EPA 365.1
TKN	0.58 mg/L	0.5	EPA 351.2
TOC	3.5 mg/L	1	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: WWU-03-0017 **USGS Hydrologic Unit:** 051202010310
Stream Name: West Fork White River **County:** Madison
Description: CR 600 West **Latitude:** 40 7 54.03407 **Longitude:** -85 47 9.35842
Drainage: 544.285 **Site Number:** 20WR018

SiteID: WWU-03-0017 **Sample Date:** 6/24/2020 **IDEM Sample #:** AB42852
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Sampled from base of bridge, not top, downstream due to logs blocking upstream.

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	69.1 %		ASTM D888-09(C)
DO	6.14 mg/L		ASTM D888-09(C)
pH (Field)	7.95 SU		EPA 150.2
Specific Conductance (Field)	656 umho/cm		SM2510B
Temperature	21.1 °C		SM2550B(2)
Turbidity (Hach)	18 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	9 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 2006012-04	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	220 mg/L	20	SM2320B
Chloride	36.5 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	264 mg/L	2.07	SM2340B
Sulfate	59.3 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	67.2 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	1.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	23.3 mg/L	0.2	EPA 200.7
Nickel (Total)	1.93 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006012-04RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.37 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50260783004	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.12 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.4 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.21 mg/L	0.05	EPA 365.1
TKN	0.84 mg/L	0.5	EPA 351.2
TOC	3.2 mg/L	1	SM5310C

SiteID: WWU-03-0017 **Sample Date:** 7/22/2020 **IDEM Sample #:** AB43297
Water Flow Type Riffle **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: pictures: u/s-285, d/s-286

Lab ID #:	Result	Reporting Limit	Method
% Sat	59.7 %		ASTM D888-09(C)
DO	5.04 mg/L		ASTM D888-09(C)
pH (Field)	7.92 SU		EPA 150.2
Specific Conductance (Field)	774 umho/cm		SM2510B
Temperature	23.9 °C		SM2550B(2)
Turbidity (Hach)	14.6 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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

Lab ID #: 2007016-03	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	240 mg/L	20	SM2320B
Chloride	48.4 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	271 mg/L	2.07	SM2340B
Sulfate	88.3 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.49 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	69 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.35 ug/L	2	EPA 200.8
Lead (Total)	1.38 ug/L	0.5	EPA 200.8
Magnesium (Total)	24.1 mg/L	0.2	EPA 200.7
Nickel (Total)	2.12 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007016-03RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.37 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.64 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50262925003	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	32 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.15 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.7 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.25 mg/L	0.05	EPA 365.1
TKN	0.68 mg/L	0.5	EPA 351.2
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: WWU-03-0017 **Sample Date:** 9/22/2020 **IDEM Sample #:** AB42807
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	8.64 mg/L		ASTM D888-09(C)
pH (Field)	8.25 SU		EPA 150.2
Specific Conductance (Field)	1145 umho/cm		SM2510B
Temperature	15.5 °C		SM2550B(2)
Turbidity (Hach)	4.53 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

SiteID: WWU-03-0017 **Sample Date:** 10/27/2020 **IDEM Sample #:** AB44475
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	9.03 mg/L		ASTM D888-09(C)
pH (Field)	7.91 SU		EPA 150.2
Specific Conductance (Field)	783 umho/cm		SM2510B
Temperature	11.3 °C		SM2550B(2)
Turbidity (Hach)	3.7 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 #: 2010014-18	Result	Reporting Limit	Method
Hardness (as CaCO3)	323 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.26 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	82.7 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	28.2 mg/L	0.2	EPA 200.7
Nickel (Total)	1.83 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2010014-18RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.6 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50271482018	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	247 mg/L	2	SM2320B
Chloride	55.1 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	455 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	463 mg/L	10	SM2540C
Sulfate	85.6 mg/L	2.5	EPA 300.0
COD	19.3 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.5 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.23 mg/L	0.05	EPA 365.1
TKN	0.75 mg/L	0.5	EPA 351.2
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**

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: WWU-03-0018 **USGS Hydrologic Unit:** 051202010310
Stream Name: West Fork White River **County:** Madison
Description: SR 13 **Latitude:** 40 8 30.45341 **Longitude:** -85 51 46.95388
Drainage: 551.265 **Site Number:** 20WR019

SiteID: WWU-03-0018 **Sample Date:** 6/24/2020 **IDEM Sample #:** AB42853
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	67.8 %		ASTM D888-09(C)
DO	5.97 mg/L		ASTM D888-09(C)
pH (Field)	8.04 SU		EPA 150.2
Specific Conductance (Field)	711 umho/cm		SM2510B
Temperature	21.4 °C		SM2550B(2)
Turbidity (Hach)	19.6 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2006012-05	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	230 mg/L	20	SM2320B
Chloride	41.2 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	279 mg/L	2.07	SM2340B
Sulfate	73.9 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	70.4 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.2 ug/L	2	EPA 200.8
Lead (Total)	1.66 ug/L	0.5	EPA 200.8
Magnesium (Total)	25.2 mg/L	0.2	EPA 200.7
Nickel (Total)	2.16 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006012-05RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.54 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50260783005	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	12.1 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.7 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.21 mg/L	0.05	EPA 365.1
TKN	0.87 mg/L	0.5	EPA 351.2
TOC	2.9 mg/L	1	SM5310C

SiteID: WWU-03-0018 **Sample Date:** 7/22/2020 **IDEM Sample #:** AB43298
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: pictures: u/s-287, d/s-288

Lab ID #:	Result	Reporting Limit	Method
% Sat	75.9 %		ASTM D888-09(C)
DO	6.36 mg/L		ASTM D888-09(C)
pH (Field)	8.08 SU		EPA 150.2
Specific Conductance (Field)	857 umho/cm		SM2510B
Temperature	24.2 °C		SM2550B(2)
Turbidity (Hach)	27.2 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 #: 2007016-04	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	250 mg/L	20	SM2320B
Chloride	54.5 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	290 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.45 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	73.3 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.28 ug/L	2	EPA 200.8
Lead (Total)	1.04 ug/L	0.5	EPA 200.8
Magnesium (Total)	25.9 mg/L	0.2	EPA 200.7
Nickel (Total)	2.24 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007016-04RE1	Result	Reporting Limit	Method
Sulfate	107 mg/L	0.25	EPA 300.0
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.31 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.76 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50262925004	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.1 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.26 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.9 mg/L	1	SM5310C

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

SiteID: WWU-03-0018 Sample Date: 9/16/2020 IDEM Sample #: AB42826
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: Sampled U/S of bridge

Lab ID #:	Result	Reporting Limit	Method
% Sat	80.2 %		ASTM D888-09(C)
DO	7.51 mg/L		ASTM D888-09(C)
pH (Field)	8.15 SU		EPA 150.2
Specific Conductance (Field)	1154 umho/cm		SM2510B
Temperature	18.3 °C		SM2550B(2)
Turbidity (Hach)	9.47 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

SiteID: WWU-03-0018 Sample Date: 10/27/2020 IDEM Sample #: AB44476
 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	89.5 %		ASTM D888-09(C)
DO	9.86 mg/L		ASTM D888-09(C)
pH (Field)	8.13 SU		EPA 150.2
Specific Conductance (Field)	760 umho/cm		SM2510B
Temperature	10.9 °C		SM2550B(2)
Turbidity (Hach)	5.57 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	7 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2010014-19RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.13 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.61 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 50271482019	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	237 mg/L	2	SM2320B
Chloride	53.9 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	434 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	436 mg/L	10	SM2540C
Sulfate	87.5 mg/L	2.5	EPA 300.0
COD	19 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.5 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.28 mg/L	0.05	EPA 365.1
TKN	0.77 mg/L	0.5	EPA 351.2
TOC	3.5 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 - 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: WWU-07-0005 **USGS Hydrologic Unit:** 051202010701
Stream Name: West Fork White River **County:** Hamilton
Description: Strawtown Avenue **Latitude:** 40 7 40.82136 **Longitude:** -85 54 31.42598
Drainage: 713.805 **Site Number:** 20WR020

SiteID: WWU-07-0005 **Sample Date:** 6/10/2020 **IDEM Sample #:** AB42854
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Water sampled u/s of X behind mobile home next to Versprille property. Sampled near where power lines cross the river

Lab ID #:	Result	Reporting Limit	Method
% Sat	93.3 %		ASTM D888-09(C)
DO	7.91 mg/L		ASTM D888-09(C)
pH (Field)	8.04 SU		EPA 150.2
Specific Conductance (Field)	786 umho/cm		SM2510B
Temperature	23.6 °C		SM2550B(2)
Turbidity (Hach)	7.9 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	3 Lookup		Observation

Lab ID #: 2006006-15	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	290 mg/L	20	SM2320B
Chloride	44 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	332 mg/L	2.07	SM2340B
Sulfate	66.9 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	84.2 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	0.55 ug/L	0.5	EPA 200.8
Magnesium (Total)	29.5 mg/L	0.2	EPA 200.7
Nickel (Total)	1.94 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006006-15RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.61 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50259643015	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	12 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.14 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.6 mg/L	1	SM5310C

SiteID: WWU-07-0005 **Sample Date:** 7/14/2020 **IDEM Sample #:** AB43286
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: US: 259
 DS: 260

Lab ID #:	Result	Reporting Limit	Method
% Sat	86.6 %		ASTM D888-09(C)
DO	7.46 mg/L		ASTM D888-09(C)
pH (Field)	8.11 SU		EPA 150.2
Specific Conductance (Field)	837 umho/cm		SM2510B
Temperature	22.8 °C		SM2550B(2)
Turbidity (Hach)	6.51 NTU		EPA 180.1
Air Temp	4 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 #: 2007009-08	Result	Reporting Limit	Method
Hardness (as CaCO3)	323 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	82.7 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	0.62 ug/L	0.5	EPA 200.8
Magnesium (Total)	28.4 mg/L	0.2	EPA 200.7
Nickel (Total)	2.07 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007009-08RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.28 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.76 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007011-16	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	290 mg/L	20	SM2320B
Chloride	49.1 mg/L	0.12	EPA 300.0

Lab ID #: 2007011-16RE1	Result	Reporting Limit	Method
Sulfate	111 mg/L	0.31	EPA 300.0

Lab ID #: 50262268016	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	12.2 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.4 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.2 mg/L	0.05	EPA 365.1
TKN	0.53 mg/L	0.5	EPA 351.2
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: WWU-07-0005 **Sample Date:** 9/16/2020 **IDEM Sample #:** AB42795
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	99.8 %		ASTM D888-09(C)
DO	9.49 mg/L		ASTM D888-09(C)
pH (Field)	8.27 SU		EPA 150.2
Specific Conductance (Field)	1078 umho/cm		SM2510B
Temperature	17.5 °C		SM2550B(2)
Turbidity (Hach)	9.6 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

SiteID: WWU-07-0005 **Sample Date:** 10/27/2020 **IDEM Sample #:** AB44478
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	89.6 %		ASTM D888-09(C)
DO	9.86 mg/L		ASTM D888-09(C)
pH (Field)	8.06 SU		EPA 150.2
Specific Conductance (Field)	740 umho/cm		SM2510B
Temperature	11 °C		SM2550B(2)
Turbidity (Hach)	3.29 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	7 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 #: 2010014-20	Result	Reporting Limit	Method
Hardness (as CaCO3)	307 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.99 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	79 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	26.7 mg/L	0.2	EPA 200.7
Nickel (Total)	1.82 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2010014-20RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.22 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.69 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50271482020	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	230 mg/L	2	SM2320B
Chloride	49 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	432 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	425 mg/L	10	SM2540C
Sulfate	84 mg/L	2.5	EPA 300.0
COD	18 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.5 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.25 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
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**

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: WWU-07-0006 **USGS Hydrologic Unit:** 051202010705
Stream Name: West Fork White River **County:** Hamilton
Description: Riverwood Avenue **Latitude:** 40 5 40.98649 **Longitude:** -85 58 7.42270
Drainage: 835.038 **Site Number:** 20WR021

SiteID: WWU-07-0006 **Sample Date:** 6/24/2020 **IDEM Sample #:** AB42855
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	56.3 %		ASTM D888-09(C)
DO	4.92 mg/L		ASTM D888-09(C)
pH (Field)	7.97 SU		EPA 150.2
Specific Conductance (Field)	686 umho/cm		SM2510B
Temperature	21.9 °C		SM2550B(2)
Turbidity (Hach)	15.3 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 2006012-06	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	230 mg/L	20	SM2320B
Chloride	41.7 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	261 mg/L	2.07	SM2340B
Sulfate	71.2 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.04 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	65.9 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	0.9 ug/L	0.5	EPA 200.8
Magnesium (Total)	23.4 mg/L	0.2	EPA 200.7
Nickel (Total)	2 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006012-06RE1

	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.49 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50260783006

	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.7 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.23 mg/L	0.05	EPA 365.1
TKN	0.72 mg/L	0.5	EPA 351.2
TOC	2.8 mg/L	1	SM5310C

SiteID: WWU-07-0006

Sample Date: 7/22/2020

IDEM Sample #: AB43299

Water Flow Type Run

Water Appearance Murky

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments: pictures: u/s-289, d/s-290

Lab ID #:

	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	73 %		ASTM D888-09(C)
DO	6.02 mg/L		ASTM D888-09(C)
pH (Field)	8.15 SU		EPA 150.2
Specific Conductance (Field)	891 umho/cm		SM2510B
Temperature	25.1 °C		SM2550B(2)
Turbidity (Hach)	13.9 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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

Lab ID #: 2007016-05	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	270 mg/L	20	SM2320B
Chloride	53.1 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	309 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	3 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	78.5 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	0.8 ug/L	0.5	EPA 200.8
Magnesium (Total)	27.5 mg/L	0.2	EPA 200.7
Nickel (Total)	2.28 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007016-05RE1	Result	Reporting Limit	Method
Sulfate	118 mg/L	0.25	EPA 300.0
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.79 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.88 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50262925005	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.8 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.26 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.9 mg/L	1	SM5310C

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

SiteID: WWU-07-0006 Sample Date: 9/14/2020 IDEM Sample #: AB42828
 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	109 %		ASTM D888-09(C)
DO	9.37 mg/L		ASTM D888-09(C)
pH (Field)	8.33 SU		EPA 150.2
Specific Conductance (Field)	868 umho/cm		SM2510B
Temperature	22.7 °C		SM2550B(2)
Turbidity (Hach)	12.3 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: WWU-07-0006 Sample Date: 11/4/2020 IDEM Sample #: AB44487
 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	87.2 %		ASTM D888-09(C)
DO	10.3 mg/L		ASTM D888-09(C)
pH (Field)	8.09 SU		EPA 150.2
Specific Conductance (Field)	721 umho/cm		SM2510B
Temperature	8 °C		SM2550B(2)
Turbidity (Hach)	6.04 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

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

Lab ID #: 2011004-01	Result	Reporting Limit	Method
Hardness (as CaCO3)	312 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.48 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	81.4 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	26.4 mg/L	0.2	EPA 200.7
Nickel (Total)	1.97 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2011004-01RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.12 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.74 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50272163001	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	236 mg/L	2	SM2320B
Chloride	45.2 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	4 mg/L	2.5	SM2540D
Solids, Total (TS)	441 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	407 mg/L	10	SM2540C
Sulfate	72.8 mg/L	2.5	EPA 300.0
COD	17.2 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	3.2 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.19 mg/L	0.05	EPA 365.1
TKN	0.58 mg/L	0.5	EPA 351.2
TOC	4.2 mg/L	1	SM5310C

**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: WWU-07-0009 **USGS Hydrologic Unit:** 051202010705
Stream Name: West Fork White River **County:** Hamilton
Description: SR 19 **Latitude:** 40 3 7.50977 **Longitude:** -86 0 52.38729
Drainage: 853.064 **Site Number:** 20WR022

SiteID: WWU-07-0009 **Sample Date:** 6/10/2020 **IDEM Sample #:** AB42856
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	87.8 %		ASTM D888-09(C)
DO	7.39 mg/L		ASTM D888-09(C)
pH (Field)	8.12 SU		EPA 150.2
Specific Conductance (Field)	733 umho/cm		SM2510B
Temperature	23.9 °C		SM2550B(2)
Turbidity (Hach)	11.2 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	3 Lookup		Observation

<u>Lab ID #:</u> 2006006-16	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	270 mg/L	20	SM2320B
Chloride	39.9 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	322 mg/L	2.07	SM2340B
Sulfate	53.8 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.03 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	82 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	0.6 ug/L	0.5	EPA 200.8
Magnesium (Total)	28.4 mg/L	0.2	EPA 200.7
Nickel (Total)	2.17 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006006-16RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	1.22 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.67 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50259643016	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	16 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.5 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.14 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.7 mg/L	1	SM5310C

SiteID: WWU-07-0009 **Sample Date:** 7/14/2020 **IDEM Sample #:** AB43287
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: US: 261
 DS: 262

Lab ID #:	Result	Reporting Limit	Method
% Sat	101.3 %		ASTM D888-09(C)
DO	8.3 mg/L		ASTM D888-09(C)
pH (Field)	8.28 SU		EPA 150.2
Specific Conductance (Field)	811 umho/cm		SM2510B
Temperature	25.3 °C		SM2550B(2)
Turbidity (Hach)	9.35 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 #: 2007009-09	Result	Reporting Limit	Method
Hardness (as CaCO3)	307 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.49 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	78.5 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	0.62 ug/L	0.5	EPA 200.8
Magnesium (Total)	27 mg/L	0.2	EPA 200.7
Nickel (Total)	2.26 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007009-09RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.46 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.76 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007011-17	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	280 mg/L	20	SM2320B
Chloride	48.9 mg/L	0.12	EPA 300.0
Sulfate	84.7 mg/L	0.12	EPA 300.0

Lab ID #: 50262268017	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	13.2 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.1 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.21 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.7 mg/L	1	SM5310C

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

SiteID: WWU-07-0009 **Sample Date:** 9/10/2020 **IDEM Sample #:** AB42806
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	74.5 %		ASTM D888-09(C)
DO	6.4 mg/L		ASTM D888-09(C)
pH (Field)	8.22 SU		EPA 150.2
Specific Conductance (Field)	1090 umho/cm		SM2510B
Temperature	22.9 °C		SM2550B(2)
Turbidity (Hach)	15.2 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: WWU-07-0009 **Sample Date:** 10/27/2020 **IDEM Sample #:** AB44479
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	95.3 %		ASTM D888-09(C)
DO	10.45 mg/L		ASTM D888-09(C)
pH (Field)	8.13 SU		EPA 150.2
Specific Conductance (Field)	776 umho/cm		SM2510B
Temperature	11.1 °C		SM2550B(2)
Turbidity (Hach)	4.03 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	7 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 #: 2010014-21	Result	Reporting Limit	Method
Hardness (as CaCO3)	289 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.55 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	74.6 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	4.66 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	25 mg/L	0.2	EPA 200.7
Nickel (Total)	1.99 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2010014-21RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.53 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.74 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50271482021	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	225 mg/L	2	SM2320B
Chloride	47.9 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	453 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	452 mg/L	10	SM2540C
Sulfate	112 mg/L	2.5	EPA 300.0
COD	18.9 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.7 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.26 mg/L	0.05	EPA 365.1
TKN	0.5 mg/L	0.5	EPA 351.2
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**

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: WWU-07-0008 **USGS Hydrologic Unit:** 051202010705
Stream Name: West Fork White River **County:** Hamilton
Description: River Avenue **Latitude:** 40 2 15.46435 **Longitude:** -86 1 32.57196
Drainage: 854.325 **Site Number:** 20WR024

SiteID: WWU-07-0008 **Sample Date:** 6/9/2020 **IDEM Sample #:** AB42881
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	116.1 %		ASTM D888-09(C)
DO	9.52 mg/L		ASTM D888-09(C)
pH (Field)	8.31 SU		EPA 150.2
Specific Conductance (Field)	726 umho/cm		SM2510B
Temperature	25.2 °C		SM2550B(2)
Turbidity (Hach)	4.91 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	4 Lookup		Observation

<u>Lab ID #:</u> 2006006-18	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	280 mg/L	20	SM2320B
Chloride	39.7 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	317 mg/L	2.07	SM2340B
Sulfate	59.3 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	80.7 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	27.9 mg/L	0.2	EPA 200.7
Nickel (Total)	1.91 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006006-18RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.55 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50259642001	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	11.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.7 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.13 mg/L	0.05	EPA 365.1
TKN	0.52 mg/L	0.5	EPA 351.2
TOC	2.6 mg/L	1	SM5310C

SiteID: WWU-07-0008 **Sample Date:** 7/7/2020 **IDEM Sample #:** AB43256
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: US: 229
 DS: 230

Lab ID #:	Result	Reporting Limit	Method
% Sat	90.5 %		ASTM D888-09(C)
DO	7.03 mg/L		ASTM D888-09(C)
pH (Field)	7.86 SU		EPA 150.2
Specific Conductance (Field)	746 umho/cm		SM2510B
Temperature	28.4 °C		SM2550B(2)
Turbidity (Hach)	17.7 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	3 Lookup		Observation

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

Lab ID #: 2007007-01	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	260 mg/L	20	SM2320B
Chloride	40.2 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	295 mg/L	2.07	SM2340B
Sulfate	70.5 mg/L	0.12	EPA 300.0
Aluminum (Total)	0.788 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.69 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	76 mg/L	0.5	EPA 200.7
Chromium (Total)	2.03 ug/L	2	EPA 200.8
Copper (Total)	3.13 ug/L	2	EPA 200.8
Lead (Total)	2.07 ug/L	0.5	EPA 200.8
Magnesium (Total)	25.5 mg/L	0.2	EPA 200.7
Nickel (Total)	3.03 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007007-01RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.53 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.54 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50261781001	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	20.5 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.7 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.31 mg/L	0.05	EPA 365.1
TKN	0.9 mg/L	0.5	EPA 351.2
TOC	2.8 mg/L	1	SM5310C

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

SiteID: WWU-07-0008 **Sample Date:** 8/6/2020 **IDEM Sample #:** AB42788
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	87.5 %		ASTM D888-09(C)
DO	7.76 mg/L		ASTM D888-09(C)
pH (Field)	8.31 SU		EPA 150.2
Specific Conductance (Field)	687 umho/cm		SM2510B
Temperature	21.2 °C		SM2550B(2)
Turbidity (Hach)	16.7 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: WWU-07-0008 **Sample Date:** 10/20/2020 **IDEM Sample #:** AB44443
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	105 %		ASTM D888-09(C)
DO	11.31 mg/L		ASTM D888-09(C)
pH (Field)	8.28 SU		EPA 150.2
Specific Conductance (Field)	1111 umho/cm		SM2510B
Temperature	11.9 °C		SM2550B(2)
Turbidity (Hach)	2.33 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 #: 2010008-01	Result	Reporting Limit	Method
Hardness (as CaCO3)	380 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.54 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	93.9 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	35.3 mg/L	0.2	EPA 200.7
Nickel (Total)	2.73 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2010008-01RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.4 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.21 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50270802001	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	294 mg/L	2	SM2320B
Chloride	87 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	672 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	646 mg/L	10	SM2540C
Sulfate	184 mg/L	2.5	EPA 300.0
COD	15.1 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.32 mg/L	0.05	EPA 365.1
TKN	0.7 mg/L	0.5	EPA 351.2
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**

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: WWU-10-0037 **USGS Hydrologic Unit:** 051202011002
Stream Name: White River **County:** Hamilton
Description: River Road Park **Latitude:** 39 58 4.87926 **Longitude:** -86 2 57.13560
Drainage: 1163.854 **Site Number:** INRB20-024

SiteID: WWU-10-0037 **Sample Date:** 5/25/2020 **IDEM Sample #:** AB42173
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	97.9 %		ASTM D888-09(C)
DO	8.58 mg/L		ASTM D888-09(C)
pH (Field)	8.17 SU		EPA 150.2
Specific Conductance (Field)	580 umho/cm		SM2510B
Temperature	21.8 °C		SM2550B(2)
Turbidity (Hach)	9.9 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> AB42173	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	88.2 MPN/100mL	1	SM9223B

SiteID: WWU-10-0037 **Sample Date:** 6/1/2020 **IDEM Sample #:** AB42195
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	90.1 %		ASTM D888-09(C)
DO	8.15 mg/L		ASTM D888-09(C)
pH (Field)	7.85 SU		EPA 150.2
Specific Conductance (Field)	564 umho/cm		SM2510B
Temperature	20.2 °C		SM2550B(2)
Turbidity (Hach)	28.3 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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

Lab ID #: AB42195	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	162.4 MPN/100mL	1	SM9223B

SiteID: WWU-10-0037 **Sample Date:** 6/8/2020 **IDEM Sample #:** AB42217
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	96.2 %		ASTM D888-09(C)
DO	8.08 mg/L		ASTM D888-09(C)
pH (Field)	7.96 SU		EPA 150.2
Specific Conductance (Field)	717 umho/cm		SM2510B
Temperature	24 °C		SM2550B(2)
Turbidity (Hach)	23.96 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: AB42217	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	127.4 MPN/100mL	1	SM9223B

SiteID: WWU-10-0037 **Sample Date:** 6/9/2020 **IDEM Sample #:** AB41881
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	99.3 %		ASTM D888-09(C)
DO	8.31 mg/L		ASTM D888-09(C)
pH (Field)	8.1 SU		EPA 150.2
Specific Conductance (Field)	714 umho/cm		SM2510B
Temperature	24.522 °C		SM2550B(2)
Turbidity (Hach)	13.2 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

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

Lab ID #: 50259461007	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	234 mg/L	2	SM2320B
Chloride	42.2 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	319 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	12 mg/L	3.1	SM2540D
Solids, Total (TS)	425 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	394 mg/L	10	SM2540C
Sulfate	60.2 mg/L	2.5	EPA 300.0
Aluminum (Total)	0.29 mg/L	0.01	EPA 200.8
Aluminum (Dissolved)	< 0.01 mg/L	0.01	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	1.5 ug/L	1	EPA 200.8
Arsenic (Total)	1.7 ug/L	1	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	81.6 mg/L	1	EPA 200.7
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	1.4 ug/L	1	EPA 200.8
Copper (Total)	1.8 ug/L	1	EPA 200.8
Lead (Total)	< 1 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Magnesium (Total)	28 mg/L	1	EPA 200.7
Nickel (Dissolved)	1.3 ug/L	0.5	EPA 200.8
Nickel (Total)	1.8 ug/L	0.5	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Total)	3.9 ug/L	3	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
COD	11.3 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.9 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.14 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
TOC	2.8 mg/L	0.5	SM5310C

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

SiteID: WWU-10-0037 **Sample Date:** 6/15/2020 **IDEM Sample #:** AB42239
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	121.4 %		ASTM D888-09(C)
DO	10.62 mg/L		ASTM D888-09(C)
pH (Field)	8.24 SU		EPA 150.2
Specific Conductance (Field)	740 umho/cm		SM2510B
Temperature	21.9 °C		SM2550B(2)
Turbidity (Hach)	11.2 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: AB42239	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	63.7 MPN/100mL	1	SM9223B

SiteID: WWU-10-0037 **Sample Date:** 6/22/2020 **IDEM Sample #:** AB42261
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	89.4 %		ASTM D888-09(C)
DO	7.37 mg/L		ASTM D888-09(C)
pH (Field)	8.09 SU		EPA 150.2
Specific Conductance (Field)	836 umho/cm		SM2510B
Temperature	25 °C		SM2550B(2)
Turbidity (Hach)	7.73 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB42261	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	83.9 MPN/100mL	1	SM9223B

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

SiteID: WWU-10-0037 **Sample Date:** 6/24/2020 **IDEM Sample #:** AB42283
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	94.7 %		ASTM D888-09(C)
DO	7.93 mg/L		ASTM D888-09(C)
pH (Field)	8.04 SU		EPA 150.2
Specific Conductance (Field)	773 umho/cm		SM2510B
Temperature	24.189 °C		SM2550B(2)
Turbidity (Hach)	18.9 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 702104	Result	Reporting Limit	Method
Phosphorus, ortho	0.085 mg/L	0.002	EPA 365.1

SiteID: WWU-10-0037 **Sample Date:** 7/21/2020 **IDEM Sample #:** AB41936
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	90.9 %		ASTM D888-09(C)
DO	7.27 mg/L		ASTM D888-09(C)
pH (Field)	8.05 SU		EPA 150.2
Specific Conductance (Field)	893 umho/cm		SM2510B
Temperature	26.763 °C		SM2550B(2)
Turbidity (Hach)	10.3 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 #: 50262903007	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	251 mg/L	2	SM2320B
Chloride	65.1 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	323 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	8 mg/L	2.5	SM2540D
Solids, Total (TS)	537 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	501 mg/L	10	SM2540C
Sulfate	107 mg/L	2.5	EPA 300.0
Aluminum (Total)	0.19 mg/L	0.01	EPA 200.8
Aluminum (Dissolved)	< 0.01 mg/L	0.01	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.2 ug/L	1	EPA 200.8
Arsenic (Total)	2.2 ug/L	1	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	80 mg/L	1	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	1.5 ug/L	1	EPA 200.8
Copper (Total)	1.9 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Lead (Total)	< 1 ug/L	1	EPA 200.8
Magnesium (Total)	29.9 mg/L	1	EPA 200.7
Nickel (Total)	2.1 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.7 ug/L	0.5	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
Zinc (Total)	< 3 ug/L	3	EPA 200.8
COD	12.5 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.2 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.21 mg/L	0.05	EPA 365.1
TKN	0.59 mg/L	0.5	EPA 351.2
TOC	3 mg/L	1	SM5310C

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

SiteID: WWU-10-0037 Sample Date: 8/6/2020 IDEM Sample #: AB42125
 Water Flow Type Run Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	97.6 %		ASTM D888-09(C)
DO	8.47 mg/L		ASTM D888-09(C)
pH (Field)	8.16 SU		EPA 150.2
Specific Conductance (Field)	705 umho/cm		SM2510B
Temperature	22.3 °C		SM2550B(2)
Turbidity (Hach)	6.46 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

SiteID: WWU-10-0037 Sample Date: 8/12/2020 IDEM Sample #: AB42303
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: HOBO #18
 SN: 20781252

Lab ID #:	Result	Reporting Limit	Method
% Sat	97.8 %		ASTM D888-09(C)
DO	7.98 mg/L		ASTM D888-09(C)
pH (Field)	8.12 SU		EPA 150.2
Specific Conductance (Field)	728 umho/cm		SM2510B
Temperature	25.603 °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

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

SiteID: WWU-10-0037 **Sample Date:** 10/14/2020 **IDEM Sample #:** AB41991
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	67.7 %		ASTM D888-09(C)
DO	6.77 mg/L		ASTM D888-09(C)
pH (Field)	7.94 SU		EPA 150.2
Specific Conductance (Field)	1066 umho/cm		SM2510B
Temperature	15.215 °C		SM2550B(2)
Turbidity (Hach)	4 NTU		EPA 180.1
Air Temp	3 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 #: 50270276004	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	852 mg/L	2	SM2320B
Chloride	85.4 mg/L	5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	330 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	619 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	597 mg/L	10	SM2540C
Sulfate	140 mg/L	5	EPA 300.0
Aluminum (Dissolved)	< 0.01 mg/L	0.01	EPA 200.8
Aluminum (Total)	0.044 mg/L	0.01	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	1.8 ug/L	1	EPA 200.8
Arsenic (Total)	2.1 ug/L	1	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	82.8 mg/L	1	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Total)	10.3 ug/L	1	EPA 200.8
Copper (Dissolved)	1.5 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Lead (Total)	1.1 ug/L	1	EPA 200.8
Magnesium (Total)	29.9 mg/L	1	EPA 200.7
Nickel (Total)	2.4 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.9 ug/L	0.5	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
Zinc (Total)	6.6 ug/L	3	EPA 200.8
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.2 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.23 mg/L	0.05	EPA 365.1
TKN	0.51 mg/L	0.5	EPA 351.2
TOC	3.3 mg/L	1	SM5310C

Lab ID #: AB41991 peri	Result	Reporting Limit	Method
Chlorophyll a	2458.78 ug/L	0.95	EPA 445M
Periphyton Algal Biomass	266.53 mg/M2	0.95	EPA 445M

Lab ID #: AB41991 phy	Result	Reporting Limit	Method
Phytoplankton Chlorophyll-a	2.21 ug/L	0.95	EPA 445M

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

SiteID: WWU-10-0037

Sample Date: 11/4/2020

IDEM Sample #: AB42341

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	94.1 %		ASTM D888-09(C)
DO	10.43 mg/L		ASTM D888-09(C)
pH (Field)	8.07 SU		EPA 150.2
Specific Conductance (Field)	675 umho/cm		SM2510B
Temperature	10.712 °C		SM2550B(2)
Turbidity (Hach)	6.73 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: 712844	Result	Reporting Limit	Method
Phosphorus, ortho	0.11 mg/L	0.02	EPA 365.1

Weather Code Definitions			
SC Sky Conditions	WD Wind Direction	WS Wind Strength	AT 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: WWU-10-0042 **USGS Hydrologic Unit:** 051202011002
Stream Name: West Fork White River **County:** Hamilton
Description: Wapihani Drive **Latitude:** 39 57 25.17712 **Longitude:** -86 3 40.10564
Drainage: 1165.631 **Site Number:** 20WR027

SiteID: WWU-10-0042 **Sample Date:** 6/2/2020 **IDEM Sample #:** AB42637
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: cyanide collected later on 6/16/20 (AB42889)

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	88.4 %		ASTM D888-09(C)
DO	7.96 mg/L		ASTM D888-09(C)
pH (Field)	8.02 SU		EPA 150.2
Specific Conductance (Field)	551 umho/cm		SM2510B
Temperature	20.4 °C		SM2550B(2)
Turbidity (Hach)	21.8 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> 2006004-01	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3) Hardness	200 mg/L	20	SM2320B
(as CaCO3)	251 mg/L	2.07	SM2340B
Solids, Suspended Total, (TSS)	25 mg/L	5	SM2540D
Solids, Total Dissolved (TDS)	356 mg/L	20	SM2540C
Aluminum (Total)	0.725 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	65.2 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.85 ug/L	2	EPA 200.8
Lead (Total)	1.35 ug/L	0.5	EPA 200.8
Magnesium (Total)	21.3 mg/L	0.2	EPA 200.7
Nickel (Total)	2.5 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006004-01RE1	Result	Reporting Limit	Method
Chloride	29.8 mg/L	0.12	EPA 300.0
Sulfate	29.8 mg/L	0.12	EPA 300.0
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.55 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50258978002	Result	Reporting Limit	Method
COD	15.5 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	5.3 mg/L	0.2	EPA 353.2
Phosphorus, Total	0.17 mg/L	0.05	EPA 365.1
TKN	0.76 mg/L	0.5	EPA 351.2
TOC	3.8 mg/L	1	SM5310C

SiteID: WWU-10-0042 **Sample Date:** 6/16/2020 **IDEM Sample #:** AB42889
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	86.4 %		ASTM D888-09(C)
DO	7.59 mg/L		ASTM D888-09(C)
pH (Field)	8.37 SU		EPA 150.2
Specific Conductance (Field)	792 umho/cm		SM2510B
Temperature	21.6 °C		SM2550B(2)
Turbidity (Hach)	13.5 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 50260117002	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4

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

SiteID: WWU-10-0042 Sample Date: 7/7/2020 IDEM Sample #: AB43257
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: US: 227
 DS: 228

Lab ID #:	Result	Reporting Limit	Method
% Sat	98.4 %		ASTM D888-09(C)
DO	8.03 mg/L		ASTM D888-09(C)
pH (Field)	8.06 SU		EPA 150.2
Specific Conductance (Field)	630 umho/cm		SM2510B
Temperature	28.6 °C		SM2550B(2)
Turbidity (Hach)	10.2 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: 2007007-02	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	210 mg/L	20	SM2320B
Chloride	39.7 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	239 mg/L	2.07	SM2340B
Sulfate	48.3 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	60.8 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	0.65 ug/L	0.5	EPA 200.8
Magnesium (Total)	21.3 mg/L	0.2	EPA 200.7
Nickel (Total)	1.87 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007007-02RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.12 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.38 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 50261781002	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	18.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.9 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.17 mg/L	0.05	EPA 365.1
TKN	0.69 mg/L	0.5	EPA 351.2
TOC	3 mg/L	1	SM5310C

SiteID: WWU-10-0042 **Sample Date:** 9/10/2020 **IDEM Sample #:** AB42787
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	7.01 mg/L		ASTM D888-09(C)
pH (Field)	8.14 SU		EPA 150.2
Specific Conductance (Field)	1011 umho/cm		SM2510B
Temperature	23.7 °C		SM2550B(2)
Turbidity (Hach)	6.06 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: WWU-10-0042 **Sample Date:** 10/20/2020 **IDEM Sample #:** AB44444
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	114.6 %		ASTM D888-09(C)
DO	12.27 mg/L		ASTM D888-09(C)
pH (Field)	8.29 SU		EPA 150.2
Specific Conductance (Field)	980 umho/cm		SM2510B
Temperature	12 °C		SM2550B(2)
Turbidity (Hach)	6.57 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 #: 2010008-02	Result	Reporting Limit	Method
Hardness (as CaCO3)	337 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	83.3 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	31.3 mg/L	0.2	EPA 200.7
Nickel (Total)	2.57 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2010008-02RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.16 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50270802002	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	262 mg/L	2	SM2320B
Chloride	92.2 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	576 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	571 mg/L	10	SM2540C
Sulfate	135 mg/L	2.5	EPA 300.0
COD	13.6 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.3 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.2 mg/L	0.05	EPA 365.1
TKN	< 0.5 mg/L	0.5	EPA 351.2
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**

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: WWU-10-0048 **USGS Hydrologic Unit:** 051202011003
Stream Name: West Fork White River **County:** Marion
Description: Town Run Trail Park **Latitude:** 39 55 33.59326 **Longitude:** -86 4 33.56999
Drainage: 1204.156 **Site Number:** 20WR028

SiteID: WWU-10-0048 **Sample Date:** 6/9/2020 **IDEM Sample #:** AB42882
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	98.9 %		ASTM D888-09(C)
DO	8.3 mg/L		ASTM D888-09(C)
pH (Field)	7.91 SU		EPA 150.2
Specific Conductance (Field)	938 umho/cm		SM2510B
Temperature	24 °C		SM2550B(2)
Turbidity (Hach)	8.03 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	5 Lookup		Observation

<u>Lab ID #:</u> 2006006-20	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	260 mg/L	20	SM2320B
Hardness (as CaCO3)	321 mg/L	2.07	SM2340B
Sulfate	62.1 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	83.5 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	27.4 mg/L	0.2	EPA 200.7
Nickel (Total)	2.05 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006006-20RE1	Result	Reporting Limit	Method
Chloride	108 mg/L	0.31	EPA 300.0
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	3.42 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.76 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50259642003	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	14.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	5 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.35 mg/L	0.05	EPA 365.1
TKN	0.84 mg/L	0.5	EPA 351.2
TOC	2.9 mg/L	1	SM5310C

SiteID: WWU-10-0048 **Sample Date:** 7/7/2020 **IDEM Sample #:** AB43258
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: US: 225
 DS: 226

Lab ID #:	Result	Reporting Limit	Method
% Sat	88.1 %		ASTM D888-09(C)
DO	6.98 mg/L		ASTM D888-09(C)
pH (Field)	7.73 SU		EPA 150.2
Specific Conductance (Field)	859 umho/cm		SM2510B
Temperature	27.3 °C		SM2550B(2)
Turbidity (Hach)	7.71 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	7 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

Lab ID #: 2007007-03	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	210 mg/L	20	SM2320B
Chloride	98.5 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	276 mg/L	2.07	SM2340B
Sulfate	55.1 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	72 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.15 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	23.4 mg/L	0.2	EPA 200.7
Nickel (Total)	1.93 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007007-03RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.06 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.69 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50261781003	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	27.4 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	4.7 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.37 mg/L	0.05	EPA 365.1
TKN	1 mg/L	0.5	EPA 351.2
TOC	3.3 mg/L	1	SM5310C

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

SiteID: WWU-10-0048 **Sample Date:** 9/10/2020 **IDEM Sample #:** AB42817
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	80.6 %		ASTM D888-09(C)
DO	6.83 mg/L		ASTM D888-09(C)
pH (Field)	7.9 SU		EPA 150.2
Specific Conductance (Field)	1411 umho/cm		SM2510B
Temperature	23.4 °C		SM2550B(2)
Turbidity (Hach)	NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: WWU-10-0048 **Sample Date:** 10/20/2020 **IDEM Sample #:** AB44445
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	90.6 %		ASTM D888-09(C)
DO	9.44 mg/L		ASTM D888-09(C)
pH (Field)	7.94 SU		EPA 150.2
Specific Conductance (Field)	1348 umho/cm		SM2510B
Temperature	13.3 °C		SM2550B(2)
Turbidity (Hach)	2.2 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 #: 2010008-03	Result	Reporting Limit	Method
Hardness (as CaCO3)	370 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	94.3 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	32.8 mg/L	0.2	EPA 200.7
Nickel (Total)	2.65 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2010008-03RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.31 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50270802003	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	250 mg/L	2	SM2320B
Chloride	180 mg/L	25	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	732 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	676 mg/L	20	SM2540C
Sulfate	133 mg/L	2.5	EPA 300.0
COD	14.7 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	4.8 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.46 mg/L	0.05	EPA 365.1
TKN	0.86 mg/L	0.5	EPA 351.2
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**

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: WWU-10-0040 **USGS Hydrologic Unit:** 051202011006
Stream Name: White River **County:** Marion
Description: 86th Street **Latitude:** 39 54 36.18267 **Longitude:** -86 6 19.17019
Drainage: 1215.704 **Site Number:** INRB20-019

SiteID: WWU-10-0040 **Sample Date:** 5/25/2020 **IDEM Sample #:** AB42172
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	98.2 %		ASTM D888-09(C)
DO	8.53 mg/L		ASTM D888-09(C)
pH (Field)	8.05 SU		EPA 150.2
Specific Conductance (Field)	625 umho/cm		SM2510B
Temperature	22.3 °C		SM2550B(2)
Turbidity (Hach)	14.7 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 #:	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	83.9 MPN/100mL	1	SM9223B

SiteID: WWU-10-0040 **Sample Date:** 6/1/2020 **IDEM Sample #:** AB42194
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	87.5 %		ASTM D888-09(C)
DO	7.89 mg/L		ASTM D888-09(C)
pH (Field)	7.78 SU		EPA 150.2
Specific Conductance (Field)	610 umho/cm		SM2510B
Temperature	20.4 °C		SM2550B(2)
Turbidity (Hach)	27.6 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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

Lab ID #: AB42194	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	115.3 MPN/100mL	1	SM9223B

SiteID: WWU-10-0040 **Sample Date:** 6/8/2020 **IDEM Sample #:** AB42216
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	93.6 %		ASTM D888-09(C)
DO	7.76 mg/L		ASTM D888-09(C)
pH (Field)	7.85 SU		EPA 150.2
Specific Conductance (Field)	773 umho/cm		SM2510B
Temperature	24.7 °C		SM2550B(2)
Turbidity (Hach)	24.52 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB42216	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	81.3 MPN/100mL	1	SM9223B

SiteID: WWU-10-0040 **Sample Date:** 6/10/2020 **IDEM Sample #:** AB41880
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	75.1 %		ASTM D888-09(C)
DO	6.25 mg/L		ASTM D888-09(C)
pH (Field)	7.01 SU		EPA 150.2
Specific Conductance (Field)	765 umho/cm		SM2510B
Temperature	24 °C		SM2550B(2)
Turbidity (Hach)	15.3 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 #: 50259461006	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	234 mg/L	2	SM2320B
Chloride	60.6 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	320 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	41 mg/L	9.1	SM2540D
Solids, Total (TS)	481 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	397 mg/L	10	SM2540C
Sulfate	54.7 mg/L	2.5	EPA 300.0
Aluminum (Total)	1.1 mg/L	0.05	EPA 200.8
Aluminum (Dissolved)	< 0.01 mg/L	0.01	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2 ug/L	1	EPA 200.8
Arsenic (Dissolved)	1.4 ug/L	1	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	81.9 mg/L	1	EPA 200.7
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Chromium (Total)	2 ug/L	2	EPA 200.8
Copper (Total)	3.3 ug/L	1	EPA 200.8
Copper (Dissolved)	1.4 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Lead (Total)	1.9 ug/L	1	EPA 200.8
Magnesium (Total)	28.1 mg/L	1	EPA 200.7
Nickel (Total)	2.8 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.4 ug/L	0.5	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
Zinc (Total)	9 ug/L	3	EPA 200.8
COD	10.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	3.1 mg/L	0.2	EPA 353.2
Phosphorus, Total	0.17 mg/L	0.05	EPA 365.1
TKN	0.53 mg/L	0.5	EPA 351.2
TOC	2.9 mg/L	0.5	SM5310C

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

SiteID: WWU-10-0040 **Sample Date:** 6/15/2020 **IDEM Sample #:** AB42238
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	112.9 %		ASTM D888-09(C)
DO	9.68 mg/L		ASTM D888-09(C)
pH (Field)	8.2 SU		EPA 150.2
Specific Conductance (Field)	822 umho/cm		SM2510B
Temperature	22.9 °C		SM2550B(2)
Turbidity (Hach)	11.11 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: AB42238	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	31.8 MPN/100mL	1	SM9223B

SiteID: WWU-10-0040 **Sample Date:** 6/22/2020 **IDEM Sample #:** AB42260
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 %		ASTM D888-09(C)
DO	7.29 mg/L		ASTM D888-09(C)
pH (Field)	7.29 SU		EPA 150.2
Specific Conductance (Field)	907 umho/cm		SM2510B
Temperature	25.3 °C		SM2550B(2)
Turbidity (Hach)	12.3 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB42260	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	261.3 MPN/100mL	1	SM9223B

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

SiteID: WWU-10-0040 **Sample Date:** 6/24/2020 **IDEM Sample #:** AB42281
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	89.7 %		ASTM D888-09(C)
DO	7.42 mg/L		ASTM D888-09(C)
pH (Field)	7.96 SU		EPA 150.2
Specific Conductance (Field)	820 umho/cm		SM2510B
Temperature	24.69 °C		SM2550B(2)
Turbidity (Hach)	14.6 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 702102	Result	Reporting Limit	Method
Phosphorus, ortho	0.12 mg/L	0.02	EPA 365.1

SiteID: WWU-10-0040 **Sample Date:** 7/21/2020 **IDEM Sample #:** AB41935
Water Flow Type Pool **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Mayflies emerging at site.

Lab ID #:	Result	Reporting Limit	Method
% Sat	93.8 %		ASTM D888-09(C)
DO	7.4 mg/L		ASTM D888-09(C)
pH (Field)	7.99 SU		EPA 150.2
Specific Conductance (Field)	934 umho/cm		SM2510B
Temperature	27.403 °C		SM2550B(2)
Turbidity (Hach)	7.54 NTU		EPA 180.1
Air Temp	6 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 #: 50262903006	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	236 mg/L	2	SM2320B
Chloride	87.4 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	320 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	48 mg/L	5.6	SM2540D
Solids, Total (TS)	599 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	512 mg/L	10	SM2540C
Sulfate	95.4 mg/L	2.5	EPA 300.0
Aluminum (Dissolved)	< 0.01 mg/L	0.01	EPA 200.8
Aluminum (Total)	0.17 mg/L	0.01	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.1 ug/L	1	EPA 200.8
Arsenic (Total)	2.1 ug/L	1	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	79.2 mg/L	1	EPA 200.7
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	1.5 ug/L	1	EPA 200.8
Copper (Total)	1.9 ug/L	1	EPA 200.8
Lead (Total)	< 1 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Magnesium (Total)	29.8 mg/L	1	EPA 200.7
Nickel (Total)	1.9 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.8 ug/L	0.5	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
Zinc (Total)	3.1 ug/L	3	EPA 200.8
COD	16.6 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.11 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.5 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.3 mg/L	0.05	EPA 365.1
TKN	0.99 mg/L	0.5	EPA 351.2
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: WWU-10-0040 **Sample Date:** 8/12/2020 **IDEM Sample #:** AB42301
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: HOBO #19
SN: 20790673

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	94.7 %		ASTM D888-09(C)
DO	7.72 mg/L		ASTM D888-09(C)
pH (Field)	7.92 SU		EPA 150.2
Specific Conductance (Field)	797 umho/cm		SM2510B
Temperature	25.613 °C		SM2550B(2)
Turbidity (Hach)	7.74 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: WWU-10-0040 **Sample Date:** 8/25/2020 **IDEM Sample #:** AB42123
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	70.4 %		ASTM D888-09(C)
DO	5.71 mg/L		ASTM D888-09(C)
pH (Field)	7.84 SU		EPA 150.2
Specific Conductance (Field)	1055 umho/cm		SM2510B
Temperature	25.8 °C		SM2550B(2)
Turbidity (Hach)	7.62 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**

SiteID: WWU-10-0040 **Sample Date:** 8/26/2020 **IDEM Sample #:** AB42319
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Pickup
 HOBO #19
 SN: 20790673

Lab ID #:	Result	Reporting Limit	Method
% Sat	109.6 %		ASTM D888-09(C)
DO	8.52 mg/L		ASTM D888-09(C)
pH (Field)	8 SU		EPA 150.2
Specific Conductance (Field)	1033 umho/cm		SM2510B
Temperature	28.265 °C		SM2550B(2)
Turbidity (Hach)	4.77 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 #: 707243	Result	Reporting Limit	Method
Phosphorus, ortho	0.22 mg/L	0.02	EPA 365.1

SiteID: WWU-10-0040 **Sample Date:** 10/14/2020 **IDEM Sample #:** AB41990
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	147.1 %		ASTM D888-09(C)
DO	13.92 mg/L		ASTM D888-09(C)
pH (Field)	8.37 SU		EPA 150.2
Specific Conductance (Field)	1154 umho/cm		SM2510B
Temperature	17.805 °C		SM2550B(2)
Turbidity (Hach)	4.43 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

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

Lab ID #: 50270276003	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	278 mg/L	2	SM2320B
Chloride	161 mg/L	5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	354 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	728 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	718 mg/L	10	SM2540C
Sulfate	141 mg/L	5	EPA 300.0
Aluminum (Dissolved)	< 0.01 mg/L	0.01	EPA 200.8
Aluminum (Total)	0.039 mg/L	0.01	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2 ug/L	1	EPA 200.8
Arsenic (Dissolved)	1.8 ug/L	1	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	89.6 mg/L	1	EPA 200.7
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	1.6 ug/L	1	EPA 200.8
Copper (Total)	1.8 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Lead (Total)	< 1 ug/L	1	EPA 200.8
Magnesium (Total)	31.6 mg/L	1	EPA 200.7
Nickel (Dissolved)	2 ug/L	0.5	EPA 200.8
Nickel (Total)	2.6 ug/L	0.5	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Total)	4.1 ug/L	3	EPA 200.8
Zinc (Dissolved)	3.9 ug/L	3	EPA 200.8
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	4.6 mg/L	0.2	EPA 353.2
Phosphorus, Total	0.38 mg/L	0.05	EPA 365.1
TKN	0.83 mg/L	0.5	EPA 351.2
TOC	3.5 mg/L	1	SM5310C

Lab ID #: AB41990 peri	Result	Reporting Limit	Method
Chlorophyll a	2006.2 ug/L	0.95	EPA 445M
Periphyton Algal Biomass	217.47 mg/M2	0.95	EPA 445M

Lab ID #: AB41990 phy	Result	Reporting Limit	Method
Phytoplankton Chlorophyll-a	1 ug/L	0.95	EPA 445M

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

SiteID: WWU-10-0040

Sample Date: 11/4/2020

IDEM Sample #: AB42339

Water Flow Type Glide

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments: Spoke with a construction crew who is putting in a canoe launch at site.

Lab ID #:	Result	Reporting Limit	Method
% Sat	93.7 %		ASTM D888-09(C)
DO	10.43 mg/L		ASTM D888-09(C)
pH (Field)	8.05 SU		EPA 150.2
Specific Conductance (Field)	754 umho/cm		SM2510B
Temperature	10.518 °C		SM2550B(2)
Turbidity (Hach)	7.63 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 712842	Result	Reporting Limit	Method
Phosphorus, ortho	0.17 mg/L	0.02	EPA 365.1

Weather Code Definitions			
SC Sky Conditions	WD Wind Direction	WS Wind Strength	AT 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: WWU-10-0043 **USGS Hydrologic Unit:** 051202011006
Stream Name: West Fork White River **County:** Marion
Description: Union Chapel Road **Latitude:** 39 54 4.91763 **Longitude:** -86 6 56.90971
Drainage: 1221.226 **Site Number:** 20WR030

SiteID: WWU-10-0043 **Sample Date:** 9/10/2020 **IDEM Sample #:** AB42824
Water Flow Type Pool **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	74.4 %		ASTM D888-09(C)
DO	6.21 mg/L		ASTM D888-09(C)
pH (Field)	7.99 SU		EPA 150.2
Specific Conductance (Field)	1211 umho/cm		SM2510B
Temperature	24.1 °C		SM2550B(2)
Turbidity (Hach)	7.92 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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		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: WWU-10-0045 **USGS Hydrologic Unit:** 051202011006
Stream Name: West Fork White River **County:** Marion
Description: Westfield Boulevard **Latitude:** 39 52 12.59114 **Longitude:** -86 8 1.72297
Drainage: 1235.083 **Site Number:** 20WR032

SiteID: WWU-10-0045 **Sample Date:** 9/10/2020 **IDEM Sample #:** AB42822
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	86 %		ASTM D888-09(C)
DO	mg/L		SM4500-OG
DO	7.15 mg/L		ASTM D888-09(C)
pH (Field)	7.94 SU		EPA 150.2
pH (Field)	SU		SM4500H-B
Specific Conductance (Field)	1199 umho/cm		SM2510B
Temperature	25 °C		SM2550B(2)
Turbidity (Hach)	6.59 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Weather Code Definitions			
SC Sky Conditions	WD Wind Direction	WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0 North (0 Degrees)	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		3 - Moderate	5 - 76-85
6 - Fog		4 - Mod./Strong	6 - > 86
7 - Shower		5 - Strong	
		6 - Gale	

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

SiteID: WWU-10-0046 **USGS Hydrologic Unit:** 051202011006
Stream Name: West Fork White River **County:** Marion
Description: Riverview Drive **Latitude:** 39 52 11.82778 **Longitude:** -86 9 27.87007
Drainage: 1260.276 **Site Number:** 20WR033

SiteID: WWU-10-0046 **Sample Date:** 9/9/2020 **IDEM Sample #:** AB42805
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	152.8 %		ASTM D888-09(C)
DO	12.31 mg/L		ASTM D888-09(C)
pH (Field)	8.36 SU		EPA 150.2
Specific Conductance (Field)	1142 umho/cm		SM2510B
Temperature	26 °C		SM2550B(2)
Turbidity (Hach)	4.09 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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	18 - Mod./Light	3 - 46-60
4 - Cloudy		27 - 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: WWU-10-0049 **USGS Hydrologic Unit:** 051202011006
Stream Name: West Fork White River **County:** Marion
Description: 52nd Street **Latitude:** 39 50 46.57490 **Longitude:** -86 10 46.61758
Drainage: 1261.678 **Site Number:** 20WR034

SiteID: WWU-10-0049 **Sample Date:** 6/1/2020 **IDEM Sample #:** AB42639
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Cyanide collected later on 6/15/20 (AB42890)

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	94.3 %		ASTM D888-09(C)
DO	8.47 mg/L		ASTM D888-09(C)
pH (Field)	8.01 SU		EPA 150.2
Specific Conductance (Field)	583 umho/cm		SM2510B
Temperature	20.5 °C		SM2550B(2)
Turbidity (Hach)	14.8 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> 2006004-02	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3) Hardness	200 mg/L	20	SM2320B
(as CaCO3)	253 mg/L	2.07	SM2340B
Solids, Suspended Total, (TSS)	15 mg/L	5	SM2540D
Solids, Total Dissolved (TDS)	368 mg/L	20	SM2540C
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	65.7 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.29 ug/L	2	EPA 200.8
Lead (Total)	0.84 ug/L	0.5	EPA 200.8
Magnesium (Total)	21.6 mg/L	0.2	EPA 200.7
Nickel (Total)	2.08 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006004-02RE1	Result	Reporting Limit	Method
Chloride	39.6 mg/L	0.12	EPA 300.0
Sulfate	31.3 mg/L	0.12	EPA 300.0
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.64 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50258978004	Result	Reporting Limit	Method
COD	16.5 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	5.2 mg/L	0.2	EPA 353.2
Phosphorus, Total	0.17 mg/L	0.05	EPA 365.1
TKN	0.74 mg/L	0.5	EPA 351.2
TOC	3.7 mg/L	1	SM5310C

SiteID: WWU-10-0049 **Sample Date:** 6/16/2020 **IDEM Sample #:** AB42890
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	82.9 %		ASTM D888-09(C)
DO	7.29 mg/L		ASTM D888-09(C)
pH (Field)	8.08 SU		EPA 150.2
Specific Conductance (Field)	822 umho/cm		SM2510B
Temperature	21.5 °C		SM2550B(2)
Turbidity (Hach)	6.21 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 50260117003	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4

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

SiteID: WWU-10-0049

Sample Date: 7/7/2020

IDEM Sample #: AB43259

Water Flow Type Run

Water Appearance Clear

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments: US: 223
DS: 224

Lab ID #:	Result	Reporting Limit	Method
% Sat	80.5 %		ASTM D888-09(C)
DO	6.34 mg/L		ASTM D888-09(C)
pH (Field)	7.69 SU		EPA 150.2
Specific Conductance (Field)	663 umho/cm		SM2510B
Temperature	27.7 °C		SM2550B(2)
Turbidity (Hach)	3.71 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2007007-04	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	200 mg/L	20	SM2320B
Chloride	57.6 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	240 mg/L	2.07	SM2340B
Sulfate	42.7 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	61 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	21.3 mg/L	0.2	EPA 200.7
Nickel (Total)	1.75 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007007-04RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.19 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.51 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 50261781004	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	17.5 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	3.4 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.19 mg/L	0.05	EPA 365.1
TKN	0.83 mg/L	0.5	EPA 351.2
TOC	3.2 mg/L	1	SM5310C

SiteID: WWU-10-0049 **Sample Date:** 9/10/2020 **IDEM Sample #:** AB42794
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	75.7 %		ASTM D888-09(C)
DO	6.39 mg/L		ASTM D888-09(C)
pH (Field)	8.15 SU		EPA 150.2
Specific Conductance (Field)	1153 umho/cm		SM2510B
Temperature	23.7 °C		SM2550B(2)
Turbidity (Hach)	6.15 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: WWU-10-0049 **Sample Date:** 10/20/2020 **IDEM Sample #:** AB44446
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	111.7 %		ASTM D888-09(C)
DO	11.93 mg/L		ASTM D888-09(C)
pH (Field)	8.3 SU		EPA 150.2
Specific Conductance (Field)	1143 umho/cm		SM2510B
Temperature	12.2 °C		SM2550B(2)
Turbidity (Hach)	7.19 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

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

Lab ID #: 2010008-04	Result	Reporting Limit	Method
Hardness (as CaCO3)	348 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	87.3 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	31.5 mg/L	0.2	EPA 200.7
Nickel (Total)	2.51 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2010008-04RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.4 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50270802004	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	257 mg/L	2	SM2320B
Chloride	139 mg/L	25	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	< 2.5 mg/L	2.5	SM2540D
Solids, Total (TS)	643 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	642 mg/L	10	SM2540C
Sulfate	128 mg/L	2.5	EPA 300.0
COD	24.5 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	3.4 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.28 mg/L	0.05	EPA 365.1
TKN	0.72 mg/L	0.5	EPA 351.2
TOC	3.7 mg/L	1	SM5310C

**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: WWU-10-0047 **USGS Hydrologic Unit:** 051202011006
Stream Name: West Fork White River **County:** Marion
Description: Waterway Boulevard **Latitude:** 39 47 15.79257 **Longitude:** -86 11 42.43141
Drainage: 1288.657 **Site Number:** 20WR035

SiteID: WWU-10-0047 **Sample Date:** 6/1/2020 **IDEM Sample #:** AB42640
Water Flow Type Pool **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Cyanide collected later on 6/16/20 (AB42891)

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	101 %		ASTM D888-09(C)
DO	8.75 mg/L		ASTM D888-09(C)
pH (Field)	8.07 SU		EPA 150.2
Specific Conductance (Field)	585 umho/cm		SM2510B
Temperature	22.4 °C		SM2550B(2)
Turbidity (Hach)	17.8 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 2006004-03	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3) Hardness	200 mg/L	20	SM2320B
(as CaCO3)	252 mg/L	2.07	SM2340B
Solids, Suspended Total, (TSS)	21 mg/L	5	SM2540D
Solids, Total Dissolved (TDS)	364 mg/L	20	SM2540C
Aluminum (Total)	1.19 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	65.7 mg/L	0.5	EPA 200.7
Chromium (Total)	2.51 ug/L	2	EPA 200.8
Copper (Total)	3.53 ug/L	2	EPA 200.8
Lead (Total)	2.08 ug/L	0.5	EPA 200.8
Magnesium (Total)	21.4 mg/L	0.2	EPA 200.7
Nickel (Total)	3.35 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006004-03RE1	Result	Reporting Limit	Method
Chloride	40.3 mg/L	0.12	EPA 300.0
Sulfate	33.6 mg/L	0.12	EPA 300.0
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.94 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50258978005	Result	Reporting Limit	Method
COD	17.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	5.2 mg/L	0.2	EPA 353.2
Phosphorus, Total	0.19 mg/L	0.05	EPA 365.1
TKN	0.6 mg/L	0.5	EPA 351.2
TOC	3.9 mg/L	1	SM5310C

SiteID: WWU-10-0047 **Sample Date:** 6/16/2020 **IDEM Sample #:** AB42891
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	117.9 %		ASTM D888-09(C)
DO	10.2 mg/L		ASTM D888-09(C)
pH (Field)	8.33 SU		EPA 150.2
Specific Conductance (Field)	776 umho/cm		SM2510B
Temperature	22.4 °C		SM2550B(2)
Turbidity (Hach)	18 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	9 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 50260117004	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4

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

SiteID: WWU-10-0047 Sample Date: 7/7/2020 IDEM Sample #: AB43260
 Water Flow Type Pool Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: US: 221
 DS: 222

Lab ID #:	Result	Reporting Limit	Method
% Sat	116.9 %		ASTM D888-09(C)
DO	8.94 mg/L		ASTM D888-09(C)
pH (Field)	8.05 SU		EPA 150.2
Specific Conductance (Field)	615 umho/cm		SM2510B
Temperature	29.3 °C		SM2550B(2)
Turbidity (Hach)	18.2 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 2007007-05	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	190 mg/L	20	SM2320B
Chloride	53 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	221 mg/L	2.07	SM2340B
Sulfate	34.9 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.06 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	56.1 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.77 ug/L	2	EPA 200.8
Lead (Total)	1.25 ug/L	0.5	EPA 200.8
Magnesium (Total)	19.7 mg/L	0.2	EPA 200.7
Nickel (Total)	2.53 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007007-05RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.07 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.7 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 50261781005	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	32.9 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.9 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.17 mg/L	0.05	EPA 365.1
TKN	1.3 mg/L	0.5	EPA 351.2
TOC	3.2 mg/L	1	SM5310C

SiteID: WWU-10-0047 **Sample Date:** 9/9/2020 **IDEM Sample #:** AB42804
Water Flow Type Pool **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	99.3 %		ASTM D888-09(C)
DO	8.31 mg/L		ASTM D888-09(C)
pH (Field)	8.82 SU		EPA 150.2
Specific Conductance (Field)	1097 umho/cm		SM2510B
Temperature	24.2 °C		SM2550B(2)
Turbidity (Hach)	8.85 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: WWU-10-0047 **Sample Date:** 10/20/2020 **IDEM Sample #:** AB44447
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	86.9 %		ASTM D888-09(C)
DO	9.33 mg/L		ASTM D888-09(C)
pH (Field)	8.11 SU		EPA 150.2
Specific Conductance (Field)	1120 umho/cm		SM2510B
Temperature	12 °C		SM2550B(2)
Turbidity (Hach)	5.38 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

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

Lab ID #: 2010008-07	Result	Reporting Limit	Method
Hardness (as CaCO3)	347 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	87.2 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.13 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	31.5 mg/L	0.2	EPA 200.7
Nickel (Total)	3.02 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2010008-07RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.3 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50270802007	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	257 mg/L	2	SM2320B
Chloride	137 mg/L	25	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	4 mg/L	2.5	SM2540D
Solids, Total (TS)	648 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	616 mg/L	10	SM2540C
Sulfate	114 mg/L	2.5	EPA 300.0
COD	19.7 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	3 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.27 mg/L	0.05	EPA 365.1
TKN	0.85 mg/L	0.5	EPA 351.2
TOC	3.1 mg/L	1	SM5310C

**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: WWU-12-0038 **USGS Hydrologic Unit:** 051202011201
Stream Name: West Fork White River **County:** Marion
Description: New York Street **Latitude:** 39 46 18.30436 **Longitude:** -86 11 11.69719
Drainage: 1612.570 **Site Number:** 20WR036

SiteID: WWU-12-0038 **Sample Date:** 6/1/2020 **IDEM Sample #:** AB42641
Water Flow Type Pool **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Cyanide collected later on 6/16/20

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	90.7 %		ASTM D888-09(C)
DO	8.09 mg/L		ASTM D888-09(C)
pH (Field)	8.01 SU		EPA 150.2
Specific Conductance (Field)	572 umho/cm		SM2510B
Temperature	20.9 °C		SM2550B(2)
Turbidity (Hach)	20.1 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 2006004-04	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3) Hardness	200 mg/L	20	SM2320B
(as CaCO3)	251 mg/L	2.07	SM2340B
Solids, Suspended Total, (TSS)	16 mg/L	5	SM2540D
Solids, Total Dissolved (TDS)	374 mg/L	20	SM2540C
Aluminum (Total)	0.578 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	65.3 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.65 ug/L	2	EPA 200.8
Lead (Total)	0.97 ug/L	0.5	EPA 200.8
Magnesium (Total)	21.5 mg/L	0.2	EPA 200.7
Nickel (Total)	2.13 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

**Indiana Department of Environmental Management
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Lab ID #: 2006004-04RE1	Result	Reporting Limit	Method
Chloride	39.1 mg/L	0.12	EPA 300.0
Sulfate	31 mg/L	0.12	EPA 300.0
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.62 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50258978006	Result	Reporting Limit	Method
COD	14.7 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	4.6 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.14 mg/L	0.05	EPA 365.1
TKN	0.6 mg/L	0.5	EPA 351.2
TOC	3.6 mg/L	1	SM5310C

SiteID: WWU-12-0038 **Sample Date:** 6/16/2020 **IDEM Sample #:** AB42892
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 %		ASTM D888-09(C)
DO	8.01 mg/L		ASTM D888-09(C)
pH (Field)	8.1 SU		EPA 150.2
Specific Conductance (Field)	783 umho/cm		SM2510B
Temperature	22.6 °C		SM2550B(2)
Turbidity (Hach)	8.16 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	9 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 50260117005	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4

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

SiteID: WWU-12-0038 Sample Date: 7/7/2020 IDEM Sample #: AB43261
 Water Flow Type Pool Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: US: 219
 DS: 220

Lab ID #:	Result	Reporting Limit	Method
% Sat	74.2 %		ASTM D888-09(C)
DO	5.82 mg/L		ASTM D888-09(C)
pH (Field)	7.77 SU		EPA 150.2
Specific Conductance (Field)	602 umho/cm		SM2510B
Temperature	27.9 °C		SM2550B(2)
Turbidity (Hach)	12.1 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2007007-06	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	190 mg/L	20	SM2320B
Chloride	50.3 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	218 mg/L	2.07	SM2340B
Sulfate	32.2 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.05 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	54.8 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.47 ug/L	2	EPA 200.8
Lead (Total)	0.57 ug/L	0.5	EPA 200.8
Magnesium (Total)	19.7 mg/L	0.2	EPA 200.7
Nickel (Total)	1.73 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007007-06RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.1 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.5 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
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Lab ID #: 50261781006	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	41.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.5 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.17 mg/L	0.05	EPA 365.1
TKN	0.63 mg/L	0.5	EPA 351.2
TOC	3.2 mg/L	1	SM5310C

SiteID: WWU-12-0038 **Sample Date:** 8/24/2020 **IDEM Sample #:** AB42803
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	87.1 %		ASTM D888-09(C)
DO	7.08 mg/L		ASTM D888-09(C)
pH (Field)	8.06 SU		EPA 150.2
Specific Conductance (Field)	790 umho/cm		SM2510B
Temperature	26 °C		SM2550B(2)
Turbidity (Hach)	3.63 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: WWU-12-0038 **Sample Date:** 10/20/2020 **IDEM Sample #:** AB44448
Water Flow Type Pool **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	82.4 %		ASTM D888-09(C)
DO	8.84 mg/L		ASTM D888-09(C)
pH (Field)	8.1 SU		EPA 150.2
Specific Conductance (Field)	937 umho/cm		SM2510B
Temperature	12.1 °C		SM2550B(2)
Turbidity (Hach)	10.6 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	3 Lookup		Observation

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

Lab ID #: 2010008-08	Result	Reporting Limit	Method
Hardness (as CaCO3)	308 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	77.1 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.71 ug/L	2	EPA 200.8
Lead (Total)	1.18 ug/L	0.5	EPA 200.8
Magnesium (Total)	28 mg/L	0.2	EPA 200.7
Nickel (Total)	2.4 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2010008-08RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.95 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50270802008	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	215 mg/L	2	SM2320B
Chloride	123 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	5 mg/L	2.5	SM2540D
Solids, Total (TS)	539 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	504 mg/L	10	SM2540C
Sulfate	90.1 mg/L	2.5	EPA 300.0
COD	18 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.18 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.1 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.16 mg/L	0.05	EPA 365.1
TKN	0.83 mg/L	0.5	EPA 351.2
TOC	3.1 mg/L	1	SM5310C

**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: WWU-12-0039 **USGS Hydrologic Unit:** 051202011205
Stream Name: West Fork White River **County:** Marion
Description: Raymond Street **Latitude:** 39 44 14.34595 **Longitude:** -86 10 15.35678
Drainage: 1636.122 **Site Number:** 20WR037

SiteID: WWU-12-0039 **Sample Date:** 6/1/2020 **IDEM Sample #:** AB42642
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Cyanide collected 6/16/20 (AB42893)

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	90.5 %		ASTM D888-09(C)
DO	7.98 mg/L		ASTM D888-09(C)
pH (Field)	7.92 SU		EPA 150.2
Specific Conductance (Field)	579 umho/cm		SM2510B
Temperature	21.6 °C		SM2550B(2)
Turbidity (Hach)	13.3 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 2006004-05	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3) Hardness	210 mg/L	20	SM2320B
(as CaCO3)	261 mg/L	2.07	SM2340B
Solids, Suspended Total, (TSS)	26 mg/L	5	SM2540D
Solids, Total Dissolved (TDS)	386 mg/L	20	SM2540C
Aluminum (Total)	1.31 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	68.1 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	4.1 ug/L	2	EPA 200.8
Lead (Total)	2.43 ug/L	0.5	EPA 200.8
Magnesium (Total)	22 mg/L	0.2	EPA 200.7
Nickel (Total)	3.15 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	10 ug/L	10	EPA 200.8

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

Lab ID #: 2006004-05RE1	Result	Reporting Limit	Method
Chloride	40.3 mg/L	0.12	EPA 300.0
Sulfate	30.9 mg/L	0.12	EPA 300.0
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.75 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50258978007	Result	Reporting Limit	Method
COD	18.6 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.14 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	4.3 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.21 mg/L	0.05	EPA 365.1
TKN	0.98 mg/L	0.5	EPA 351.2
TOC	3.9 mg/L	1	SM5310C

SiteID: WWU-12-0039 **Sample Date:** 6/16/2020 **IDEM Sample #:** AB42893
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	82.2 %		ASTM D888-09(C)
DO	7.08 mg/L		ASTM D888-09(C)
pH (Field)	7.96 SU		EPA 150.2
Specific Conductance (Field)	umho/cm		SM2510B
Temperature	22.7 °C		SM2550B(2)
Turbidity (Hach)	7.43 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 50260117006	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4

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

SiteID: WWU-12-0039 Sample Date: 7/7/2020 IDEM Sample #: AB43262
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: US: 218
 DS: 217

Lab ID #:	Result	Reporting Limit	Method
% Sat	76.4 %		ASTM D888-09(C)
DO	5.86 mg/L		ASTM D888-09(C)
pH (Field)	7.71 SU		EPA 150.2
Specific Conductance (Field)	573 umho/cm		SM2510B
Temperature	29.4 °C		SM2550B(2)
Turbidity (Hach)	9.66 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2007007-07	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	180 mg/L	20	SM2320B
Chloride	48 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	210 mg/L	2.07	SM2340B
Sulfate	29.6 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	52.6 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.65 ug/L	2	EPA 200.8
Lead (Total)	0.76 ug/L	0.5	EPA 200.8
Magnesium (Total)	19.1 mg/L	0.2	EPA 200.7
Nickel (Total)	1.77 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007007-07RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.14 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.38 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 50261781007	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	19 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.15 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.4 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.15 mg/L	0.05	EPA 365.1
TKN	0.72 mg/L	0.5	EPA 351.2
TOC	3.2 mg/L	1	SM5310C

SiteID: WWU-12-0039 **Sample Date:** 8/31/2020 **IDEM Sample #:** AB42802
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	69.1 %		ASTM D888-09(C)
DO	5.78 mg/L		ASTM D888-09(C)
pH (Field)	8.07 SU		EPA 150.2
Specific Conductance (Field)	956 umho/cm		SM2510B
Temperature	24.2 °C		SM2550B(2)
Turbidity (Hach)	11.8 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: WWU-12-0039 **Sample Date:** 10/20/2020 **IDEM Sample #:** AB44449
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	80 %		ASTM D888-09(C)
DO	8.5 mg/L		ASTM D888-09(C)
pH (Field)	8.04 SU		EPA 150.2
Specific Conductance (Field)	950 umho/cm		SM2510B
Temperature	12.5 °C		SM2550B(2)
Turbidity (Hach)	10.9 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
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Lab ID #: 2010008-09	Result	Reporting Limit	Method
Hardness (as CaCO3)	312 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	78.3 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.6 ug/L	2	EPA 200.8
Lead (Total)	0.98 ug/L	0.5	EPA 200.8
Magnesium (Total)	28.3 mg/L	0.2	EPA 200.7
Nickel (Total)	2.4 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2010008-09RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.07 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50270802009	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	220 mg/L	2	SM2320B
Chloride	120 mg/L	25	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	3 mg/L	2.5	SM2540D
Solids, Total (TS)	540 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	522 mg/L	10	SM2540C
Sulfate	90.5 mg/L	2.5	EPA 300.0
COD	13.4 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.18 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.15 mg/L	0.05	EPA 365.1
TKN	0.76 mg/L	0.5	EPA 351.2
TOC	3 mg/L	1	SM5310C

**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: WWU-12-0040 **USGS Hydrologic Unit:** 051202011205
Stream Name: West Fork White River **County:** Marion
Description: Harding Street **Latitude:** 39 43 35.72668 **Longitude:** -86 11 11.74158
Drainage: 1660.116 **Site Number:** 20WR038

SiteID: WWU-12-0040 **Sample Date:** 6/9/2020 **IDEM Sample #:** AB42883
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	79.5 %		ASTM D888-09(C)
DO	6.55 mg/L		ASTM D888-09(C)
pH (Field)	7.85 SU		EPA 150.2
Specific Conductance (Field)	701 umho/cm		SM2510B
Temperature	25.2 °C		SM2550B(2)
Turbidity (Hach)	18.3 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	5 Lookup		Observation

<u>Lab ID #:</u> 2006006-21	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	230 mg/L	20	SM2320B
Chloride	56.2 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	299 mg/L	2.07	SM2340B
Sulfate	43.9 mg/L	0.12	EPA 300.0
Aluminum (Total)	0.593 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.02 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	77.2 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	4.9 ug/L	2	EPA 200.8
Lead (Total)	3.13 ug/L	0.5	EPA 200.8
Magnesium (Total)	25.8 mg/L	0.2	EPA 200.7
Nickel (Total)	2.81 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	10.4 ug/L	10	EPA 200.8

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

Lab ID #: 2006006-21RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.66 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50259642004	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	18.6 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.14 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	3 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.16 mg/L	0.05	EPA 365.1
TKN	0.98 mg/L	0.5	EPA 351.2
TOC	3.4 mg/L	1	SM5310C

SiteID: WWU-12-0040 **Sample Date:** 7/7/2020 **IDEM Sample #:** AB43263
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Sampled downstream due to homeless camp
 US: 213
 DS: 214

Lab ID #:	Result	Reporting Limit	Method
% Sat	64.7 %		ASTM D888-09(C)
DO	5.11 mg/L		ASTM D888-09(C)
pH (Field)	7.76 SU		EPA 150.2
Specific Conductance (Field)	570 umho/cm		SM2510B
Temperature	27.4 °C		SM2550B(2)
Turbidity (Hach)	11.4 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

Lab ID #: 2007007-08	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	190 mg/L	20	SM2320B
Chloride	48.9 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	207 mg/L	2.07	SM2340B
Sulfate	29.9 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	52.3 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3.2 ug/L	2	EPA 200.8
Lead (Total)	1.4 ug/L	0.5	EPA 200.8
Magnesium (Total)	18.6 mg/L	0.2	EPA 200.7
Nickel (Total)	1.86 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007007-08RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	2.05 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.41 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50261781008	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	31.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.13 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.4 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.16 mg/L	0.05	EPA 365.1
TKN	0.71 mg/L	0.5	EPA 351.2
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: WWU-12-0040 **Sample Date:** 8/31/2020 **IDEM Sample #:** AB42793
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	74.5 %		ASTM D888-09(C)
DO	6.16 mg/L		ASTM D888-09(C)
pH (Field)	8.04 SU		EPA 150.2
Specific Conductance (Field)	949 umho/cm		SM2510B
Temperature	25 °C		SM2550B(2)
Turbidity (Hach)	8.05 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: WWU-12-0040 **Sample Date:** 10/20/2020 **IDEM Sample #:** AB44450
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	8.32 mg/L		ASTM D888-09(C)
pH (Field)	8.06 SU		EPA 150.2
Specific Conductance (Field)	916 umho/cm		SM2510B
Temperature	12.8 °C		SM2550B(2)
Turbidity (Hach)	7.88 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 #: 2010008-10	Result	Reporting Limit	Method
Hardness (as CaCO3)	292 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	73.8 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.78 ug/L	2	EPA 200.8
Lead (Total)	0.91 ug/L	0.5	EPA 200.8
Magnesium (Total)	26.2 mg/L	0.2	EPA 200.7
Nickel (Total)	2.42 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2010008-10RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.01 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50270802010	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	211 mg/L	2	SM2320B
Chloride	125 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	5 mg/L	2.5	SM2540D
Solids, Total (TS)	513 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	486 mg/L	10	SM2540C
Sulfate	83.3 mg/L	2.5	EPA 300.0
COD	15.4 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.13 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.9 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.14 mg/L	0.05	EPA 365.1
TKN	0.65 mg/L	0.5	EPA 351.2
TOC	3 mg/L	1	SM5310C

**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: WWU-12-0041 **USGS Hydrologic Unit:** 051202011205
Stream Name: West Fork White River **County:** Marion
Description: Upstream of Southport Road and WWTP **Latitude:** 39 39 59.82053 **Longitude:** -86 14 13.00214
Drainage: 1941.351 **Site Number:** 20WR039

SiteID: WWU-12-0041 **Sample Date:** 6/1/2020 **IDEM Sample #:** AB42644
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Cyanide collected on 6/16/20, see AB42894

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	94.6 %		ASTM D888-09(C)
DO	8.45 mg/L		ASTM D888-09(C)
pH (Field)	8.02 SU		EPA 150.2
Specific Conductance (Field)	583 umho/cm		SM2510B
Temperature	20.9 °C		SM2550B(2)
Turbidity (Hach)	32.2 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 2006004-06	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3) Hardness	200 mg/L	20	SM2320B
(as CaCO3)	249 mg/L	2.07	SM2340B
Solids, Suspended Total, (TSS)	16 mg/L	5	SM2540D
Solids, Total Dissolved (TDS)	398 mg/L	20	SM2540C
Aluminum (Total)	0.6 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	65.2 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	4.1 ug/L	2	EPA 200.8
Lead (Total)	1.45 ug/L	0.5	EPA 200.8
Magnesium (Total)	21.1 mg/L	0.2	EPA 200.7
Nickel (Total)	2.63 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006004-06RE1	Result	Reporting Limit	Method
Chloride	44.5 mg/L	0.12	EPA 300.0
Sulfate	33.8 mg/L	0.12	EPA 300.0
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	2.9 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.89 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50258978009	Result	Reporting Limit	Method
COD	11.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	4.4 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.16 mg/L	0.05	EPA 365.1
TKN	0.72 mg/L	0.5	EPA 351.2
TOC	3.9 mg/L	1	SM5310C

SiteID: WWU-12-0041 **Sample Date:** 6/16/2020 **IDEM Sample #:** AB42894
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	125.1 %		ASTM D888-09(C)
DO	10.58 mg/L		ASTM D888-09(C)
pH (Field)	8.1 SU		EPA 150.2
Specific Conductance (Field)	944 umho/cm		SM2510B
Temperature	23.6 °C		SM2550B(2)
Turbidity (Hach)	5.79 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 50260117007	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4

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

SiteID: WWU-12-0041 Sample Date: 7/7/2020 IDEM Sample #: AB43264
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: US: 215
 DS: 216

Lab ID #:	Result	Reporting Limit	Method
% Sat	90.6 %		ASTM D888-09(C)
DO	7.11 mg/L		ASTM D888-09(C)
pH (Field)	7.87 SU		EPA 150.2
Specific Conductance (Field)	701 umho/cm		SM2510B
Temperature	27.7 °C		SM2550B(2)
Turbidity (Hach)	13.2 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 2007007-09	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	190 mg/L	20	SM2320B
Chloride	69.4 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	223 mg/L	2.07	SM2340B
Sulfate	51.2 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	57 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3.64 ug/L	2	EPA 200.8
Lead (Total)	1.28 ug/L	0.5	EPA 200.8
Magnesium (Total)	19.7 mg/L	0.2	EPA 200.7
Nickel (Total)	2.42 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	15.5 ug/L	10	EPA 200.8

Lab ID #: 2007007-09RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	2.2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.01 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 50261781009	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	33.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.32 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.2 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.15 mg/L	0.05	EPA 365.1
TKN	1.1 mg/L	0.5	EPA 351.2
TOC	3.7 mg/L	1	SM5310C

SiteID: WWU-12-0041 **Sample Date:** 8/25/2020 **IDEM Sample #:** AB42786
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	112 %		ASTM D888-09(C)
DO	8.73 mg/L		ASTM D888-09(C)
pH (Field)	7.95 SU		EPA 150.2
Specific Conductance (Field)	1068 umho/cm		SM2510B
Temperature	28.2 °C		SM2550B(2)
Turbidity (Hach)	5.1 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

SiteID: WWU-12-0041 **Sample Date:** 10/20/2020 **IDEM Sample #:** AB44451
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	87.1 %		ASTM D888-09(C)
DO	8.8 mg/L		ASTM D888-09(C)
pH (Field)	7.8 SU		EPA 150.2
Specific Conductance (Field)	1061 umho/cm		SM2510B
Temperature	14.7 °C		SM2550B(2)
Turbidity (Hach)	9.21 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 #: 2010008-11	Result	Reporting Limit	Method
Hardness (as CaCO3)	287 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	73.9 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.94 ug/L	2	EPA 200.8
Lead (Total)	0.88 ug/L	0.5	EPA 200.8
Magnesium (Total)	24.9 mg/L	0.2	EPA 200.7
Nickel (Total)	3.78 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	29.1 ug/L	10	EPA 200.8

Lab ID #: 2010008-11RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	3.32 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	22.5 ug/L	10	EPA 200.8

Lab ID #: 50270802011	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	207 mg/L	2	SM2320B
Chloride	114 mg/L	25	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	8 mg/L	2.5	SM2540D
Solids, Total (TS)	603 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	589 mg/L	10	SM2540C
Sulfate	123 mg/L	2.5	EPA 300.0
COD	18.2 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.21 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.8 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.14 mg/L	0.05	EPA 365.1
TKN	0.88 mg/L	0.5	EPA 351.2
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**

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: WWU-14-0007 **USGS Hydrologic Unit:** 051202011402
Stream Name: West Fork White River **County:** Morgan
Description: Old Town Waverly Park **Latitude:** 39 33 32.22776 **Longitude:** -86 16 27.10659
Drainage: 2024.825 **Site Number:** 20WR040

SiteID: WWU-14-0007 **Sample Date:** 6/9/2020 **IDEM Sample #:** AB42884
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	90.5 %		ASTM D888-09(C)
DO	7.59 mg/L		ASTM D888-09(C)
pH (Field)	7.87 SU		EPA 150.2
Specific Conductance (Field)	857 umho/cm		SM2510B
Temperature	24.1 °C		SM2550B(2)
Turbidity (Hach)	11.6 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	5 Lookup		Observation

<u>Lab ID #:</u> 2006006-22	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	250 mg/L	20	SM2320B
Hardness (as CaCO3)	300 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	78.3 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3.46 ug/L	2	EPA 200.8
Lead (Total)	1.4 ug/L	0.5	EPA 200.8
Magnesium (Total)	25.3 mg/L	0.2	EPA 200.7
Nickel (Total)	3.04 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	18.1 ug/L	10	EPA 200.8

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

Lab ID #: 2006006-22RE1	Result	Reporting Limit	Method
Chloride	78.9 mg/L	0.12	EPA 300.0
Sulfate	73 mg/L	0.12	EPA 300.0
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	2.17 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.44 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	10.3 ug/L	10	EPA 200.8

Lab ID #: 50259642005	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	16.5 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	3.4 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.15 mg/L	0.05	EPA 365.1
TKN	0.8 mg/L	0.5	EPA 351.2
TOC	3 mg/L	1	SM5310C

SiteID: WWU-14-0007 **Sample Date:** 7/6/2020 **IDEM Sample #:** AB43265
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: US: 211
 DS: 212

Lab ID #:	Result	Reporting Limit	Method
% Sat	126.7 %		ASTM D888-09(C)
DO	9.61 mg/L		ASTM D888-09(C)
pH (Field)	8.04 SU		EPA 150.2
Specific Conductance (Field)	715 umho/cm		SM2510B
Temperature	29.9 °C		SM2550B(2)
Turbidity (Hach)	16.9 NTU		EPA 180.1
Air Temp	6 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 #: 2007007-10	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	190 mg/L	20	SM2320B
Chloride	67.4 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	230 mg/L	2.07	SM2340B
Sulfate	56.5 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	58 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3.49 ug/L	2	EPA 200.8
Lead (Total)	0.97 ug/L	0.5	EPA 200.8
Magnesium (Total)	20.6 mg/L	0.2	EPA 200.7
Nickel (Total)	2.44 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	10.7 ug/L	10	EPA 200.8

Lab ID #: 2007007-10RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	2.61 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.09 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50261781010	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	19 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	3 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.12 mg/L	0.05	EPA 365.1
TKN	0.86 mg/L	0.5	EPA 351.2
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: WWU-14-0007 **Sample Date:** 9/15/2020 **IDEM Sample #:** AB42792
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Additional Samplers: Corey DeBoom, Nick Haurert, and Seth Bogue

Lab ID #:	Result	Reporting Limit	Method
% Sat	100.3 %		ASTM D888-09(C)
DO	8.79 mg/L		ASTM D888-09(C)
pH (Field)	8.17 SU		EPA 150.2
Specific Conductance (Field)	1395 umho/cm		SM2510B
Temperature	21.6 °C		SM2550B(2)
Turbidity (Hach)	6.89 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: WWU-14-0007 **Sample Date:** 10/19/2020 **IDEM Sample #:** AB44452
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	85.9 %		ASTM D888-09(C)
DO	8.56 mg/L		ASTM D888-09(C)
pH (Field)	8.02 SU		EPA 150.2
Specific Conductance (Field)	1465 umho/cm		SM2510B
Temperature	15.3 °C		SM2550B(2)
Turbidity (Hach)	9.7 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	8 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

Lab ID #: 2010008-12	Result	Reporting Limit	Method
Hardness (as CaCO3)	345 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	1.38 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	87 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3 ug/L	2	EPA 200.8
Lead (Total)	0.72 ug/L	0.5	EPA 200.8
Magnesium (Total)	31.1 mg/L	0.2	EPA 200.7
Nickel (Total)	5.46 ug/L	1	EPA 200.8
Selenium (Total)	3.87 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	29.7 ug/L	10	EPA 200.8

Lab ID #: 2010008-12RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	1.44 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	2.06 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	4.99 ug/L	1	EPA 200.8
Selenium (Dissolved)	3.52 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	24.3 ug/L	10	EPA 200.8

Lab ID #: 50270802012	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	246 mg/L	2	SM2320B
Chloride	186 mg/L	25	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	32 mg/L	2.5	SM2540D
Solids, Total (TS)	812 mg/L	20	SM2540B
Solids, Total Dissolved (TDS)	808 mg/L	20	SM2540C
Sulfate	201 mg/L	2.5	EPA 300.0
COD	18.4 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	3.9 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.19 mg/L	0.05	EPA 365.1
TKN	0.89 mg/L	0.5	EPA 351.2
TOC	3.8 mg/L	1	SM5310C

**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: WWU-14-0008 **USGS Hydrologic Unit:** 051202011407
Stream Name: West Fork White River **County:** Morgan
Description: SR 37 **Latitude:** 39 30 32.71749 **Longitude:** -86 19 23.01498
Drainage: 2061.333 **Site Number:** 20WR041

SiteID: WWU-14-0008 **Sample Date:** 6/23/2020 **IDEM Sample #:** AB42646
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	102.8 %		ASTM D888-09(C)
DO	8.3 mg/L		ASTM D888-09(C)
pH (Field)	8.02 SU		EPA 150.2
Specific Conductance (Field)	1029 umho/cm		SM2510B
Temperature	26.1 °C		SM2550B(2)
Turbidity (Hach)	31.7 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

<u>Lab ID #:</u> 2006012-07	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	240 mg/L	20	SM2320B
Chloride	119 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	313 mg/L	2.07	SM2340B
Sulfate	99.4 mg/L	0.25	EPA 300.0
Aluminum (Total)	0.858 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.1 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	81 mg/L	0.5	EPA 200.7
Chromium (Total)	2.4 ug/L	2	EPA 200.8
Copper (Total)	6.04 ug/L	2	EPA 200.8
Lead (Total)	3.38 ug/L	0.5	EPA 200.8
Magnesium (Total)	26.9 mg/L	0.2	EPA 200.7
Nickel (Total)	4.71 ug/L	1	EPA 200.8
Selenium (Total)	2.47 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	35.7 ug/L	10	EPA 200.8

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

Lab ID #: 2006012-07RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	2.74 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	3.29 ug/L	1	EPA 200.8
Selenium (Dissolved)	2.31 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	11.5 ug/L	10	EPA 200.8

Lab ID #: 50260783007	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	14.2 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	4.4 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.29 mg/L	0.05	EPA 365.1
TKN	1.3 mg/L	0.5	EPA 351.2
TOC	3.9 mg/L	1	SM5310C

SiteID: WWU-14-0008 **Sample Date:** 7/21/2020 **IDEM Sample #:** AB43300
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: pictures: u/s-267, d/s-268

Lab ID #:	Result	Reporting Limit	Method
% Sat	77.9 %		ASTM D888-09(C)
DO	6.48 mg/L		ASTM D888-09(C)
pH (Field)	7.92 SU		EPA 150.2
Specific Conductance (Field)	817 umho/cm		SM2510B
Temperature	24.5 °C		SM2550B(2)
Turbidity (Hach)	10.3 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

Lab ID #: 2007016-08	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	210 mg/L	20	SM2320B
Chloride	86.7 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	254 mg/L	2.07	SM2340B
Sulfate	66.7 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	66.5 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.93 ug/L	2	EPA 200.8
Lead (Total)	1 ug/L	0.5	EPA 200.8
Magnesium (Total)	21.4 mg/L	0.2	EPA 200.7
Nickel (Total)	3 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	15.3 ug/L	10	EPA 200.8

Lab ID #: 2007016-08RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	2.03 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.55 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	11 ug/L	10	EPA 200.8

Lab ID #: 50262925008	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	13.4 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.3 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.2 mg/L	0.05	EPA 365.1
TKN	0.66 mg/L	0.5	EPA 351.2
TOC	3.7 mg/L	1	SM5310C

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

SiteID: WWU-14-0008 **Sample Date:** 9/24/2020 **IDEM Sample #:** AB42791
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	89.4 %		ASTM D888-09(C)
DO	8.23 mg/L		ASTM D888-09(C)
pH (Field)	8.15 SU		EPA 150.2
Specific Conductance (Field)	1267 umho/cm		SM2510B
Temperature	19.2 °C		SM2550B(2)
Turbidity (Hach)	7.62 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

SiteID: WWU-14-0008 **Sample Date:** 11/3/2020 **IDEM Sample #:** AB44488
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	94.8 %		ASTM D888-09(C)
DO	10.27 mg/L		ASTM D888-09(C)
pH (Field)	8.07 SU		EPA 150.2
Specific Conductance (Field)	775 umho/cm		SM2510B
Temperature	11.6 °C		SM2550B(2)
Turbidity (Hach)	7.4 NTU		EPA 180.1
Air Temp	4 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 #: 2011004-02	Result	Reporting Limit	Method
Hardness (as CaCO3)	256 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.33 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	66.4 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.32 ug/L	2	EPA 200.8
Lead (Total)	0.62 ug/L	0.5	EPA 200.8
Magnesium (Total)	22 mg/L	0.2	EPA 200.7
Nickel (Total)	2.91 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	16.4 ug/L	10	EPA 200.8

Lab ID #: 2011004-02RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.62 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	14.4 ug/L	10	EPA 200.8

Lab ID #: 50272163002	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	193 mg/L	2	SM2320B
Chloride	94.1 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	7 mg/L	2.5	SM2540D
Solids, Total (TS)	454 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	428 mg/L	10	SM2540C
Sulfate	71.5 mg/L	2.5	EPA 300.0
COD	16.7 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.8 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.17 mg/L	0.05	EPA 365.1
TKN	0.66 mg/L	0.5	EPA 351.2
TOC	3.7 mg/L	1	SM5310C

**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: WWU-15-0006 **USGS Hydrologic Unit:** 051202011503
Stream Name: White River **County:** Morgan
Description: East of Blue Bluff Road **Latitude:** 39 29 38.06073 **Longitude:** -86 23 33.38554
Drainage: 2441.802 **Site Number:** INRB20-087

SiteID: WWU-15-0006 **Sample Date:** 6/3/2020 **IDEM Sample #:** AB41857
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	88.3 %		ASTM D888-09(C)
DO	7.77 mg/L		ASTM D888-09(C)
pH (Field)	7.89 SU		EPA 150.2
Specific Conductance (Field)	714 umho/cm		SM2510B
Temperature	21.548 °C		SM2550B(2)
Turbidity (Hach)	13.1 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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

Lab ID #: 50258838015	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	208 mg/L	2	SM2320B
Chloride	64.4 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	296 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	21 mg/L	5	SM2540D
Solids, Total (TS)	438 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	376 mg/L	10	SM2540C
Sulfate	44.3 mg/L	2.5	EPA 300.0
Aluminum (Total)	0.41 mg/L	0.01	EPA 200.8
Aluminum (Dissolved)	< 0.01 mg/L	0.01	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	1.2 ug/L	1	EPA 200.8
Arsenic (Total)	1.4 ug/L	1	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	78.3 mg/L	1	EPA 200.7
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	2.3 ug/L	1	EPA 200.8
Copper (Total)	3 ug/L	1	EPA 200.8
Lead (Total)	1.2 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Magnesium (Total)	24.5 mg/L	1	EPA 200.7
Nickel (Dissolved)	2 ug/L	0.5	EPA 200.8
Nickel (Total)	2.3 ug/L	0.5	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Dissolved)	5.4 ug/L	3	EPA 200.8
Zinc (Total)	9.8 ug/L	3	EPA 200.8
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	3.9 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.16 mg/L	0.05	EPA 365.1
TKN	0.62 mg/L	0.5	EPA 351.2
TOC	3.1 mg/L	1	SM5310C

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

SiteID: WWU-15-0006 Sample Date: 6/23/2020 IDEM Sample #: AB42276
 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	111.6 %		ASTM D888-09(C)
DO	9.03 mg/L		ASTM D888-09(C)
pH (Field)	8.13 SU		EPA 150.2
Specific Conductance (Field)	1041 umho/cm		SM2510B
Temperature	25.944 °C		SM2550B(2)
Turbidity (Hach)	11.6 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 702114	Result	Reporting Limit	Method
Phosphorus, ortho	0.16 mg/L	0.02	EPA 365.1

SiteID: WWU-15-0006 Sample Date: 7/15/2020 IDEM Sample #: AB41912
 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	119.3 %		ASTM D888-09(C)
DO	9.74 mg/L		ASTM D888-09(C)
pH (Field)	8.38 SU		EPA 150.2
Specific Conductance (Field)	843 umho/cm		SM2510B
Temperature	25.402 °C		SM2550B(2)
Turbidity (Hach)	17.1 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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

Lab ID #: 50262366014	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	208 mg/L	2	SM2320B
Chloride	90.3 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	263 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	20 mg/L	5	SM2540D
Solids, Total (TS)	511 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	462 mg/L	10	SM2540C
Sulfate	78.6 mg/L	2.5	EPA 300.0
Aluminum (Dissolved)	< 0.01 mg/L	0.01	EPA 200.8
Aluminum (Total)	0.25 mg/L	0.01	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	1.7 ug/L	1	EPA 200.8
Arsenic (Dissolved)	1.4 ug/L	1	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	67.1 mg/L	1	EPA 200.7
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	2.2 ug/L	1	EPA 200.8
Copper (Total)	3.2 ug/L	1	EPA 200.8
Lead (Total)	< 1 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Magnesium (Total)	23.1 mg/L	1	EPA 200.7
Nickel (Dissolved)	2.2 ug/L	0.5	EPA 200.8
Nickel (Total)	2.7 ug/L	0.5	EPA 200.8
Selenium (Total)	1.5 ug/L	1	EPA 200.8
Selenium (Dissolved)	1.2 ug/L	1	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Dissolved)	5.5 ug/L	3	EPA 200.8
Zinc (Total)	11.7 ug/L	3	EPA 200.8
COD	24.5 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.46 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.8 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.19 mg/L	0.05	EPA 365.1
TKN	1.1 mg/L	0.5	EPA 351.2
TOC	3.3 mg/L	1	SM5310C

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

SiteID: WWU-15-0006 **Sample Date:** 8/11/2020 **IDEM Sample #:** AB42296
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: HOBO #13
 SN: 10985624

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	82.4 %		ASTM D888-09(C)
DO	6.71 mg/L		ASTM D888-09(C)
pH (Field)	7.72 SU		EPA 150.2
Specific Conductance (Field)	529 umho/cm		SM2510B
Temperature	25.75 °C		SM2550B(2)
Turbidity (Hach)	126 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: WWU-15-0006 **Sample Date:** 8/24/2020 **IDEM Sample #:** AB42266
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	98.9 %		ASTM D888-09(C)
DO	8.03 mg/L		ASTM D888-09(C)
pH (Field)	8.17 SU		EPA 150.2
Specific Conductance (Field)	1128 umho/cm		SM2510B
Temperature	25.7 °C		SM2550B(2)
Turbidity (Hach)	6.15 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

SiteID: WWU-15-0006 **Sample Date:** 8/25/2020 **IDEM Sample #:** AB42314
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Pickup
HOBO #13
SN: 10985624

Lab ID #:	Result	Reporting Limit	Method
% Sat	152.1 %		ASTM D888-09(C)
DO	11.63 mg/L		ASTM D888-09(C)
pH (Field)	8.34 SU		EPA 150.2
Specific Conductance (Field)	1113 umho/cm		SM2510B
Temperature	29.269 °C		SM2550B(2)
Turbidity (Hach)	6.58 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 707254	Result	Reporting Limit	Method
Phosphorus, ortho	0.085 mg/L	0.002	EPA 365.1

SiteID: WWU-15-0006 **Sample Date:** 10/20/2020 **IDEM Sample #:** AB41967
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	82.3 %		ASTM D888-09(C)
DO	8.4 mg/L		ASTM D888-09(C)
pH (Field)	7.99 SU		EPA 150.2
Specific Conductance (Field)	1398 umho/cm		SM2510B
Temperature	14.258 °C		SM2550B(2)
Turbidity (Hach)	17.5 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 #: 50270782005	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	242 mg/L	2	SM2320B
Chloride	186 mg/L	25	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	310 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	29 mg/L	5	SM2540D
Solids, Total (TS)	792 mg/L	20	SM2540B
Solids, Total Dissolved (TDS)	780 mg/L	20	SM2540C
Sulfate	200 mg/L	2.5	EPA 300.0
Aluminum (Dissolved)	0.021 mg/L	0.01	EPA 200.8
Aluminum (Total)	0.35 mg/L	0.01	EPA 200.8
Antimony (Total)	1.1 ug/L	1	EPA 200.8
Antimony (Dissolved)	1.2 ug/L	1	EPA 200.8
Arsenic (Dissolved)	1.1 ug/L	1	EPA 200.8
Arsenic (Total)	1.4 ug/L	1	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	80 mg/L	1	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3.8 ug/L	1	EPA 200.8
Copper (Dissolved)	2.3 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Lead (Total)	1.5 ug/L	1	EPA 200.8
Magnesium (Total)	26.8 mg/L	1	EPA 200.7
Nickel (Dissolved)	4.5 ug/L	0.5	EPA 200.8
Nickel (Total)	5.2 ug/L	0.5	EPA 200.8
Selenium (Dissolved)	3.4 ug/L	1	EPA 200.8
Selenium (Total)	3.5 ug/L	1	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Dissolved)	16.4 ug/L	3	EPA 200.8
Zinc (Total)	25.8 ug/L	3	EPA 200.8
COD	19.1 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	3.7 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.18 mg/L	0.05	EPA 365.1
TKN	1 mg/L	0.5	EPA 351.2
TOC	3.7 mg/L	1	SM5310C

Lab ID #: AB41967 peri	Result	Reporting Limit	Method
Chlorophyll a	2504.12 ug/L	0.95	EPA 445M
Periphyton Algal Biomass	30.23 mg/M2	0.95	EPA 445M

Lab ID #: AB41967 phy	Result	Reporting Limit	Method
Phytoplankton Chlorophyll-a	16.43 ug/L	0.95	EPA 445M

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

SiteID: WWU-15-0006 Sample Date: 11/3/2020 IDEM Sample #: AB42334
 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	94.7 %		ASTM D888-09(C)
DO	10.31 mg/L		ASTM D888-09(C)
pH (Field)	8.08 SU		EPA 150.2
Specific Conductance (Field)	752 umho/cm		SM2510B
Temperature	11.458 °C		SM2550B(2)
Turbidity (Hach)	11.6 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 712853	Result	Reporting Limit	Method
Phosphorus, ortho	0.14 mg/L	0.02	EPA 365.1

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

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

SiteID: WWU-15-0007 **USGS Hydrologic Unit:** 051202011503
Stream Name: West Fork White River **County:** Morgan
Description: SR 39 **Latitude:** 39 26 2.67333 **Longitude:** -86 26 54.79281
Drainage: 2484.805 **Site Number:** 20WR043

SiteID: WWU-15-0007 **Sample Date:** 6/9/2020 **IDEM Sample #:** AB42885
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	96.3 %		ASTM D888-09(C)
DO	8.08 mg/L		ASTM D888-09(C)
pH (Field)	8 SU		EPA 150.2
Specific Conductance (Field)	773 umho/cm		SM2510B
Temperature	24.2 °C		SM2550B(2)
Turbidity (Hach)	11.4 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	5 Lookup		Observation

<u>Lab ID #:</u> 2006006-23	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	250 mg/L	20	SM2320B
Hardness (as CaCO3)	299 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	78.9 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.77 ug/L	2	EPA 200.8
Lead (Total)	0.87 ug/L	0.5	EPA 200.8
Magnesium (Total)	24.7 mg/L	0.2	EPA 200.7
Nickel (Total)	2.64 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	11 ug/L	10	EPA 200.8

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

Lab ID #: 2006006-23RE1	Result	Reporting Limit	Method
Chloride	70.6 mg/L	0.12	EPA 300.0
Sulfate	56.9 mg/L	0.12	EPA 300.0
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.01 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50259642006	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	13.3 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	3.1 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.11 mg/L	0.05	EPA 365.1
TKN	0.61 mg/L	0.5	EPA 351.2
TOC	2.7 mg/L	1	SM5310C

SiteID: WWU-15-0007 **Sample Date:** 7/6/2020 **IDEM Sample #:** AB43266
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: US: 209
 DS: 210

Lab ID #:	Result	Reporting Limit	Method
% Sat	140.3 %		ASTM D888-09(C)
DO	10.7 mg/L		ASTM D888-09(C)
pH (Field)	8.33 SU		EPA 150.2
Specific Conductance (Field)	725 umho/cm		SM2510B
Temperature	29.3 °C		SM2550B(2)
Turbidity (Hach)	16.9 NTU		EPA 180.1
Air Temp	6 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 #: 2007007-11	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	210 mg/L	20	SM2320B
Chloride	65.5 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	242 mg/L	2.07	SM2340B
Sulfate	60.6 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	62.2 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3.42 ug/L	2	EPA 200.8
Lead (Total)	1.17 ug/L	0.5	EPA 200.8
Magnesium (Total)	21.1 mg/L	0.2	EPA 200.7
Nickel (Total)	2.66 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	10 ug/L	10	EPA 200.8

Lab ID #: 2007007-11RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	2.21 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.01 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50261781011	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	17.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.8 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.12 mg/L	0.05	EPA 365.1
TKN	1.1 mg/L	0.5	EPA 351.2
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: WWU-15-0007 **Sample Date:** 9/15/2020 **IDEM Sample #:** AB42790
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Additional Samplers: Dorey DeBoom, Nick Haurert, and Seth Bogues

Lab ID #:	Result	Reporting Limit	Method
% Sat	92.1 %		ASTM D888-09(C)
DO	8.04 mg/L		ASTM D888-09(C)
pH (Field)	8.28 SU		EPA 150.2
Specific Conductance (Field)	1319 umho/cm		SM2510B
Temperature	21.9 °C		SM2550B(2)
Turbidity (Hach)	10.8 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: WWU-15-0007 **Sample Date:** 10/19/2020 **IDEM Sample #:** AB44453
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	93.6 %		ASTM D888-09(C)
DO	9.66 mg/L		ASTM D888-09(C)
pH (Field)	8.2 SU		EPA 150.2
Specific Conductance (Field)	1464 umho/cm		SM2510B
Temperature	13.7 °C		SM2550B(2)
Turbidity (Hach)	8.32 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 #: 2010008-13	Result	Reporting Limit	Method
Hardness (as CaCO3)	359 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	1.59 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	91 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.66 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	32 mg/L	0.2	EPA 200.7
Nickel (Total)	5.65 ug/L	1	EPA 200.8
Selenium (Total)	3.09 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	18.6 ug/L	10	EPA 200.8

Lab ID #: 2010008-13RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	1.59 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	5.08 ug/L	1	EPA 200.8
Selenium (Dissolved)	2.82 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	15.3 ug/L	10	EPA 200.8

Lab ID #: 50270802013	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	255 mg/L	2	SM2320B
Chloride	170 mg/L	25	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	9 mg/L	2.5	SM2540D
Solids, Total (TS)	1010 mg/L	25	SM2540B
Solids, Total Dissolved (TDS)	800 mg/L	20	SM2540C
Sulfate	218 mg/L	2.5	EPA 300.0
COD	11.6 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	3.5 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.16 mg/L	0.05	EPA 365.1
TKN	0.81 mg/L	0.5	EPA 351.2
TOC	3.3 mg/L	1	SM5310C

**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: WWU-17-0009 **USGS Hydrologic Unit:** 051202011702
Stream Name: West Fork White River **County:** Morgan
Description: Smokey Road **Latitude:** 39 22 51.56923 **Longitude:** -86 30 6.03149
Drainage: 2617.340 **Site Number:** 20WR044

SiteID: WWU-17-0009 **Sample Date:** 6/2/2020 **IDEM Sample #:** AB42648
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Photos 94(us), 93(ds)
CN:NaOH collected 6/15, see AB42895

Lab ID #:	Result	Reporting Limit	Method
% Sat	94.3 %		ASTM D888-09(C)
DO	8.19 mg/L		ASTM D888-09(C)
pH (Field)	8.02 SU		EPA 150.2
Specific Conductance (Field)	637 umho/cm		SM2510B
Temperature	22.3 °C		SM2550B(2)
Turbidity (Hach)	26.3 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2006004-07	Result	Reporting Limit	Method
Alkalinity (as CaCO3) Hardness	210 mg/L	20	SM2320B
(as CaCO3)	270 mg/L	2.07	SM2340B
Solids, Suspended Total, (TSS)	366 mg/L	5	SM2540D
Solids, Total Dissolved (TDS)	412 mg/L	20	SM2540C
Aluminum (Total)	1.1 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	71.4 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3.87 ug/L	2	EPA 200.8
Lead (Total)	1.94 ug/L	0.5	EPA 200.8
Magnesium (Total)	22.1 mg/L	0.2	EPA 200.7
Nickel (Total)	3.15 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	11.7 ug/L	10	EPA 200.8

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

Lab ID #: 2006004-07RE1	Result	Reporting Limit	Method
Chloride	49.2 mg/L	0.12	EPA 300.0
Sulfate	35.8 mg/L	0.12	EPA 300.0
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	2.13 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.11 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50258978012	Result	Reporting Limit	Method
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	3.9 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.19 mg/L	0.05	EPA 365.1
TKN	0.66 mg/L	0.5	EPA 351.2
TOC	3.3 mg/L	1	SM5310C

SiteID: WWU-17-0009 **Sample Date:** 6/15/2020 **IDEM Sample #:** AB42895
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	126.2 %		ASTM D888-09(C)
DO	10.62 mg/L		ASTM D888-09(C)
pH (Field)	8.32 SU		EPA 150.2
Specific Conductance (Field)	928 umho/cm		SM2510B
Temperature	24.1 °C		SM2550B(2)
Turbidity (Hach)	15.1 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	9 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 50260117008	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4

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

SiteID: WWU-17-0009 Sample Date: 7/6/2020 IDEM Sample #: AB43267
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: US: 207
 DS: 208

Lab ID #:	Result	Reporting Limit	Method
% Sat	134.3 %		ASTM D888-09(C)
DO	10.27 mg/L		ASTM D888-09(C)
pH (Field)	8.3 SU		EPA 150.2
Specific Conductance (Field)	686 umho/cm		SM2510B
Temperature	29.4 °C		SM2550B(2)
Turbidity (Hach)	30.9 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2007007-14	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	210 mg/L	20	SM2320B
Chloride	62.9 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	237 mg/L	2.07	SM2340B
Sulfate	55.2 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.04 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	60.9 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3.53 ug/L	2	EPA 200.8
Lead (Total)	1.34 ug/L	0.5	EPA 200.8
Magnesium (Total)	20.7 mg/L	0.2	EPA 200.7
Nickel (Total)	2.75 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	10.1 ug/L	10	EPA 200.8

Lab ID #: 2007007-14RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	2.14 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 50261781014	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	16.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.6 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.11 mg/L	0.05	EPA 365.1
TKN	1 mg/L	0.5	EPA 351.2
TOC	3.2 mg/L	1	SM5310C

SiteID: WWU-17-0009 **Sample Date:** 9/30/2020 **IDEM Sample #:** AB42785
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	84.6 %		ASTM D888-09(C)
DO	8.12 mg/L		ASTM D888-09(C)
pH (Field)	8.23 SU		EPA 150.2
Specific Conductance (Field)	1257 umho/cm		SM2510B
Temperature	17.1 °C		SM2550B(2)
Turbidity (Hach)	7.18 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

SiteID: WWU-17-0009 **Sample Date:** 10/19/2020 **IDEM Sample #:** AB44454
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	96.2 %		ASTM D888-09(C)
DO	10 mg/L		ASTM D888-09(C)
pH (Field)	8.22 SU		EPA 150.2
Specific Conductance (Field)	1429 umho/cm		SM2510B
Temperature	13.4 °C		SM2550B(2)
Turbidity (Hach)	10.8 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

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

Lab ID #: 2010008-14	Result	Reporting Limit	Method
Hardness (as CaCO3)	361 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	1.42 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	91.5 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.9 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	32.1 mg/L	0.2	EPA 200.7
Nickel (Total)	6.08 ug/L	1	EPA 200.8
Selenium (Total)	3.47 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	17.1 ug/L	10	EPA 200.8

Lab ID #: 2010008-14RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	1.34 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	5.1 ug/L	1	EPA 200.8
Selenium (Dissolved)	2.99 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	12.4 ug/L	10	EPA 200.8

Lab ID #: 50270802014	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	259 mg/L	2	SM2320B
Chloride	168 mg/L	25	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	13 mg/L	2.5	SM2540D
Solids, Total (TS)	830 mg/L	20	SM2540B
Solids, Total Dissolved (TDS)	792 mg/L	20	SM2540C
Sulfate	201 mg/L	2.5	EPA 300.0
COD	14.4 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	4.1 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.16 mg/L	0.05	EPA 365.1
TKN	0.83 mg/L	0.5	EPA 351.2
TOC	3.1 mg/L	1	SM5310C

**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: WWU-17-0010 **USGS Hydrologic Unit:** 051202011702
Stream Name: West Fork White River **County:** Morgan
Description: Burnett Landing Public Access Site **Latitude:** 39 22 23.71625 **Longitude:** -86 33 30.04476
Drainage: 2656.209 **Site Number:** 20WR045

SiteID: WWU-17-0010 **Sample Date:** 6/2/2020 **IDEM Sample #:** AB42649
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: 92(us) + 91 downstream -> Photos
Cyanide collected 6/15, see AB42896

Lab ID #:	Result	Reporting Limit	Method
% Sat	98.1 %		ASTM D888-09(C)
DO	8.42 mg/L		ASTM D888-09(C)
pH (Field)	8.1 SU		EPA 150.2
Specific Conductance (Field)	623 umho/cm		SM2510B
Temperature	22.9 °C		SM2550B(2)
Turbidity (Hach)	35.6 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2006004-08	Result	Reporting Limit	Method
Alkalinity (as CaCO3) Hardness	210 mg/L	20	SM2320B
(as CaCO3)	266 mg/L	2.07	SM2340B
Solids, Suspended Total, (TSS)	27 mg/L	5	SM2540D
Solids, Total Dissolved (TDS)	422 mg/L	20	SM2540C
Aluminum (Total)	0.724 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	70.8 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3.69 ug/L	2	EPA 200.8
Lead (Total)	1.73 ug/L	0.5	EPA 200.8
Magnesium (Total)	21.6 mg/L	0.2	EPA 200.7
Nickel (Total)	2.79 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006004-08RE1	Result	Reporting Limit	Method
Chloride	46.6 mg/L	0.12	EPA 300.0
Sulfate	33.8 mg/L	0.12	EPA 300.0
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	2.12 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.93 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50258978013	Result	Reporting Limit	Method
COD	13.5 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	3.8 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.15 mg/L	0.05	EPA 365.1
TKN	0.63 mg/L	0.5	EPA 351.2
TOC	3.2 mg/L	1	SM5310C

SiteID: WWU-17-0010 **Sample Date:** 6/15/2020 **IDEM Sample #:** AB42896
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	134 %		ASTM D888-09(C)
DO	11.2 mg/L		ASTM D888-09(C)
pH (Field)	8.4 SU		EPA 150.2
Specific Conductance (Field)	914 umho/cm		SM2510B
Temperature	24.3 °C		SM2550B(2)
Turbidity (Hach)	7.96 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 50260117009	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4

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

SiteID: WWU-17-0010 Sample Date: 7/6/2020 IDEM Sample #: AB43268
 Water Flow Type Run Water Appearance Green Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: US: 205
 DS: 206

Lab ID #:	Result	Reporting Limit	Method
% Sat	157.7 %		ASTM D888-09(C)
DO	11.85 mg/L		ASTM D888-09(C)
pH (Field)	8.46 SU		EPA 150.2
Specific Conductance (Field)	697 umho/cm		SM2510B
Temperature	30.1 °C		SM2550B(2)
Turbidity (Hach)	17.4 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2007007-15	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	200 mg/L	20	SM2320B
Chloride	62.2 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	238 mg/L	2.07	SM2340B
Sulfate	53.8 mg/L	0.12	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.04 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	61.4 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3.23 ug/L	2	EPA 200.8
Lead (Total)	1.17 ug/L	0.5	EPA 200.8
Magnesium (Total)	20.7 mg/L	0.2	EPA 200.7
Nickel (Total)	2.65 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007007-15RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	2.14 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.88 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 50261781015	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	23.2 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.4 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.11 mg/L	0.05	EPA 365.1
TKN	1.1 mg/L	0.5	EPA 351.2
TOC	3.2 mg/L	1	SM5310C

SiteID: WWU-17-0010 **Sample Date:** 9/8/2020 **IDEM Sample #:** AB42801
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	129.3 %		ASTM D888-09(C)
DO	10.56 mg/L		ASTM D888-09(C)
pH (Field)	8.34 SU		EPA 150.2
Specific Conductance (Field)	1156 umho/cm		SM2510B
Temperature	25.5 °C		SM2550B(2)
Turbidity (Hach)	15.4 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

SiteID: WWU-17-0010 **Sample Date:** 10/19/2020 **IDEM Sample #:** AB44455
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	96.5 %		ASTM D888-09(C)
DO	10.09 mg/L		ASTM D888-09(C)
pH (Field)	8.25 SU		EPA 150.2
Specific Conductance (Field)	1399 umho/cm		SM2510B
Temperature	13.2 °C		SM2550B(2)
Turbidity (Hach)	8.77 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	3 Lookup		Observation

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

Lab ID #: 2010008-15	Result	Reporting Limit	Method
Hardness (as CaCO3)	368 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	1.41 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	93.5 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.5 ug/L	2	EPA 200.8
Lead (Total)	< 0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	32.7 mg/L	0.2	EPA 200.7
Nickel (Total)	5.39 ug/L	1	EPA 200.8
Selenium (Total)	3.43 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	13.6 ug/L	10	EPA 200.8

Lab ID #: 2010008-15RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	1.41 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	4.72 ug/L	1	EPA 200.8
Selenium (Dissolved)	2.93 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	10.9 ug/L	10	EPA 200.8

Lab ID #: 50270802015	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	254 mg/L	2	SM2320B
Chloride	162 mg/L	25	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	11 mg/L	2.5	SM2540D
Solids, Total (TS)	788 mg/L	20	SM2540B
Solids, Total Dissolved (TDS)	764 mg/L	20	SM2540C
Sulfate	191 mg/L	2.5	EPA 300.0
COD	14.6 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	4 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.16 mg/L	0.05	EPA 365.1
TKN	0.74 mg/L	0.5	EPA 351.2
TOC	3 mg/L	1	SM5310C

**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: WWU-17-0011 **USGS Hydrologic Unit:** 051202011704
Stream Name: West Fork White River **County:** Owen
Description: Gosport Public Access Site **Latitude:** 39 21 1.69626 **Longitude:** -86 39 31.58287
Drainage: 2718.349 **Site Number:** 20WR046

SiteID: WWU-17-0011 **Sample Date:** 6/2/2020 **IDEM Sample #:** AB42650
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Photo 89 (downstream) + 90 (upstream). CN collected 6/15, see AB42897
 Fishermen at site

Lab ID #:	Result	Reporting Limit	Method
% Sat	99.5 %		ASTM D888-09(C)
DO	8.53 mg/L		ASTM D888-09(C)
pH (Field)	8.08 SU		EPA 150.2
Specific Conductance (Field)	610 umho/cm		SM2510B
Temperature	23 °C		SM2550B(2)
Turbidity (Hach)	26.6 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2006004-09	Result	Reporting Limit	Method
Alkalinity (as CaCO3) Hardness	210 mg/L	20	SM2320B
(as CaCO3)	264 mg/L	2.07	SM2340B
Solids, Suspended Total, (TSS)	103 mg/L	5	SM2540D
Solids, Total Dissolved (TDS)	412 mg/L	20	SM2540C
Aluminum (Total)	1.04 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	70.5 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3.84 ug/L	2	EPA 200.8
Lead (Total)	1.77 ug/L	0.5	EPA 200.8
Magnesium (Total)	21.2 mg/L	0.2	EPA 200.7
Nickel (Total)	3.15 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	10.1 ug/L	10	EPA 200.8

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

Lab ID #: 2006004-09RE1	Result	Reporting Limit	Method
Chloride	44.3 mg/L	0.12	EPA 300.0
Sulfate	32.2 mg/L	0.12	EPA 300.0
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	2.12 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.85 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50258978014	Result	Reporting Limit	Method
COD	17.5 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	3.7 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.21 mg/L	0.05	EPA 365.1
TKN	0.76 mg/L	0.5	EPA 351.2
TOC	3.3 mg/L	1	SM5310C

SiteID: WWU-17-0011 **Sample Date:** 6/15/2020 **IDEM Sample #:** AB42897
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	122.5 %		ASTM D888-09(C)
DO	10.45 mg/L		ASTM D888-09(C)
pH (Field)	8.29 SU		EPA 150.2
Specific Conductance (Field)	900 umho/cm		SM2510B
Temperature	23.2 °C		SM2550B(2)
Turbidity (Hach)	19.4 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 50260117010	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4

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

SiteID: WWU-17-0011 Sample Date: 7/6/2020 IDEM Sample #: AB43269
 Water Flow Type Run Water Appearance Green Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: US: 203
 DS: 204

Lab ID #:	Result	Reporting Limit	Method
% Sat	156.2 %		ASTM D888-09(C)
DO	11.81 mg/L		ASTM D888-09(C)
pH (Field)	8.49 SU		EPA 150.2
Specific Conductance (Field)	695 umho/cm		SM2510B
Temperature	29.8 °C		SM2550B(2)
Turbidity (Hach)	35.2 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2007007-16	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	210 mg/L	20	SM2320B
Chloride	62.1 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	241 mg/L	2.07	SM2340B
Sulfate	53.9 mg/L	0.12	EPA 300.0
Aluminum (Total)	0.67 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	62 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3.43 ug/L	2	EPA 200.8
Lead (Total)	1.44 ug/L	0.5	EPA 200.8
Magnesium (Total)	20.9 mg/L	0.2	EPA 200.7
Nickel (Total)	2.9 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	10.1 ug/L	10	EPA 200.8

Lab ID #: 2007007-16RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	2.01 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.95 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 50261781016	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	21.3 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.4 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.11 mg/L	0.05	EPA 365.1
TKN	1 mg/L	0.5	EPA 351.2
TOC	3.2 mg/L	1	SM5310C

SiteID: WWU-17-0011 **Sample Date:** 9/14/2020 **IDEM Sample #:** AB42800
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	85.8 %		ASTM D888-09(C)
DO	7.4 mg/L		ASTM D888-09(C)
pH (Field)	8.12 SU		EPA 150.2
Specific Conductance (Field)	1175 umho/cm		SM2510B
Temperature	22.5 °C		SM2550B(2)
Turbidity (Hach)	13.8 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: WWU-17-0011 **Sample Date:** 10/19/2020 **IDEM Sample #:** AB44456
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 %		ASTM D888-09(C)
DO	9.82 mg/L		ASTM D888-09(C)
pH (Field)	8.22 SU		EPA 150.2
Specific Conductance (Field)	1344 umho/cm		SM2510B
Temperature	13.2 °C		SM2550B(2)
Turbidity (Hach)	16 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

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

Lab ID #: 2010008-16	Result	Reporting Limit	Method
Hardness (as CaCO3)	360 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	1.19 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	91.6 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.68 ug/L	2	EPA 200.8
Lead (Total)	0.62 ug/L	0.5	EPA 200.8
Magnesium (Total)	32 mg/L	0.2	EPA 200.7
Nickel (Total)	5.55 ug/L	1	EPA 200.8
Selenium (Total)	3.29 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	13.5 ug/L	10	EPA 200.8

Lab ID #: 2010008-16RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	1.22 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	4.81 ug/L	1	EPA 200.8
Selenium (Dissolved)	2.99 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50270802016	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	253 mg/L	2	SM2320B
Chloride	156 mg/L	25	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	29 mg/L	2.5	SM2540D
Solids, Total (TS)	760 mg/L	20	SM2540B
Solids, Total Dissolved (TDS)	708 mg/L	20	SM2540C
Sulfate	175 mg/L	2.5	EPA 300.0
COD	16.7 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	4 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.15 mg/L	0.05	EPA 365.1
TKN	0.84 mg/L	0.5	EPA 351.2
TOC	3 mg/L	1	SM5310C

**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: WWL-02-0011 **USGS Hydrologic Unit:** 051202020205
Stream Name: West Fork White River **County:** Owen
Description: SR 67 **Latitude:** 39 15 39.47621 **Longitude:** -86 47 53.88719
Drainage: 2989.483 **Site Number:** 20WR047

SiteID: WWL-02-0011 **Sample Date:** 6/23/2020 **IDEM Sample #:** AB42916
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	149.6 %		ASTM D888-09(C)
DO	11.9 mg/L		ASTM D888-09(C)
pH (Field)	8.48 SU		EPA 150.2
Specific Conductance (Field)	972 umho/cm		SM2510B
Temperature	27 °C		SM2550B(2)
Turbidity (Hach)	13.4 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 2006012-08	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	260 mg/L	20	SM2320B
Chloride	99 mg/L	0.25	EPA 300.0
Hardness (as CaCO3)	318 mg/L	2.07	SM2340B
Sulfate	97.5 mg/L	0.25	EPA 300.0
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	83.7 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.48 ug/L	2	EPA 200.8
Lead (Total)	0.74 ug/L	0.5	EPA 200.8
Magnesium (Total)	26.6 mg/L	0.2	EPA 200.7
Nickel (Total)	3.59 ug/L	1	EPA 200.8
Selenium (Total)	2.12 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006012-08RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	3.1 ug/L	1	EPA 200.8
Selenium (Dissolved)	2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50260783008	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	< 10 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.8 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.12 mg/L	0.05	EPA 365.1
TKN	1.1 mg/L	0.5	EPA 351.2
TOC	2.9 mg/L	1	SM5310C

SiteID: WWL-02-0011 **Sample Date:** 7/21/2020 **IDEM Sample #:** AB43301
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: pictures: u/s-269, d/s-270

Lab ID #:	Result	Reporting Limit	Method
% Sat	90 %		ASTM D888-09(C)
DO	7.26 mg/L		ASTM D888-09(C)
pH (Field)	8.24 SU		EPA 150.2
Specific Conductance (Field)	774 umho/cm		SM2510B
Temperature	26.2 °C		SM2550B(2)
Turbidity (Hach)	45.3 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	5 Lookup		Observation
Wind Direction	18 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 #: 2007016-09	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	190 mg/L	20	SM2320B
Chloride	80.7 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	234 mg/L	2.07	SM2340B
Sulfate	77.3 mg/L	0.12	EPA 300.0
Aluminum (Total)	1.93 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.48 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	59.9 mg/L	0.5	EPA 200.7
Chromium (Total)	3.19 ug/L	2	EPA 200.8
Copper (Total)	4.05 ug/L	2	EPA 200.8
Lead (Total)	2.4 ug/L	0.5	EPA 200.8
Magnesium (Total)	20.5 mg/L	0.2	EPA 200.7
Nickel (Total)	5.33 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	15.5 ug/L	10	EPA 200.8

Lab ID #: 2007016-09RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.95 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50262925009	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	21.3 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.6 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.29 mg/L	0.05	EPA 365.1
TKN	1.5 mg/L	0.5	EPA 351.2
TOC	4 mg/L	1	SM5310C

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

SiteID: WWL-02-0011 Sample Date: 9/29/2020 IDEM Sample #: AB42825
 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	121.8 %		ASTM D888-09(C)
DO	11.31 mg/L		ASTM D888-09(C)
pH (Field)	8.34 SU		EPA 150.2
Specific Conductance (Field)	1122 umho/cm		SM2510B
Temperature	18.7 °C		SM2550B(2)
Turbidity (Hach)	13.1 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: WWL-02-0011 Sample Date: 11/3/2020 IDEM Sample #: AB44489
 Water Flow Type Run Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	95.3 %		ASTM D888-09(C)
DO	10.81 mg/L		ASTM D888-09(C)
pH (Field)	8.19 SU		EPA 150.2
Specific Conductance (Field)	709 umho/cm		SM2510B
Temperature	9.8 °C		SM2550B(2)
Turbidity (Hach)	14.2 NTU		EPA 180.1
Air Temp	4 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 #: 2011004-03	Result	Reporting Limit	Method
Hardness (as CaCO3)	252 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.3 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	65.6 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.27 ug/L	2	EPA 200.8
Lead (Total)	0.65 ug/L	0.5	EPA 200.8
Magnesium (Total)	21.5 mg/L	0.2	EPA 200.7
Nickel (Total)	2.4 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2011004-03RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.02 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50272163003	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	192 mg/L	2	SM2320B
Chloride	76 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	16 mg/L	3.3	SM2540D
Solids, Total (TS)	400 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	394 mg/L	10	SM2540C
Sulfate	67.3 mg/L	2.5	EPA 300.0
COD	13.3 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.15 mg/L	0.05	EPA 365.1
TKN	0.55 mg/L	0.5	EPA 351.2
TOC	3.3 mg/L	1	SM5310C

**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: WWL-02-0012 **USGS Hydrologic Unit:** 051202020210
Stream Name: West Fork White River **County:** Owen
Description: CR 590 South **Latitude:** 39 12 19.81181 **Longitude:** -86 51 59.43815
Drainage: 3040.298 **Site Number:** 20WR048

SiteID: WWL-02-0012 **Sample Date:** 6/9/2020 **IDEM Sample #:** AB42886
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	108 %		ASTM D888-09(C)
DO	8.91 mg/L		ASTM D888-09(C)
pH (Field)	8.18 SU		EPA 150.2
Specific Conductance (Field)	688 umho/cm		SM2510B
Temperature	25.1 °C		SM2550B(2)
Turbidity (Hach)	27.9 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	5 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	5 Lookup		Observation

<u>Lab ID #:</u> 2006006-24	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	230 mg/L	20	SM2320B
Hardness (as CaCO3)	278 mg/L	2.07	SM2340B
Aluminum (Total)	0.9 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	74.2 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3.33 ug/L	2	EPA 200.8
Lead (Total)	1.47 ug/L	0.5	EPA 200.8
Magnesium (Total)	22.5 mg/L	0.2	EPA 200.7
Nickel (Total)	3.13 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	10.9 ug/L	10	EPA 200.8

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

Lab ID #: 2006006-24RE1	Result	Reporting Limit	Method
Chloride	58.5 mg/L	0.12	EPA 300.0
Sulfate	45.9 mg/L	0.12	EPA 300.0
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.79 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50259642007	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	18.4 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.9 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.09 mg/L	0.05	EPA 365.1
TKN	0.62 mg/L	0.5	EPA 351.2
TOC	2.7 mg/L	1	SM5310C

SiteID: WWL-02-0012 **Sample Date:** 7/6/2020 **IDEM Sample #:** AB43270
Water Flow Type Eddy **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: US: 201
 DS: 202

Lab ID #:	Result	Reporting Limit	Method
% Sat	161.6 %		ASTM D888-09(C)
DO	12.2 mg/L		ASTM D888-09(C)
pH (Field)	8.61 SU		EPA 150.2
Specific Conductance (Field)	647 umho/cm		SM2510B
Temperature	30 °C		SM2550B(2)
Turbidity (Hach)	44 NTU		EPA 180.1
Air Temp	6 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 #: 2007007-17	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	210 mg/L	20	SM2320B
Chloride	55.4 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	236 mg/L	2.07	SM2340B
Sulfate	48.9 mg/L	0.12	EPA 300.0
Aluminum (Total)	0.865 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.18 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	60.9 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3.87 ug/L	2	EPA 200.8
Lead (Total)	1.99 ug/L	0.5	EPA 200.8
Magnesium (Total)	20.4 mg/L	0.2	EPA 200.7
Nickel (Total)	3.29 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	11.3 ug/L	10	EPA 200.8

Lab ID #: 2007007-17RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.85 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50261781017	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	23.3 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.1 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.1 mg/L	0.05	EPA 365.1
TKN	1.2 mg/L	0.5	EPA 351.2
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: WWL-02-0012 **Sample Date:** 9/29/2020 **IDEM Sample #:** AB42799
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	92.1 %		ASTM D888-09(C)
DO	8.79 mg/L		ASTM D888-09(C)
pH (Field)	8.34 SU		EPA 150.2
Specific Conductance (Field)	1093 umho/cm		SM2510B
Temperature	17.5 °C		SM2550B(2)
Turbidity (Hach)	21.2 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

SiteID: WWL-02-0012 **Sample Date:** 10/19/2020 **IDEM Sample #:** AB44457
Water Flow Type Eddy **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	95.9 %		ASTM D888-09(C)
DO	10.01 mg/L		ASTM D888-09(C)
pH (Field)	8.3 SU		EPA 150.2
Specific Conductance (Field)	1278 umho/cm		SM2510B
Temperature	13.3 °C		SM2550B(2)
Turbidity (Hach)	15.6 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
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Lab ID #: 2010008-17	Result	Reporting Limit	Method
Hardness (as CaCO3)	356 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	90.9 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.49 ug/L	2	EPA 200.8
Lead (Total)	0.54 ug/L	0.5	EPA 200.8
Magnesium (Total)	31.4 mg/L	0.2	EPA 200.7
Nickel (Total)	5.69 ug/L	1	EPA 200.8
Selenium (Total)	3.18 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	10.4 ug/L	10	EPA 200.8

Lab ID #: 2010008-17RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	4.62 ug/L	1	EPA 200.8
Selenium (Dissolved)	2.93 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50270802017	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	246 mg/L	2	SM2320B
Chloride	150 mg/L	25	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	18 mg/L	2.5	SM2540D
Solids, Total (TS)	700 mg/L	20	SM2540B
Solids, Total Dissolved (TDS)	650 mg/L	20	SM2540C
Sulfate	154 mg/L	2.5	EPA 300.0
COD	14.1 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	3.9 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.12 mg/L	0.05	EPA 365.1
TKN	0.78 mg/L	0.5	EPA 351.2
TOC	2.8 mg/L	1	SM5310C

**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: WWL-02-0007 **USGS Hydrologic Unit:** 051202020211
Stream Name: White River **County:** Greene
Description: CR 990 North **Latitude:** 39 9 57.01222 **Longitude:** -86 53 34.80548
Drainage: 3162.790 **Site Number:** INRB20-013

SiteID: WWL-02-0007 **Sample Date:** 6/15/2020 **IDEM Sample #:** AB41843
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	142.1 %		ASTM D888-09(C)
DO	11.99 mg/L		ASTM D888-09(C)
pH (Field)	8.27 SU		EPA 150.2
Specific Conductance (Field)	775 umho/cm		SM2510B
Temperature	23.444 °C		SM2550B(2)
Turbidity (Hach)	51.8 NTU		EPA 180.1
Air Temp	4 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
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Lab ID #: 50259875001	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	216 mg/L	2	SM2320B
Chloride	78.3 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	297 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	47 mg/L	6.2	SM2540D
Solids, Total (TS)	522 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	440 mg/L	10	SM2540C
Sulfate	77.8 mg/L	2.5	EPA 300.0
Aluminum (Total)	0.45 mg/L	0.02	EPA 200.8
Aluminum (Dissolved)	< 0.01 mg/L	0.01	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	1.1 ug/L	1	EPA 200.8
Arsenic (Total)	1.4 ug/L	1	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	76.2 mg/L	1	EPA 200.7
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.5 ug/L	1	EPA 200.8
Copper (Dissolved)	1.9 ug/L	1	EPA 200.8
Lead (Total)	< 1 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Magnesium (Total)	25.9 mg/L	1	EPA 200.7
Nickel (Dissolved)	2.1 ug/L	0.5	EPA 200.8
Nickel (Total)	2.9 ug/L	0.5	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Total)	6.4 ug/L	3	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
COD	20.7 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.8 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.05 mg/L	0.05	EPA 365.1
TKN	1.2 mg/L	0.5	EPA 351.2
TOC	2.8 mg/L	1	SM5310C

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

SiteID: WWL-02-0007 Sample Date: 6/23/2020 IDEM Sample #: AB42269
 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	115.1 %		ASTM D888-09(C)
DO	9.42 mg/L		ASTM D888-09(C)
pH (Field)	8.12 SU		EPA 150.2
Specific Conductance (Field)	880 umho/cm		SM2510B
Temperature	25.65 °C		SM2550B(2)
Turbidity (Hach)	29.9 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 702099	Result	Reporting Limit	Method
Phosphorus, ortho	0.0058 mg/L	0.002	EPA 365.1

SiteID: WWL-02-0007 Sample Date: 7/7/2020 IDEM Sample #: AB42010
 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	167.3 %		ASTM D888-09(C)
DO	12.75 mg/L		ASTM D888-09(C)
pH (Field)	8.38 SU		EPA 150.2
Specific Conductance (Field)	655 umho/cm		SM2510B
Temperature	29.4 °C		SM2550B(2)
Turbidity (Hach)	51.7 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB42010	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	29.2 MPN/100mL	1	SM9223B

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

SiteID: WWL-02-0007 Sample Date: 7/14/2020 IDEM Sample #: AB42032
 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	175.7 %		ASTM D888-09(C)
DO	13.85 mg/L		ASTM D888-09(C)
pH (Field)	8.64 SU		EPA 150.2
Specific Conductance (Field)	771 umho/cm		SM2510B
Temperature	27.6 °C		SM2550B(2)
Turbidity (Hach)	31.9 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 #: AB42032	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	88.8 MPN/100mL	1	SM9223B

SiteID: WWL-02-0007 Sample Date: 7/21/2020 IDEM Sample #: AB42054
 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	80.4 %		ASTM D888-09(C)
DO	6.48 mg/L		ASTM D888-09(C)
pH (Field)	7.83 SU		EPA 150.2
Specific Conductance (Field)	449 umho/cm		SM2510B
Temperature	26.2 °C		SM2550B(2)
Turbidity (Hach)	141 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB42054	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1203.3 MPN/100mL	1	SM9223B

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

SiteID: WWL-02-0007 Sample Date: 7/28/2020 IDEM Sample #: AB41898
 Water Flow Type Eddy Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	164.5 %		ASTM D888-09(C)
DO	12.62 mg/L		ASTM D888-09(C)
pH (Field)	8.58 SU		EPA 150.2
Specific Conductance (Field)	689 umho/cm		SM2510B
Temperature	29.236 °C		SM2550B(2)
Turbidity (Hach)	47.1 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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

Lab ID #: 50263470001	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	176 mg/L	2	SM2320B
Chloride	63.3 mg/L	5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	253 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	56 mg/L	7.1	SM2540D
Solids, Total (TS)	446 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	369 mg/L	10	SM2540C
Sulfate	57.3 mg/L	5	EPA 300.0
Aluminum (Total)	2.2 mg/L	0.05	EPA 200.8
Aluminum (Dissolved)	< 0.01 mg/L	0.01	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	1.5 ug/L	1	EPA 200.8
Arsenic (Total)	2.4 ug/L	1	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	66.4 mg/L	1	EPA 200.7
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Chromium (Total)	2.7 ug/L	2	EPA 200.8
Copper (Total)	4 ug/L	1	EPA 200.8
Copper (Dissolved)	1.6 ug/L	1	EPA 200.8
Lead (Total)	2.7 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Magnesium (Total)	21.2 mg/L	1	EPA 200.7
Nickel (Total)	4.7 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.2 ug/L	0.5	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
Zinc (Total)	13.6 ug/L	3	EPA 200.8
COD	27.4 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.71 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.097 mg/L	0.05	EPA 365.1
TKN	1.5 mg/L	0.5	EPA 351.2
TOC	5.6 mg/L	1	SM5310C

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

SiteID: WWL-02-0007 Sample Date: 7/28/2020 IDEM Sample #: AB42076
 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	162.8 %		ASTM D888-09(C)
DO	12.48 mg/L		ASTM D888-09(C)
pH (Field)	8.66 SU		EPA 150.2
Specific Conductance (Field)	681 umho/cm		SM2510B
Temperature	29.1 °C		SM2550B(2)
Turbidity (Hach)	46.8 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation
Lab ID #: AB42076	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	65.1 MPN/100mL	1	SM9223B

SiteID: WWL-02-0007 Sample Date: 8/4/2020 IDEM Sample #: AB42098
 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	110 %		ASTM D888-09(C)
DO	9.16 mg/L		ASTM D888-09(C)
pH (Field)	8.27 SU		EPA 150.2
Specific Conductance (Field)	661 umho/cm		SM2510B
Temperature	24.5 °C		SM2550B(2)
Turbidity (Hach)	46.5 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation
Lab ID #: AB42098	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	124.6 MPN/100mL	1	SM9223B

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

SiteID: WWL-02-0007 **Sample Date:** 8/11/2020 **IDEM Sample #:** AB42289
Water Flow Type Eddy **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: HOBO #11
 SN: 10960974

Lab ID #:	Result	Reporting Limit	Method
% Sat	98.9 %		ASTM D888-09(C)
DO	8.09 mg/L		ASTM D888-09(C)
pH (Field)	8.19 SU		EPA 150.2
Specific Conductance (Field)	661 umho/cm		SM2510B
Temperature	25.515 °C		SM2550B(2)
Turbidity (Hach)	114 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

SiteID: WWL-02-0007 **Sample Date:** 8/25/2020 **IDEM Sample #:** AB42307
Water Flow Type Eddy **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Pickup
 HOBO #11
 SN: 10960974

Lab ID #:	Result	Reporting Limit	Method
% Sat	213.7 %		ASTM D888-09(C)
DO	16.17 mg/L		ASTM D888-09(C)
pH (Field)	8.4 SU		EPA 150.2
Specific Conductance (Field)	845 umho/cm		SM2510B
Temperature	28.607 °C		SM2550B(2)
Turbidity (Hach)	41.8 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 707240	Result	Reporting Limit	Method
Phosphorus, ortho	< 0.002 mg/L	0.002	EPA 365.1

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

SiteID: WWL-02-0007 Sample Date: 9/9/2020 IDEM Sample #: AB41953
 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	129.4 %		ASTM D888-09(C)
DO	10.7 mg/L		ASTM D888-09(C)
pH (Field)	8.23 SU		EPA 150.2
Specific Conductance (Field)	1049 umho/cm		SM2510B
Temperature	24.806 °C		SM2550B(2)
Turbidity (Hach)	26.3 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

**Indiana Department of Environmental Management
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Lab ID #: 50266972001	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	230 mg/L	2	SM2320B
Chloride	109 mg/L	25	EPA 300.0
Cyanide (Total)	< 0.023 mg/L	0.023	EPA 335.4
Hardness (as CaCO3)	289 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	35 mg/L	8.3	SM2540D
Solids, Total (TS)	635 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	587 mg/L	10	SM2540C
Sulfate	115 mg/L	25	EPA 300.0
Aluminum (Dissolved)	< 0.01 mg/L	0.01	EPA 200.8
Aluminum (Total)	0.48 mg/L	0.02	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	1.7 ug/L	1	EPA 200.8
Arsenic (Dissolved)	1.3 ug/L	1	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	71.7 mg/L	1	EPA 200.7
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	1.5 ug/L	1	EPA 200.8
Copper (Total)	2.4 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Lead (Total)	< 1 ug/L	1	EPA 200.8
Magnesium (Total)	26.7 mg/L	1	EPA 200.7
Nickel (Total)	4.1 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	3.5 ug/L	0.5	EPA 200.8
Selenium (Dissolved)	1.8 ug/L	1	EPA 200.8
Selenium (Total)	2 ug/L	1	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Total)	5.8 ug/L	3	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
COD	18.4 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.6 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.05 mg/L	0.05	EPA 365.1
TKN	1.3 mg/L	0.5	EPA 351.2
TOC	3 mg/L	1	SM5310C

Lab ID #: AB41953 peri	Result	Reporting Limit	Method
Chlorophyll a	4831.6 ug/L	0.95	EPA 445M
Periphyton Algal Biomass	523.75 mg/M2	0.95	EPA 445M

Lab ID #: AB41953 phy	Result	Reporting Limit	Method
Phytoplankton Chlorophyll-a	65.94 ug/L	0.95	EPA 445M

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

SiteID: WWL-02-0007 **Sample Date:** 9/28/2020 **IDEM Sample #:** AB42119
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 %		ASTM D888-09(C)
DO	8.21 mg/L		ASTM D888-09(C)
pH (Field)	8.27 SU		EPA 150.2
Specific Conductance (Field)	1145 umho/cm		SM2510B
Temperature	19.6 °C		SM2550B(2)
Turbidity (Hach)	22.2 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

SiteID: WWL-02-0007 **Sample Date:** 11/3/2020 **IDEM Sample #:** AB42327
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	93.4 %		ASTM D888-09(C)
DO	10.62 mg/L		ASTM D888-09(C)
pH (Field)	8.21 SU		EPA 150.2
Specific Conductance (Field)	697 umho/cm		SM2510B
Temperature	9.64 °C		SM2550B(2)
Turbidity (Hach)	23.5 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: 712839	Result	Reporting Limit	Method
Phosphorus, ortho	0.12 mg/L	0.02	EPA 365.1

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: WWL-04-0006 **USGS Hydrologic Unit:** 051202020404
Stream Name: West Fork White River **County:** Greene
Description: Worthington Public Access Site **Latitude:** 39 6 39.11944 **Longitude:** -86 57 45.53642
Drainage: 4389.388 **Site Number:** 20WR050

SiteID: WWL-04-0006 **Sample Date:** 6/9/2020 **IDEM Sample #:** AB42887
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Had boaters drive by several times and send wake while sampling.
*MSG: marked water appearance as "Murky" post sampling based on high turbidity.

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	115.5 %		ASTM D888-09(C)
DO	9.51 mg/L		ASTM D888-09(C)
pH (Field)	8.21 SU		EPA 150.2
Specific Conductance (Field)	638 umho/cm		SM2510B
Temperature	25.1 °C		SM2550B(2)
Turbidity (Hach)	27.1 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	4 Lookup		Observation

<u>Lab ID #:</u> 2006006-25	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	220 mg/L	20	SM2320B
Hardness (as CaCO3)	266 mg/L	2.07	SM2340B
Aluminum (Total)	1.03 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.02 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	71.5 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3.33 ug/L	2	EPA 200.8
Lead (Total)	1.68 ug/L	0.5	EPA 200.8
Magnesium (Total)	21.3 mg/L	0.2	EPA 200.7
Nickel (Total)	3.23 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	10.3 ug/L	10	EPA 200.8

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

Lab ID #: 2006006-25RE1	Result	Reporting Limit	Method
Chloride	49.1 mg/L	0.12	EPA 300.0
Sulfate	41.4 mg/L	0.12	EPA 300.0
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.66 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50259642008	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	19 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.4 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.094 mg/L	0.05	EPA 365.1
TKN	0.91 mg/L	0.5	EPA 351.2
TOC	2.7 mg/L	1	SM5310C

SiteID: WWL-04-0006 **Sample Date:** 7/6/2020 **IDEM Sample #:** AB43271
Water Flow Type Run **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: US: 199
 DS: 200

Lab ID #:	Result	Reporting Limit	Method
% Sat	142.7 %		ASTM D888-09(C)
DO	10.9 mg/L		ASTM D888-09(C)
pH (Field)	8.55 SU		EPA 150.2
Specific Conductance (Field)	606 umho/cm		SM2510B
Temperature	29.3 °C		SM2550B(2)
Turbidity (Hach)	32.7 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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

Lab ID #: 2007007-18	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	200 mg/L	20	SM2320B
Chloride	48.7 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	228 mg/L	2.07	SM2340B
Sulfate	43.2 mg/L	0.12	EPA 300.0
Aluminum (Total)	0.995 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.13 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	59.2 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3.54 ug/L	2	EPA 200.8
Lead (Total)	1.68 ug/L	0.5	EPA 200.8
Magnesium (Total)	19.4 mg/L	0.2	EPA 200.7
Nickel (Total)	3.14 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	10 ug/L	10	EPA 200.8

Lab ID #: 2007007-18RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.78 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50261781018	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	22.4 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.099 mg/L	0.05	EPA 365.1
TKN	0.98 mg/L	0.5	EPA 351.2
TOC	3.1 mg/L	1	SM5310C

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

SiteID: WWL-04-0006 **Sample Date:** 9/8/2020 **IDEM Sample #:** AB42798
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	98.4 %		ASTM D888-09(C)
DO	8.25 mg/L		ASTM D888-09(C)
pH (Field)	8.07 SU		EPA 150.2
Specific Conductance (Field)	975 umho/cm		SM2510B
Temperature	24 °C		SM2550B(2)
Turbidity (Hach)	23.2 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: WWL-04-0006 **Sample Date:** 10/19/2020 **IDEM Sample #:** AB44458
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	94.9 %		ASTM D888-09(C)
DO	9.93 mg/L		ASTM D888-09(C)
pH (Field)	8.29 SU		EPA 150.2
Specific Conductance (Field)	1132 umho/cm		SM2510B
Temperature	13.2 °C		SM2550B(2)
Turbidity (Hach)	15.7 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 #: 2010008-18	Result	Reporting Limit	Method
Hardness (as CaCO3)	335 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	85.9 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	0.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	29.3 mg/L	0.2	EPA 200.7
Nickel (Total)	4.64 ug/L	1	EPA 200.8
Selenium (Total)	2.56 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2010008-18RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	3.95 ug/L	1	EPA 200.8
Selenium (Dissolved)	2.3 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50270802018	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	238 mg/L	2	SM2320B
Chloride	122 mg/L	25	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	17 mg/L	2.5	SM2540D
Solids, Total (TS)	655 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	610 mg/L	10	SM2540C
Sulfate	133 mg/L	25	EPA 300.0
COD	13.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.9 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.11 mg/L	0.05	EPA 365.1
TKN	0.74 mg/L	0.5	EPA 351.2
TOC	2.7 mg/L	1	SM5310C

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

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: WWL-04-0007 **USGS Hydrologic Unit:** 051202020404
Stream Name: West Fork White River **County:** Greene
Description: Base Line Road **Latitude:** 39 1 6.31489 **Longitude:** -86 58 19.62675
Drainage: 4466.281 **Site Number:** 20WR051

SiteID: WWL-04-0007 **Sample Date:** 6/2/2020 **IDEM Sample #:** AB42653
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: 82(u/s) 83(d/s)
Cyanide collected 12:36 on 6/15/20, see AB42898

Lab ID #:	Result	Reporting Limit	Method
% Sat	89.9 %		ASTM D888-09(C)
DO	7.92 mg/L		ASTM D888-09(C)
pH (Field)	8.07 SU		EPA 150.2
Specific Conductance (Field)	505 umho/cm		SM2510B
Temperature	21.7 °C		SM2550B(2)
Turbidity (Hach)	182 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2006004-11	Result	Reporting Limit	Method
Alkalinity (as CaCO3) Hardness	180 mg/L	20	SM2320B
(as CaCO3)	346 mg/L	2.07	SM2340B
Solids, Suspended Total, (TSS)	692 mg/L	5	SM2540D
Solids, Total Dissolved (TDS)	346 mg/L	20	SM2540C
Aluminum (Total)	11.3 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	5.07 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	90.7 mg/L	0.5	EPA 200.7
Chromium (Total)	12.6 ug/L	2	EPA 200.8
Copper (Total)	17.6 ug/L	2	EPA 200.8
Lead (Total)	18.7 ug/L	0.5	EPA 200.8
Magnesium (Total)	28.9 mg/L	0.2	EPA 200.7
Nickel (Total)	17.4 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	72.4 ug/L	10	EPA 200.8

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

Lab ID #: 2006004-11RE1	Result	Reporting Limit	Method
Chloride	30.2 mg/L	0.12	EPA 300.0
Sulfate	29.4 mg/L	0.12	EPA 300.0
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.55 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50258978019	Result	Reporting Limit	Method
COD	33.1 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.7 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.53 mg/L	0.05	EPA 365.1
TKN	1.1 mg/L	0.5	EPA 351.2
TOC	3.5 mg/L	1	SM5310C

SiteID: WWL-04-0007 **Sample Date:** 6/15/2020 **IDEM Sample #:** AB42898
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	141.7 %		ASTM D888-09(C)
DO	12.06 mg/L		ASTM D888-09(C)
pH (Field)	8.18 SU		EPA 150.2
Specific Conductance (Field)	745 umho/cm		SM2510B
Temperature	23.4 °C		SM2550B(2)
Turbidity (Hach)	41.8 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 50260117011	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4

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

SiteID: WWL-04-0007 Sample Date: 7/6/2020 IDEM Sample #: AB43272
 Water Flow Type Run Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: US: 197
 DS: 198

Lab ID #:	Result	Reporting Limit	Method
% Sat	127.7 %		ASTM D888-09(C)
DO	9.8 mg/L		ASTM D888-09(C)
pH (Field)	8.5 SU		EPA 150.2
Specific Conductance (Field)	581 umho/cm		SM2510B
Temperature	29 °C		SM2550B(2)
Turbidity (Hach)	56.8 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: 2007007-19	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	190 mg/L	20	SM2320B
Chloride	42.7 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	225 mg/L	2.07	SM2340B
Sulfate	44.2 mg/L	0.12	EPA 300.0
Aluminum (Total)	1.03 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.19 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	58.4 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3.88 ug/L	2	EPA 200.8
Lead (Total)	1.94 ug/L	0.5	EPA 200.8
Magnesium (Total)	19.3 mg/L	0.2	EPA 200.7
Nickel (Total)	3.21 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	10.5 ug/L	10	EPA 200.8

Lab ID #: 2007007-19RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.67 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 50261781019	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	33.1 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.9 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.088 mg/L	0.05	EPA 365.1
TKN	1 mg/L	0.5	EPA 351.2
TOC	3.1 mg/L	1	SM5310C

SiteID: WWL-04-0007 **Sample Date:** 9/28/2020 **IDEM Sample #:** AB42784
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	87.2 %		ASTM D888-09(C)
DO	7.94 mg/L		ASTM D888-09(C)
pH (Field)	8.21 SU		EPA 150.2
Specific Conductance (Field)	1151 umho/cm		SM2510B
Temperature	19.7 °C		SM2550B(2)
Turbidity (Hach)	23.3 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	8 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

SiteID: WWL-04-0007 **Sample Date:** 10/19/2020 **IDEM Sample #:** AB44459
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	9.53 mg/L		ASTM D888-09(C)
pH (Field)	8.23 SU		EPA 150.2
Specific Conductance (Field)	1126 umho/cm		SM2510B
Temperature	13.3 °C		SM2550B(2)
Turbidity (Hach)	20.5 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 #: 2010008-19RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	3.83 ug/L	1	EPA 200.8
Selenium (Dissolved)	2.25 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50270802019	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	244 mg/L	2	SM2320B
Chloride	111 mg/L	25	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	20 mg/L	2.5	SM2540D
Solids, Total (TS)	669 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	617 mg/L	10	SM2540C
Sulfate	145 mg/L	25	EPA 300.0
COD	14.2 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.7 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.08 mg/L	0.05	EPA 365.1
TKN	0.75 mg/L	0.5	EPA 351.2
TOC	2.5 mg/L	1	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: WWL-05-0019 **USGS Hydrologic Unit:** 051202020504
Stream Name: West Fork White River **County:** Greene
Description: CR 350 West **Latitude:** 38 57 28.90643 **Longitude:** -86 59 39.52703
Drainage: 4654.651 **Site Number:** 20WR052

SiteID: WWL-05-0019 **Sample Date:** 6/2/2020 **IDEM Sample #:** AB42654
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Pictures 80(DS) & 81 (US) on red olympus
 Boat parked 6/15/20
 Cyanide collected 11:17 on 6/15/20, see AB42899

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	88.5 %		ASTM D888-09(C)
DO	7.82 mg/L		ASTM D888-09(C)
pH (Field)	7.96 SU		EPA 150.2
Specific Conductance (Field)	493.9 umho/cm		SM2510B
Temperature	21.4 °C		SM2550B(2)
Turbidity (Hach)	57.5 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 2006004-12	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3) Hardness	190 mg/L	20	SM2320B
(as CaCO3)	223 mg/L	2.07	SM2340B
Solids, Suspended Total, (TSS)	68 mg/L	5	SM2540D
Solids, Total Dissolved (TDS)	346 mg/L	20	SM2540C
Aluminum (Total)	1.7 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	60.2 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3.52 ug/L	2	EPA 200.8
Lead (Total)	2.07 ug/L	0.5	EPA 200.8
Magnesium (Total)	17.6 mg/L	0.2	EPA 200.7
Nickel (Total)	3.08 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	10.7 ug/L	10	EPA 200.8

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

Lab ID #: 2006004-12RE1	Result	Reporting Limit	Method
Chloride	30.1 mg/L	0.12	EPA 300.0
Sulfate	26.5 mg/L	0.12	EPA 300.0
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.49 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50258978020	Result	Reporting Limit	Method
COD	15.2 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.9 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.16 mg/L	0.05	EPA 365.1
TKN	0.55 mg/L	0.5	EPA 351.2
TOC	3.1 mg/L	1	SM5310C

SiteID: WWL-05-0019 **Sample Date:** 6/15/2020 **IDEM Sample #:** AB42899
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	143.6 %		ASTM D888-09(C)
DO	12.18 mg/L		ASTM D888-09(C)
pH (Field)	8.2 SU		EPA 150.2
Specific Conductance (Field)	710 umho/cm		SM2510B
Temperature	23.5 °C		SM2550B(2)
Turbidity (Hach)	35.4 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 50260117012	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4

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

SiteID: WWL-05-0019 Sample Date: 7/6/2020 IDEM Sample #: AB43273
 Water Flow Type Run Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: US: 195
 DS: 196

Lab ID #:	Result	Reporting Limit	Method
% Sat	122.9 %		ASTM D888-09(C)
DO	9.45 mg/L		ASTM D888-09(C)
pH (Field)	8.51 SU		EPA 150.2
Specific Conductance (Field)	554 umho/cm		SM2510B
Temperature	28.8 °C		SM2550B(2)
Turbidity (Hach)	30.3 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	9 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 2007007-20	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	190 mg/L	20	SM2320B
Chloride	39.6 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	222 mg/L	2.07	SM2340B
Sulfate	36.7 mg/L	0.12	EPA 300.0
Aluminum (Total)	1.45 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.34 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	58.1 mg/L	0.5	EPA 200.7
Chromium (Total)	2.48 ug/L	2	EPA 200.8
Copper (Total)	4.23 ug/L	2	EPA 200.8
Lead (Total)	2.17 ug/L	0.5	EPA 200.8
Magnesium (Total)	18.7 mg/L	0.2	EPA 200.7
Nickel (Total)	3.62 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	12 ug/L	10	EPA 200.8

Lab ID #: 2007007-20RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.61 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 50261781020	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	20.4 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.9 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.081 mg/L	0.05	EPA 365.1
TKN	1.1 mg/L	0.5	EPA 351.2
TOC	3.1 mg/L	1	SM5310C

SiteID: WWL-05-0019 **Sample Date:** 10/13/2020 **IDEM Sample #:** AB42789
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Additional Samplers: Paul Stockebrand

Lab ID #:	Result	Reporting Limit	Method
% Sat	85 %		ASTM D888-09(C)
DO	8.01 mg/L		ASTM D888-09(C)
pH (Field)	8.22 SU		EPA 150.2
Specific Conductance (Field)	1096 umho/cm		SM2510B
Temperature	18.1 °C		SM2550B(2)
Turbidity (Hach)	25.4 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: WWL-05-0019 **Sample Date:** 10/19/2020 **IDEM Sample #:** AB44460
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	86.5 %		ASTM D888-09(C)
DO	9.04 mg/L		ASTM D888-09(C)
pH (Field)	8.16 SU		EPA 150.2
Specific Conductance (Field)	1096 umho/cm		SM2510B
Temperature	13.2 °C		SM2550B(2)
Turbidity (Hach)	22.6 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 #: 2010008-20	Result	Reporting Limit	Method
Hardness (as CaCO3)	338 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	86.5 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	0.62 ug/L	0.5	EPA 200.8
Magnesium (Total)	29.6 mg/L	0.2	EPA 200.7
Nickel (Total)	4.52 ug/L	1	EPA 200.8
Selenium (Total)	2.34 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2010008-20RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	3.79 ug/L	1	EPA 200.8
Selenium (Dissolved)	2.28 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50270802020	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	244 mg/L	2	SM2320B
Chloride	110 mg/L	25	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	27 mg/L	5	SM2540D
Solids, Total (TS)	642 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	599 mg/L	10	SM2540C
Sulfate	132 mg/L	25	EPA 300.0
COD	11.1 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.6 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.063 mg/L	0.05	EPA 365.1
TKN	0.68 mg/L	0.5	EPA 351.2
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**

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: WWL-05-0020 **USGS Hydrologic Unit:** 051202020506
Stream Name: West Fork White River **County:** Greene
Description: CR 750 South **Latitude:** 38 54 35.11584 **Longitude:** -87 5 47.34973
Drainage: 4771.531 **Site Number:** 20WR053

SiteID: WWL-05-0020 **Sample Date:** 6/9/2020 **IDEM Sample #:** AB42888
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	102.7 %		ASTM D888-09(C)
DO	8.55 mg/L		ASTM D888-09(C)
pH (Field)	8.17 SU		EPA 150.2
Specific Conductance (Field)	601 umho/cm		SM2510B
Temperature	24.6 °C		SM2550B(2)
Turbidity (Hach)	29.1 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	9 Lookup		Observation
Wind Strength	5 Lookup		Observation

<u>Lab ID #:</u> 2006006-26	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	210 mg/L	20	SM2320B
Hardness (as CaCO3)	259 mg/L	2.07	SM2340B
Aluminum (Total)	0.944 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	70.1 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.82 ug/L	2	EPA 200.8
Lead (Total)	1.26 ug/L	0.5	EPA 200.8
Magnesium (Total)	20.4 mg/L	0.2	EPA 200.7
Nickel (Total)	2.9 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006006-26RE1	Result	Reporting Limit	Method
Chloride	41.4 mg/L	0.12	EPA 300.0
Sulfate	39.8 mg/L	0.12	EPA 300.0
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.51 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50259642009	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	18.2 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.1 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.095 mg/L	0.05	EPA 365.1
TKN	0.75 mg/L	0.5	EPA 351.2
TOC	2.7 mg/L	1	SM5310C

SiteID: WWL-05-0020 **Sample Date:** 7/6/2020 **IDEM Sample #:** AB43274
Water Flow Type Pool **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: US: 193
 DS: 194

Lab ID #:	Result	Reporting Limit	Method
% Sat	104.2 %		ASTM D888-09(C)
DO	8.07 mg/L		ASTM D888-09(C)
pH (Field)	8.37 SU		EPA 150.2
Specific Conductance (Field)	550 umho/cm		SM2510B
Temperature	28.4 °C		SM2550B(2)
Turbidity (Hach)	38.8 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	9 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 #: 2007007-21RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.58 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50261781021	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	18.6 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.1 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.091 mg/L	0.05	EPA 365.1
TKN	1.1 mg/L	0.5	EPA 351.2
TOC	3 mg/L	1	SM5310C

SiteID: WWL-05-0020 **Sample Date:** 9/14/2020 **IDEM Sample #:** AB42783
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	93.7 %		ASTM D888-09(C)
DO	7.97 mg/L		ASTM D888-09(C)
pH (Field)	8.05 SU		EPA 150.2
Specific Conductance (Field)	923 umho/cm		SM2510B
Temperature	23.3 °C		SM2550B(2)
Turbidity (Hach)	28.2 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

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

SiteID: WWL-05-0020 Sample Date: 10/19/2020 IDEM Sample #: AB44461
 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	88.8 %		ASTM D888-09(C)
DO	9.24 mg/L		ASTM D888-09(C)
pH (Field)	8.12 SU		EPA 150.2
Specific Conductance (Field)	1073 umho/cm		SM2510B
Temperature	13.4 °C		SM2550B(2)
Turbidity (Hach)	14.8 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: 2010008-21	Result	Reporting Limit	Method
Hardness (as CaCO3)	323 mg/L	2.07	SM2340B
Aluminum (Total)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.24 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	83.3 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	< 2 ug/L	2	EPA 200.8
Lead (Total)	1.24 ug/L	0.5	EPA 200.8
Magnesium (Total)	28 mg/L	0.2	EPA 200.7
Nickel (Total)	4.26 ug/L	1	EPA 200.8
Selenium (Total)	2.45 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2010008-21RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	3.45 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 50270802021	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	239 mg/L	2	SM2320B
Chloride	106 mg/L	25	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	14 mg/L	5	SM2540D
Solids, Total (TS)	626 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	579 mg/L	10	SM2540C
Sulfate	127 mg/L	25	EPA 300.0
COD	11.6 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.5 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.069 mg/L	0.05	EPA 365.1
TKN	0.54 mg/L	0.5	EPA 351.2
TOC	2.4 mg/L	1	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: WWL-05-0021 **USGS Hydrologic Unit:** 051202020508
Stream Name: West Fork White River **County:** Daviess
Description: Riverdale Road **Latitude:** 38 49 36.61441 **Longitude:** -87 11 10.76768
Drainage: 4806.964 **Site Number:** INRB20-102

SiteID: WWL-05-0021 **Sample Date:** 5/20/2020 **IDEM Sample #:** AB41839
Water Flow Type Run **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Sampled US of X at corner of Riverdale Rd. and Bowman Rd. due to high water.

Lab ID #:	Result	Reporting Limit	Method
% Sat	68.9 %		ASTM D888-09(C)
DO	6.57 mg/L		ASTM D888-09(C)
pH (Field)	7.72 SU		EPA 150.2
Specific Conductance (Field)	363.3 umho/cm		SM2510B
Temperature	17.612 °C		SM2550B(2)
Turbidity (Hach)	148 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

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

Lab ID #: 50257770014	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	90.9 mg/L	2	SM2320B
Chloride	20.5 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	138 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	156 mg/L	25	SM2540D
Solids, Total (TS)	344 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	182 mg/L	10	SM2540C
Sulfate	17.3 mg/L	2.5	EPA 300.0
Aluminum (Total)	3.9 mg/L	0.1	EPA 200.8
Aluminum (Dissolved)	0.17 mg/L	0.01	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.4 ug/L	1	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	38.2 mg/L	1	EPA 200.7
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Chromium (Total)	5 ug/L	2	EPA 200.8
Copper (Total)	6.3 ug/L	1	EPA 200.8
Copper (Dissolved)	2 ug/L	1	EPA 200.8
Lead (Total)	4.5 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Magnesium (Total)	10.3 mg/L	1	EPA 200.7
Nickel (Total)	6 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.6 ug/L	0.5	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Total)	23.8 ug/L	3	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
COD	20.6 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.11 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.7 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.25 mg/L	0.05	EPA 365.1
TKN	0.78 mg/L	0.5	EPA 351.2
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: WWL-05-0021 Sample Date: 6/23/2020 IDEM Sample #: AB42277
 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	102.7 %		ASTM D888-09(C)
DO	8.36 mg/L		ASTM D888-09(C)
pH (Field)	7.94 SU		EPA 150.2
Specific Conductance (Field)	689 umho/cm		SM2510B
Temperature	25.783 °C		SM2550B(2)
Turbidity (Hach)	35.9 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: 702115	Result	Reporting Limit	Method
Phosphorus, ortho	< 0.002 mg/L	0.002	EPA 365.1

SiteID: WWL-05-0021 Sample Date: 7/7/2020 IDEM Sample #: AB41894
 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	203.5 %		ASTM D888-09(C)
DO	15.05 mg/L		ASTM D888-09(C)
pH (Field)	8.57 SU		EPA 150.2
Specific Conductance (Field)	547 umho/cm		SM2510B
Temperature	31.302 °C		SM2550B(2)
Turbidity (Hach)	36.7 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

Lab ID #: 50261918014	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	159 mg/L	2	SM2320B
Chloride	42.8 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	221 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	61 mg/L	16.7	SM2540D
Solids, Total (TS)	361 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	293 mg/L	10	SM2540C
Sulfate	41.3 mg/L	2.5	EPA 300.0
Aluminum (Dissolved)	< 0.01 mg/L	0.01	EPA 200.8
Aluminum (Total)	0.72 mg/L	0.01	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	1.7 ug/L	1	EPA 200.8
Arsenic (Dissolved)	1.3 ug/L	1	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	56.2 mg/L	1	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	1.9 ug/L	1	EPA 200.8
Copper (Total)	4 ug/L	1	EPA 200.8
Lead (Total)	1.4 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Magnesium (Total)	19.7 mg/L	1	EPA 200.7
Nickel (Total)	2.8 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.6 ug/L	0.5	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
Zinc (Total)	6.4 ug/L	3	EPA 200.8
COD	29.2 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.3 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.084 mg/L	0.05	EPA 365.1
TKN	1.5 mg/L	0.5	EPA 351.2
TOC	3.3 mg/L	1	SM5310C

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

SiteID: WWL-05-0021 **Sample Date:** 8/11/2020 **IDEM Sample #:** AB42297
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: HOBO #10
 SN: 10947139

Lab ID #:	Result	Reporting Limit	Method
% Sat	116.2 %		ASTM D888-09(C)
DO	9.42 mg/L		ASTM D888-09(C)
pH (Field)	8.04 SU		EPA 150.2
Specific Conductance (Field)	587 umho/cm		SM2510B
Temperature	25.978 °C		SM2550B(2)
Turbidity (Hach)	77.5 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: WWL-05-0021 **Sample Date:** 8/25/2020 **IDEM Sample #:** AB42315
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Pickup
 HOBO #10
 SN: 10947139

Lab ID #:	Result	Reporting Limit	Method
% Sat	148 %		ASTM D888-09(C)
DO	11.63 mg/L		ASTM D888-09(C)
pH (Field)	8.1 SU		EPA 150.2
Specific Conductance (Field)	671 umho/cm		SM2510B
Temperature	27.683 °C		SM2550B(2)
Turbidity (Hach)	40.6 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #:	Result	Reporting Limit	Method
707255	Phosphorus, ortho	0.0024 mg/L	0.002 EPA 365.1

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

SiteID: WWL-05-0021 Sample Date: 9/8/2020 IDEM Sample #: AB41949
 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	168 %		ASTM D888-09(C)
DO	13.55 mg/L		ASTM D888-09(C)
pH (Field)	8.25 SU		EPA 150.2
Specific Conductance (Field)	862 umho/cm		SM2510B
Temperature	26.158 °C		SM2550B(2)
Turbidity (Hach)	43.4 NTU		EPA 180.1
Air Temp	6 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 #: 50266972003	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	226 mg/L	2	SM2320B
Chloride	88.3 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.023 mg/L	0.023	EPA 335.4
Hardness (as CaCO3)	286 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	62 mg/L	8.3	SM2540D
Solids, Total (TS)	520 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	457 mg/L	10	SM2540C
Sulfate	89.4 mg/L	2.5	EPA 300.0
Aluminum (Total)	0.75 mg/L	0.01	EPA 200.8
Aluminum (Dissolved)	< 0.01 mg/L	0.01	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	1.1 ug/L	1	EPA 200.8
Arsenic (Total)	1.7 ug/L	1	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	70.6 mg/L	1	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.3 ug/L	1	EPA 200.8
Copper (Dissolved)	1.3 ug/L	1	EPA 200.8
Lead (Total)	1.1 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Magnesium (Total)	26.8 mg/L	1	EPA 200.7
Nickel (Total)	4.4 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	3 ug/L	0.5	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Selenium (Dissolved)	1.1 ug/L	1	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
Zinc (Total)	5.4 ug/L	3	EPA 200.8
COD	15.2 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.66 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.05 mg/L	0.05	EPA 365.1
TKN	0.93 mg/L	0.5	EPA 351.2
TOC	3.1 mg/L	1	SM5310C

Lab ID #: AB41949 peri	Result	Reporting Limit	Method
Chlorophyll a	1425.33 ug/L	0.95	EPA 445M
Periphyton Algal Biomass	154.51 mg/M2	0.95	EPA 445M

Lab ID #: AB41949 phy	Result	Reporting Limit	Method
Phytoplankton Chlorophyll-a	83.65 ug/L	0.95	EPA 445M

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

SiteID: WWL-05-0021 **Sample Date:** 10/5/2020 **IDEM Sample #:** AB42267
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	99.6 %		ASTM D888-09(C)
DO	10.28 mg/L		ASTM D888-09(C)
pH (Field)	8.06 SU		EPA 150.2
Specific Conductance (Field)	969 umho/cm		SM2510B
Temperature	14.1 °C		SM2550B(2)
Turbidity (Hach)	19.7 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: WWL-05-0021 **Sample Date:** 11/3/2020 **IDEM Sample #:** AB42335
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	92.1 %		ASTM D888-09(C)
DO	10.56 mg/L		ASTM D888-09(C)
pH (Field)	8.13 SU		EPA 150.2
Specific Conductance (Field)	588 umho/cm		SM2510B
Temperature	9.256 °C		SM2550B(2)
Turbidity (Hach)	50.2 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 712854	Result	Reporting Limit	Method
Phosphorus, ortho	0.088 mg/L	0.002	EPA 365.1

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: WWL-08-0006 **USGS Hydrologic Unit:** 051202020803
Stream Name: West Fork White River **County:** Knox
Description: Riverdale Road **Latitude:** 38 48 54.04083 **Longitude:** -87 13 55.30737
Drainage: 4950.045 **Site Number:** 20WR055

SiteID: WWL-08-0006 **Sample Date:** 6/23/2020 **IDEM Sample #:** AB42909
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: sampled from ephemeral stream mouth

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	105.6 %		ASTM D888-09(C)
DO	8.6 mg/L		ASTM D888-09(C)
pH (Field)	8.04 SU		EPA 150.2
Specific Conductance (Field)	723 umho/cm		SM2510B
Temperature	25.7 °C		SM2550B(2)
Turbidity (Hach)	79 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	2 Lookup		Observation

<u>Lab ID #:</u> 2006012-09	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	220 mg/L	20	SM2320B
Chloride	53.5 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	296 mg/L	2.07	SM2340B
Sulfate	85.2 mg/L	0.12	EPA 300.0
Aluminum (Total)	2.15 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	73.9 mg/L	0.5	EPA 200.7
Chromium (Total)	2.68 ug/L	2	EPA 200.8
Copper (Total)	3.51 ug/L	2	EPA 200.8
Lead (Total)	2.36 ug/L	0.5	EPA 200.8
Magnesium (Total)	27.1 mg/L	0.2	EPA 200.7
Nickel (Total)	4.55 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	12.9 ug/L	10	EPA 200.8

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

Lab ID #: 2006012-09RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.18 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50260783009	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	10.4 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.1 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.1 mg/L	0.05	EPA 365.1
TKN	1.1 mg/L	0.5	EPA 351.2
TOC	2.6 mg/L	1	SM5310C

SiteID: WWL-08-0006 **Sample Date:** 7/21/2020 **IDEM Sample #:** AB43302
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: pictures: u/s-271, d/s-272

Lab ID #:	Result	Reporting Limit	Method
% Sat	60.7 %		ASTM D888-09(C)
DO	4.93 mg/L		ASTM D888-09(C)
pH (Field)	7.99 SU		EPA 150.2
Specific Conductance (Field)	386.5 umho/cm		SM2510B
Temperature	26.5 °C		SM2550B(2)
Turbidity (Hach)	287 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

**Indiana Department of Environmental Management
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Lab ID #: 2007016-10	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	99 mg/L	20	SM2320B
Chloride	23.2 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	169 mg/L	2.07	SM2340B
Sulfate	54.1 mg/L	0.12	EPA 300.0
Aluminum (Total)	5.45 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	3.64 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	44.2 mg/L	0.5	EPA 200.7
Chromium (Total)	7.03 ug/L	2	EPA 200.8
Copper (Total)	7.85 ug/L	2	EPA 200.8
Lead (Total)	6.86 ug/L	0.5	EPA 200.8
Magnesium (Total)	14.2 mg/L	0.2	EPA 200.7
Nickel (Total)	9.43 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	29 ug/L	10	EPA 200.8

Lab ID #: 2007016-10RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.22 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50262925010	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	33.2 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.17 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.5 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.73 mg/L	0.05	EPA 365.1
TKN	2.7 mg/L	0.5	EPA 351.2
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: WWL-08-0006 **Sample Date:** 8/27/2020 **IDEM Sample #:** AB42831
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	97.1 %		ASTM D888-09(C)
DO	7.66 mg/L		ASTM D888-09(C)
pH (Field)	8.05 SU		EPA 150.2
Specific Conductance (Field)	713 umho/cm		SM2510B
Temperature	27.4 °C		SM2550B(2)
Turbidity (Hach)	32.1 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

SiteID: WWL-08-0006 **Sample Date:** 11/2/2020 **IDEM Sample #:** AB44490
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	10.41 mg/L		ASTM D888-09(C)
pH (Field)	8.05 SU		EPA 150.2
Specific Conductance (Field)	594 umho/cm		SM2510B
Temperature	9.8 °C		SM2550B(2)
Turbidity (Hach)	80.5 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

**Indiana Department of Environmental Management
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Lab ID #: 2011004-04	Result	Reporting Limit	Method
Hardness (as CaCO3)	230 mg/L	2.07	SM2340B
Aluminum (Total)	0.99 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.69 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	60.6 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3.55 ug/L	2	EPA 200.8
Lead (Total)	1.78 ug/L	0.5	EPA 200.8
Magnesium (Total)	19 mg/L	0.2	EPA 200.7
Nickel (Total)	3.44 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	11.7 ug/L	10	EPA 200.8

Lab ID #: 2011004-04RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.95 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50272163004	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	153 mg/L	2	SM2320B
Chloride	56.2 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	98 mg/L	12.5	SM2540D
Solids, Total (TS)	386 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	335 mg/L	10	SM2540C
Sulfate	67.6 mg/L	2.5	EPA 300.0
COD	20.4 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.4 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.15 mg/L	0.05	EPA 365.1
TKN	0.96 mg/L	0.5	EPA 351.2
TOC	3.7 mg/L	1	SM5310C

**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: WWL-08-0007 **USGS Hydrologic Unit:** 051202020803
Stream Name: West Fork White River **County:** Knox
Description: CR 650 North **Latitude:** 38 44 54.28458 **Longitude:** -87 14 14.08616
Drainage: 4982.507 **Site Number:** 20WR056

SiteID: WWL-08-0007 **Sample Date:** 6/23/2020 **IDEM Sample #:** AB42908
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: huge sand island/bar

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	109 %		ASTM D888-09(C)
DO	8.9 mg/L		ASTM D888-09(C)
pH (Field)	8.19 SU		EPA 150.2
Specific Conductance (Field)	719 umho/cm		SM2510B
Temperature	25.5 °C		SM2550B(2)
Turbidity (Hach)	49.3 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	3 Lookup		Observation

<u>Lab ID #:</u> 2006012-10	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	230 mg/L	20	SM2320B
Chloride	56.8 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	291 mg/L	2.07	SM2340B
Sulfate	74.4 mg/L	0.12	EPA 300.0
Aluminum (Total)	1.11 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	73.6 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.42 ug/L	2	EPA 200.8
Lead (Total)	1.46 ug/L	0.5	EPA 200.8
Magnesium (Total)	26.1 mg/L	0.2	EPA 200.7
Nickel (Total)	3.67 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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Lab ID #: 2006012-10RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.12 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50260783010	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	13.1 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.89 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.063 mg/L	0.05	EPA 365.1
TKN	0.58 mg/L	0.5	EPA 351.2
TOC	2.4 mg/L	1	SM5310C

SiteID: WWL-08-0007 **Sample Date:** 7/21/2020 **IDEM Sample #:** AB43303
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: pictures: u/s-273, d/s-274

Lab ID #:	Result	Reporting Limit	Method
% Sat	57.2 %		ASTM D888-09(C)
DO	4.5 mg/L		ASTM D888-09(C)
pH (Field)	7.81 SU		EPA 150.2
Specific Conductance (Field)	379.2 umho/cm		SM2510B
Temperature	27.4 °C		SM2550B(2)
Turbidity (Hach)	226 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	2 Lookup		Observation

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

Lab ID #: 2007016-11	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	100 mg/L	20	SM2320B
Chloride	28.2 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	151 mg/L	2.07	SM2340B
Sulfate	39.3 mg/L	0.12	EPA 300.0
Aluminum (Total)	4.55 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	3.25 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	40 mg/L	0.5	EPA 200.7
Chromium (Total)	5.9 ug/L	2	EPA 200.8
Copper (Total)	6.21 ug/L	2	EPA 200.8
Lead (Total)	5.05 ug/L	0.5	EPA 200.8
Magnesium (Total)	12.5 mg/L	0.2	EPA 200.7
Nickel (Total)	7.57 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	22.9 ug/L	10	EPA 200.8

Lab ID #: 2007016-11RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.93 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50262925011	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	20.1 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.18 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.4 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.42 mg/L	0.05	EPA 365.1
TKN	1.9 mg/L	0.5	EPA 351.2
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: WWL-08-0007 **Sample Date:** 9/8/2020 **IDEM Sample #:** AB42830
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	119.4 %		ASTM D888-09(C)
DO	9.92 mg/L		ASTM D888-09(C)
pH (Field)	8.06 SU		EPA 150.2
Specific Conductance (Field)	847 umho/cm		SM2510B
Temperature	24.6 °C		SM2550B(2)
Turbidity (Hach)	27.1 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: WWL-08-0007 **Sample Date:** 11/2/2020 **IDEM Sample #:** AB44491
Water Flow Type Eddy **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	90.8 %		ASTM D888-09(C)
DO	10.24 mg/L		ASTM D888-09(C)
pH (Field)	8.05 SU		EPA 150.2
Specific Conductance (Field)	578 umho/cm		SM2510B
Temperature	10 °C		SM2550B(2)
Turbidity (Hach)	52.6 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

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

Lab ID #: 2011004-05	Result	Reporting Limit	Method
Hardness (as CaCO3)	212 mg/L	2.07	SM2340B
Aluminum (Total)	0.506 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.23 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	57.6 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3.4 ug/L	2	EPA 200.8
Lead (Total)	1.54 ug/L	0.5	EPA 200.8
Magnesium (Total)	16.6 mg/L	0.2	EPA 200.7
Nickel (Total)	3.01 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	10.3 ug/L	10	EPA 200.8

Lab ID #: 2011004-05RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.97 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50272163005	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	152 mg/L	2	SM2320B
Chloride	57.2 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	60 mg/L	12.5	SM2540D
Solids, Total (TS)	331 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	320 mg/L	10	SM2540C
Sulfate	56.2 mg/L	2.5	EPA 300.0
COD	18.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.5 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.12 mg/L	0.05	EPA 365.1
TKN	0.76 mg/L	0.5	EPA 351.2
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**

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: WWL-08-0008 **USGS Hydrologic Unit:** 051202020804
Stream Name: West Fork White River **County:** Daviess
Description: Apraw Road **Latitude:** 38 42 32.51907 **Longitude:** -87 15 22.39379
Drainage: 5061.386 **Site Number:** INRB20-166

SiteID: WWL-08-0008 **Sample Date:** 5/20/2020 **IDEM Sample #:** AB41840
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	68.3 %		ASTM D888-09(C)
DO	6.83 mg/L		ASTM D888-09(C)
pH (Field)	7.68 SU		EPA 150.2
Specific Conductance (Field)	286.4 umho/cm		SM2510B
Temperature	17.474 °C		SM2550B(2)
Turbidity (Hach)	66.7 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 #: 50257770015	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	81.5 mg/L	2	SM2320B
Chloride	16.1 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	120 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	34 mg/L	6.2	SM2540D
Solids, Total (TS)	201 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	170 mg/L	10	SM2540C
Sulfate	23.2 mg/L	2.5	EPA 300.0
Aluminum (Dissolved)	0.13 mg/L	0.01	EPA 200.8
Aluminum (Total)	1.8 mg/L	0.05	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	1.6 ug/L	1	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	33.6 mg/L	1	EPA 200.7
Chromium (Total)	2.2 ug/L	2	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3.3 ug/L	1	EPA 200.8
Copper (Dissolved)	1.7 ug/L	1	EPA 200.8
Lead (Total)	1.8 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Magnesium (Total)	8.7 mg/L	1	EPA 200.7
Nickel (Total)	3.2 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.5 ug/L	0.5	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Total)	8.5 ug/L	3	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
COD	20.2 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.11 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.7 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.15 mg/L	0.05	EPA 365.1
TKN	0.52 mg/L	0.5	EPA 351.2
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: WWL-08-0008 Sample Date: 6/22/2020 IDEM Sample #: AB42278
 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	141.5 %		ASTM D888-09(C)
DO	11.29 mg/L		ASTM D888-09(C)
pH (Field)	8.25 SU		EPA 150.2
Specific Conductance (Field)	712 umho/cm		SM2510B
Temperature	26.974 °C		SM2550B(2)
Turbidity (Hach)	97 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 702116	Result	Reporting Limit	Method
Phosphorus, ortho	< 0.002 mg/L	0.002	EPA 365.1

SiteID: WWL-08-0008 Sample Date: 7/7/2020 IDEM Sample #: AB41895
 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	184.6 %		ASTM D888-09(C)
DO	13.59 mg/L		ASTM D888-09(C)
pH (Field)	8.68 SU		EPA 150.2
Specific Conductance (Field)	549 umho/cm		SM2510B
Temperature	31.38 °C		SM2550B(2)
Turbidity (Hach)	68.4 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

Lab ID #: 50261918015	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	164 mg/L	2	SM2320B
Chloride	38.8 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	233 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	92 mg/L	16.7	SM2540D
Solids, Total (TS)	389 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	301 mg/L	10	SM2540C
Sulfate	44.1 mg/L	2.5	EPA 300.0
Aluminum (Total)	1.2 mg/L	0.02	EPA 200.8
Aluminum (Dissolved)	< 0.01 mg/L	0.01	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	1.4 ug/L	1	EPA 200.8
Arsenic (Total)	1.9 ug/L	1	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	60.3 mg/L	1	EPA 200.7
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	1.8 ug/L	1	EPA 200.8
Copper (Total)	3.8 ug/L	1	EPA 200.8
Lead (Total)	1.9 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Magnesium (Total)	20.1 mg/L	1	EPA 200.7
Nickel (Total)	3.4 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.5 ug/L	0.5	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
Zinc (Total)	8.3 ug/L	3	EPA 200.8
COD	32.4 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.4 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.089 mg/L	0.05	EPA 365.1
TKN	1.4 mg/L	0.5	EPA 351.2
TOC	3.3 mg/L	1	SM5310C

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

SiteID: WWL-08-0008 **Sample Date:** 8/11/2020 **IDEM Sample #:** AB42298
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: HOBO #9
 SN: 10947138

Lab ID #:	Result	Reporting Limit	Method
% Sat	124.6 %		ASTM D888-09(C)
DO	10.04 mg/L		ASTM D888-09(C)
pH (Field)	8.12 SU		EPA 150.2
Specific Conductance (Field)	603 umho/cm		SM2510B
Temperature	26.377 °C		SM2550B(2)
Turbidity (Hach)	74.9 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: WWL-08-0008 **Sample Date:** 8/25/2020 **IDEM Sample #:** AB42316
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Pickup
 HOBO #9
 SN: 10947138

Lab ID #:	Result	Reporting Limit	Method
% Sat	133.5 %		ASTM D888-09(C)
DO	10.46 mg/L		ASTM D888-09(C)
pH (Field)	8.13 SU		EPA 150.2
Specific Conductance (Field)	676 umho/cm		SM2510B
Temperature	27.867 °C		SM2550B(2)
Turbidity (Hach)	53.6 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 707256	Result	Reporting Limit	Method
Phosphorus, ortho	0.003 mg/L	0.002	EPA 365.1

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

SiteID: WWL-08-0008 Sample Date: 8/27/2020 IDEM Sample #: AB42268
 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	97.8 %		ASTM D888-09(C)
DO	7.69 mg/L		ASTM D888-09(C)
pH (Field)	8.09 SU		EPA 150.2
Specific Conductance (Field)	698 umho/cm		SM2510B
Temperature	27.7 °C		SM2550B(2)
Turbidity (Hach)	34.5 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: WWL-08-0008 Sample Date: 9/8/2020 IDEM Sample #: AB41950
 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	151.3 %		ASTM D888-09(C)
DO	12.34 mg/L		ASTM D888-09(C)
pH (Field)	8.3 SU		EPA 150.2
Specific Conductance (Field)	858 umho/cm		SM2510B
Temperature	25.578 °C		SM2550B(2)
Turbidity (Hach)	51.5 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB41950 peri	Result	Reporting Limit	Method
Chlorophyll a	614.43 ug/L	0.95	EPA 445M
Periphyton Algal Biomass	66.61 mg/M2	0.95	EPA 445M

Lab ID #: AB41950 phy	Result	Reporting Limit	Method
Phytoplankton Chlorophyll-a	85.23 ug/L	0.95	EPA 445M

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

SiteID: WWL-08-0008 Sample Date: 10/5/2020 IDEM Sample #: AB44406
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	126 %		ASTM D888-09(C)
DO	12.47 mg/L		ASTM D888-09(C)
pH (Field)	8.48 SU		EPA 150.2
Specific Conductance (Field)	951 umho/cm		SM2510B
Temperature	15.743 °C		SM2550B(2)
Turbidity (Hach)	22.3 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

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

Lab ID #: 50269557008	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	235 mg/L	2	SM2320B
Chloride	93 mg/L	5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	309 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	26 mg/L	5	SM2540D
Solids, Total (TS)	601 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	547 mg/L	10	SM2540C
Sulfate	116 mg/L	5	EPA 300.0
Aluminum (Total)	0.29 mg/L	0.01	EPA 200.8
Aluminum (Dissolved)	0.02 mg/L	0.01	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	1.2 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 1 ug/L	1	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	78.6 mg/L	1	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 1 ug/L	1	EPA 200.8
Copper (Total)	1.5 ug/L	1	EPA 200.8
Lead (Total)	< 1 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Magnesium (Total)	27.4 mg/L	1	EPA 200.7
Nickel (Total)	3.9 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	3.7 ug/L	0.5	EPA 200.8
Selenium (Dissolved)	1.2 ug/L	1	EPA 200.8
Selenium (Total)	1.4 ug/L	1	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Total)	3.1 ug/L	3	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
COD	25.4 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.3 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.05 mg/L	0.05	EPA 365.1
TKN	0.8 mg/L	0.5	EPA 351.2
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: WWL-08-0008

Sample Date: 11/3/2020

IDEM Sample #: AB42336

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	91.3 %		ASTM D888-09(C)
DO	10.41 mg/L		ASTM D888-09(C)
pH (Field)	8.1 SU		EPA 150.2
Specific Conductance (Field)	587 umho/cm		SM2510B
Temperature	9.516 °C		SM2550B(2)
Turbidity (Hach)	50 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 712855	Result	Reporting Limit	Method
Phosphorus, ortho	0.095 mg/L	0.002	EPA 365.1

Weather Code Definitions			
SC Sky Conditions	WD Wind Direction	WS Wind Strength	AT 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: WWL-09-0007 **USGS Hydrologic Unit:** 051202020903
Stream Name: West Fork White River **County:** Daviess
Description: CR 300 South **Latitude:** 38 37 0.09613 **Longitude:** -87 14 24.08858
Drainage: 5248.043 **Site Number:** 20WR058

SiteID: WWL-09-0007 **Sample Date:** 6/23/2020 **IDEM Sample #:** AB42907
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 %		ASTM D888-09(C)
DO	8.04 mg/L		ASTM D888-09(C)
pH (Field)	8.2 SU		EPA 150.2
Specific Conductance (Field)	723 umho/cm		SM2510B
Temperature	25.3 °C		SM2550B(2)
Turbidity (Hach)	56.9 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	3 Lookup		Observation

<u>Lab ID #:</u> 2006012-11	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	230 mg/L	20	SM2320B
Chloride	55.9 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	289 mg/L	2.07	SM2340B
Sulfate	73.5 mg/L	0.12	EPA 300.0
Aluminum (Total)	1.23 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	73 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.48 ug/L	2	EPA 200.8
Lead (Total)	1.48 ug/L	0.5	EPA 200.8
Magnesium (Total)	26 mg/L	0.2	EPA 200.7
Nickel (Total)	3.72 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006012-11RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.15 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50260783011	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	11.9 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.93 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.071 mg/L	0.05	EPA 365.1
TKN	1 mg/L	0.5	EPA 351.2
TOC	2.3 mg/L	1	SM5310C

SiteID: WWL-09-0007 **Sample Date:** 7/21/2020 **IDEM Sample #:** AB43304
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: pictures: u/s-275, d/s-276

Lab ID #:	Result	Reporting Limit	Method
% Sat	69.6 %		ASTM D888-09(C)
DO	5.34 mg/L		ASTM D888-09(C)
pH (Field)	7.85 SU		EPA 150.2
Specific Conductance (Field)	553 umho/cm		SM2510B
Temperature	29.1 °C		SM2550B(2)
Turbidity (Hach)	144 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	18 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 #: 2007016-12	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	140 mg/L	20	SM2320B
Chloride	47.5 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	223 mg/L	2.07	SM2340B
Sulfate	63.5 mg/L	0.12	EPA 300.0
Aluminum (Total)	5.05 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	3.45 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	56.1 mg/L	0.5	EPA 200.7
Chromium (Total)	6.61 ug/L	2	EPA 200.8
Copper (Total)	7.02 ug/L	2	EPA 200.8
Lead (Total)	5.42 ug/L	0.5	EPA 200.8
Magnesium (Total)	20 mg/L	0.2	EPA 200.7
Nickel (Total)	8.7 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	26.9 ug/L	10	EPA 200.8

Lab ID #: 2007016-12RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.2 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50262925012	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	49.3 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.11 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.57 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.38 mg/L	0.05	EPA 365.1
TKN	1.7 mg/L	0.5	EPA 351.2
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: WWL-09-0007 **Sample Date:** 8/25/2020 **IDEM Sample #:** AB42833
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	109.7 %		ASTM D888-09(C)
DO	8.7 mg/L		ASTM D888-09(C)
pH (Field)	8.07 SU		EPA 150.2
Specific Conductance (Field)	687 umho/cm		SM2510B
Temperature	27.1 °C		SM2550B(2)
Turbidity (Hach)	44.9 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

SiteID: WWL-09-0007 **Sample Date:** 11/2/2020 **IDEM Sample #:** AB44492
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	91.4 %		ASTM D888-09(C)
DO	10.23 mg/L		ASTM D888-09(C)
pH (Field)	8.01 SU		EPA 150.2
Specific Conductance (Field)	673 umho/cm		SM2510B
Temperature	10.3 °C		SM2550B(2)
Turbidity (Hach)	65.7 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

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

Lab ID #: 2011004-06	Result	Reporting Limit	Method
Hardness (as CaCO3)	229 mg/L	2.07	SM2340B
Aluminum (Total)	1.1 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.82 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	62.2 mg/L	0.5	EPA 200.7
Chromium (Total)	2.05 ug/L	2	EPA 200.8
Copper (Total)	3.65 ug/L	2	EPA 200.8
Lead (Total)	1.79 ug/L	0.5	EPA 200.8
Magnesium (Total)	18 mg/L	0.2	EPA 200.7
Nickel (Total)	3.98 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	13.5 ug/L	10	EPA 200.8

Lab ID #: 2011004-06RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.45 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50272163006	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	160 mg/L	2	SM2320B
Chloride	74.6 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	100 mg/L	12.5	SM2540D
Solids, Total (TS)	439 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	382 mg/L	10	SM2540C
Sulfate	77.8 mg/L	2.5	EPA 300.0
COD	18.4 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.8 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.19 mg/L	0.05	EPA 365.1
TKN	0.81 mg/L	0.5	EPA 351.2
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**

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: WWL-09-0008 **USGS Hydrologic Unit:** 051202020907
Stream Name: West Fork White River **County:** Daviess
Description: CR 375 West **Latitude:** 38 33 31.95471 **Longitude:** -87 14 19.92133
Drainage: 5292.196 **Site Number:** 20WR059

SiteID: WWL-09-0008 **Sample Date:** 6/22/2020 **IDEM Sample #:** AB42915
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	115.5 %		ASTM D888-09(C)
DO	9.41 mg/L		ASTM D888-09(C)
pH (Field)	8.2 SU		EPA 150.2
Specific Conductance (Field)	715 umho/cm		SM2510B
Temperature	25.7 °C		SM2550B(2)
Turbidity (Hach)	39.2 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> 2006012-12	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	240 mg/L	20	SM2320B
Chloride	52.7 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	290 mg/L	2.07	SM2340B
Sulfate	66.3 mg/L	0.12	EPA 300.0
Aluminum (Total)	1.05 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	73.1 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.25 ug/L	2	EPA 200.8
Lead (Total)	1.22 ug/L	0.5	EPA 200.8
Magnesium (Total)	26.1 mg/L	0.2	EPA 200.7
Nickel (Total)	3.44 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006012-12RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2.12 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50260783012	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	12.1 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.94 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.074 mg/L	0.05	EPA 365.1
TKN	1.1 mg/L	0.5	EPA 351.2
TOC	2.4 mg/L	1	SM5310C

SiteID: WWL-09-0008 **Sample Date:** 7/20/2020 **IDEM Sample #:** AB43305
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: pictures: u/s-265, d/s-266

Lab ID #:	Result	Reporting Limit	Method
% Sat	127.8 %		ASTM D888-09(C)
DO	9.77 mg/L		ASTM D888-09(C)
pH (Field)	8.41 SU		EPA 150.2
Specific Conductance (Field)	585 umho/cm		SM2510B
Temperature	29.3 °C		SM2550B(2)
Turbidity (Hach)	51.8 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	2 Lookup		Observation

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

Lab ID #: 2007016-13	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	160 mg/L	20	SM2320B
Chloride	49.7 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	213 mg/L	2.07	SM2340B
Sulfate	60.4 mg/L	0.12	EPA 300.0
Aluminum (Total)	1.56 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.03 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	50.5 mg/L	0.5	EPA 200.7
Chromium (Total)	2.55 ug/L	2	EPA 200.8
Copper (Total)	4.11 ug/L	2	EPA 200.8
Lead (Total)	1.68 ug/L	0.5	EPA 200.8
Magnesium (Total)	21.2 mg/L	0.2	EPA 200.7
Nickel (Total)	4.08 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007016-13RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.95 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50262925013	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	23.3 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	< 0.1 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.2 mg/L	0.05	EPA 365.1
TKN	0.78 mg/L	0.5	EPA 351.2
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: WWL-09-0008 **Sample Date:** 8/26/2020 **IDEM Sample #:** AB42832
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Water chem taken 700m d/s of "x"

Lab ID #:	Result	Reporting Limit	Method
% Sat	98.3 %		ASTM D888-09(C)
DO	7.73 mg/L		ASTM D888-09(C)
pH (Field)	8.01 SU		EPA 150.2
Specific Conductance (Field)	652 umho/cm		SM2510B
Temperature	27.6 °C		SM2550B(2)
Turbidity (Hach)	42.5 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

SiteID: WWL-09-0008 **Sample Date:** 11/3/2020 **IDEM Sample #:** AB44493
Water Flow Type Run **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	90.9 %		ASTM D888-09(C)
DO	10.39 mg/L		ASTM D888-09(C)
pH (Field)	8.04 SU		EPA 150.2
Specific Conductance (Field)	570 umho/cm		SM2510B
Temperature	9.4 °C		SM2550B(2)
Turbidity (Hach)	45.7 NTU		EPA 180.1
Air Temp	3 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 #: 2011004-09	Result	Reporting Limit	Method
Hardness (as CaCO3)	212 mg/L	2.07	SM2340B
Aluminum (Total)	0.635 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.72 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	57.3 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3.23 ug/L	2	EPA 200.8
Lead (Total)	1.62 ug/L	0.5	EPA 200.8
Magnesium (Total)	16.8 mg/L	0.2	EPA 200.7
Nickel (Total)	3.12 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2011004-09RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.93 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50272163009	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	152 mg/L	2	SM2320B
Chloride	57.3 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	79 mg/L	5	SM2540D
Solids, Total (TS)	390 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	323 mg/L	10	SM2540C
Sulfate	54.8 mg/L	2.5	EPA 300.0
COD	17.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.6 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.19 mg/L	0.05	EPA 365.1
TKN	0.83 mg/L	0.5	EPA 351.2
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**

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: WWL-10-0054 **USGS Hydrologic Unit:** 051202021001
Stream Name: White River **County:** Pike
Description: Petersburg Public Access Site **Latitude:** 38 30 44.57841 **Longitude:** -87 17 18.43216
Drainage: 11118.014 **Site Number:** 20WR060

SiteID: WWL-10-0054 **Sample Date:** 6/22/2020 **IDEM Sample #:** AB42906
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	135 %		ASTM D888-09(C)
DO	10.68 mg/L		ASTM D888-09(C)
pH (Field)	8.25 SU		EPA 150.2
Specific Conductance (Field)	135.1 umho/cm		SM2510B
Temperature	27.4 °C		SM2550B(2)
Turbidity (Hach)	44.7 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	7 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	3 Lookup		Observation

Lab ID #: 2006012-13	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	200 mg/L	20	SM2320B
Chloride	32.3 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	233 mg/L	2.07	SM2340B
Sulfate	45.7 mg/L	0.12	EPA 300.0
Aluminum (Total)	1.22 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	59.5 mg/L	0.5	EPA 200.7
Chromium (Total)	2.13 ug/L	2	EPA 200.8
Copper (Total)	2.24 ug/L	2	EPA 200.8
Lead (Total)	1.23 ug/L	0.5	EPA 200.8
Magnesium (Total)	20.6 mg/L	0.2	EPA 200.7
Nickel (Total)	2.91 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006012-13RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.47 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50260783013	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	15 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.64 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.055 mg/L	0.05	EPA 365.1
TKN	0.96 mg/L	0.5	EPA 351.2
TOC	2.5 mg/L	1	SM5310C

SiteID: WWL-10-0054 **Sample Date:** 7/20/2020 **IDEM Sample #:** AB43306
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: pictures: u/s-263, d/s-264

Lab ID #:	Result	Reporting Limit	Method
% Sat	135.6 %		ASTM D888-09(C)
DO	10.17 mg/L		ASTM D888-09(C)
pH (Field)	8.35 SU		EPA 150.2
Specific Conductance (Field)	524 umho/cm		SM2510B
Temperature	30.3 °C		SM2550B(2)
Turbidity (Hach)	31.3 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	0 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 #: 2007016-14	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	170 mg/L	20	SM2320B
Chloride	36.1 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	206 mg/L	2.07	SM2340B
Sulfate	46.2 mg/L	0.12	EPA 300.0
Aluminum (Total)	0.879 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	50.8 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.12 ug/L	2	EPA 200.8
Lead (Total)	0.97 ug/L	0.5	EPA 200.8
Magnesium (Total)	19.2 mg/L	0.2	EPA 200.7
Nickel (Total)	2.73 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007016-14RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.72 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50262925014	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	19.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.22 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.15 mg/L	0.05	EPA 365.1
TKN	1.1 mg/L	0.5	EPA 351.2
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: WWL-10-0054 **Sample Date:** 8/26/2020 **IDEM Sample #:** AB42797
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	125.5 %		ASTM D888-09(C)
DO	9.67 mg/L		ASTM D888-09(C)
pH (Field)	8.27 SU		EPA 150.2
Specific Conductance (Field)	535 umho/cm		SM2510B
Temperature	28.8 °C		SM2550B(2)
Turbidity (Hach)	44.8 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: WWL-10-0054 **Sample Date:** 11/3/2020 **IDEM Sample #:** AB44494
Water Flow Type Run **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	83 %		ASTM D888-09(C)
DO	9.35 mg/L		ASTM D888-09(C)
pH (Field)	7.85 SU		EPA 150.2
Specific Conductance (Field)	405 umho/cm		SM2510B
Temperature	10 °C		SM2550B(2)
Turbidity (Hach)	69.3 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

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

Lab ID #: 2011004-10	Result	Reporting Limit	Method
Hardness (as CaCO3)	160 mg/L	2.07	SM2340B
Aluminum (Total)	1.17 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.62 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	44.7 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3.27 ug/L	2	EPA 200.8
Lead (Total)	1.73 ug/L	0.5	EPA 200.8
Magnesium (Total)	11.9 mg/L	0.2	EPA 200.7
Nickel (Total)	3.18 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2011004-10RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.76 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50272163010	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	118 mg/L	2	SM2320B
Chloride	32.3 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	78 mg/L	12.5	SM2540D
Solids, Total (TS)	281 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	229 mg/L	10	SM2540C
Sulfate	33.7 mg/L	2.5	EPA 300.0
COD	21.5 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.3 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.16 mg/L	0.05	EPA 365.1
TKN	0.84 mg/L	0.5	EPA 351.2
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**

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: WWL-10-0048 **USGS Hydrologic Unit:** 051202021003
Stream Name: White River **County:** Pike
Description: River Road **Latitude:** 38 31 44.27189 **Longitude:** -87 20 6.75113
Drainage: 11143.899 **Site Number:** INRB20-022

SiteID: WWL-10-0048 **Sample Date:** 5/19/2020 **IDEM Sample #:** AB41845
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	62.9 %		ASTM D888-09(C)
DO	5.9 mg/L		ASTM D888-09(C)
pH (Field)	7.67 SU		EPA 150.2
Specific Conductance (Field)	301.1 umho/cm		SM2510B
Temperature	18.396 °C		SM2550B(2)
Turbidity (Hach)	412 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

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

Lab ID #: 50257770005	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	89.2 mg/L	2	SM2320B
Chloride	14.7 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	152 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	417 mg/L	35.7	SM2540D
Solids, Total (TS)	604 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	172 mg/L	20	SM2540C
Sulfate	25.3 mg/L	2.5	EPA 300.0
Aluminum (Dissolved)	0.22 mg/L	0.01	EPA 200.8
Aluminum (Total)	9.3 mg/L	0.2	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	4.3 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 1 ug/L	1	EPA 200.8
Cadmium (Total)	0.24 ug/L	0.2	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	40.6 mg/L	1	EPA 200.7
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Chromium (Total)	11.1 ug/L	2	EPA 200.8
Copper (Dissolved)	2.4 ug/L	1	EPA 200.8
Copper (Total)	11.7 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Lead (Total)	9.9 ug/L	1	EPA 200.8
Magnesium (Total)	12.4 mg/L	1	EPA 200.7
Nickel (Total)	12.7 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	2 ug/L	0.5	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
Zinc (Total)	44.8 ug/L	3	EPA 200.8
COD	37.2 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.17 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.9 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.5 mg/L	0.05	EPA 365.1
TKN	2.4 mg/L	0.5	EPA 351.2
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: WWL-10-0048 Sample Date: 6/22/2020 IDEM Sample #: AB42282
 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	127 %		ASTM D888-09(C)
DO	10.08 mg/L		ASTM D888-09(C)
pH (Field)	8.29 SU		EPA 150.2
Specific Conductance (Field)	518 umho/cm		SM2510B
Temperature	26.8 °C		SM2550B(2)
Turbidity (Hach)	87.9 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 702103	Result	Reporting Limit	Method
Phosphorus, ortho	0.0088 mg/L	0.002	EPA 365.1

SiteID: WWL-10-0048 Sample Date: 7/6/2020 IDEM Sample #: AB42012
 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	100.7 %		ASTM D888-09(C)
DO	7.59 mg/L		ASTM D888-09(C)
pH (Field)	8.15 SU		EPA 150.2
Specific Conductance (Field)	466 umho/cm		SM2510B
Temperature	30.1 °C		SM2550B(2)
Turbidity (Hach)	68.7 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 #: AB42012	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	55.6 MPN/100mL	1	SM9223B

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

SiteID: WWL-10-0048 **Sample Date:** 7/6/2020 **IDEM Sample #:** AB41900
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	104.4 %		ASTM D888-09(C)
DO	7.82 mg/L		ASTM D888-09(C)
pH (Field)	8.07 SU		EPA 150.2
Specific Conductance (Field)	472.1 umho/cm		SM2510B
Temperature	30.38 °C		SM2550B(2)
Turbidity (Hach)	62.7 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

Lab ID #: 50261918005	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	146 mg/L	2	SM2320B
Chloride	27.1 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	203 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	90 mg/L	12.5	SM2540D
Solids, Total (TS)	371 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	246 mg/L	10	SM2540C
Sulfate	31.2 mg/L	2.5	EPA 300.0
Aluminum (Total)	1.6 mg/L	0.02	EPA 200.8
Aluminum (Dissolved)	< 0.01 mg/L	0.01	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	1.8 ug/L	1	EPA 200.8
Arsenic (Dissolved)	1.2 ug/L	1	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	53.6 mg/L	1	EPA 200.7
Chromium (Total)	2.1 ug/L	2	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Total)	4.2 ug/L	1	EPA 200.8
Copper (Dissolved)	1.9 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Lead (Total)	1.9 ug/L	1	EPA 200.8
Magnesium (Total)	16.8 mg/L	1	EPA 200.7
Nickel (Dissolved)	1.3 ug/L	0.5	EPA 200.8
Nickel (Total)	3.4 ug/L	0.5	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Total)	8.4 ug/L	3	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
COD	21.3 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	3.1 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.17 mg/L	0.05	EPA 365.1
TKN	1.1 mg/L	0.5	EPA 351.2
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: WWL-10-0048 Sample Date: 7/13/2020 IDEM Sample #: AB42034
 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	139.2 %		ASTM D888-09(C)
DO	10.76 mg/L		ASTM D888-09(C)
pH (Field)	8.46 SU		EPA 150.2
Specific Conductance (Field)	514 umho/cm		SM2510B
Temperature	28.7 °C		SM2550B(2)
Turbidity (Hach)	66.8 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: AB42034	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	95.9 MPN/100mL	1	SM9223B

SiteID: WWL-10-0048 Sample Date: 7/20/2020 IDEM Sample #: AB42056
 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	129.6 %		ASTM D888-09(C)
DO	9.71 mg/L		ASTM D888-09(C)
pH (Field)	8.23 SU		EPA 150.2
Specific Conductance (Field)	512 umho/cm		SM2510B
Temperature	30.5 °C		SM2550B(2)
Turbidity (Hach)	52.8 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB42056	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	16 MPN/100mL	1	SM9223B

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

SiteID: WWL-10-0048 Sample Date: 7/27/2020 IDEM Sample #: AB42078
 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	104.6 %		ASTM D888-09(C)
DO	7.89 mg/L		ASTM D888-09(C)
pH (Field)	8.18 SU		EPA 150.2
Specific Conductance (Field)	520 umho/cm		SM2510B
Temperature	30.1 °C		SM2550B(2)
Turbidity (Hach)	67.9 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	3 Lookup		Observation

Lab ID #: AB42078	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	71.7 MPN/100mL	1	SM9223B

SiteID: WWL-10-0048 Sample Date: 8/3/2020 IDEM Sample #: AB42100
 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	68.9 %		ASTM D888-09(C)
DO	5.92 mg/L		ASTM D888-09(C)
pH (Field)	7.73 SU		EPA 150.2
Specific Conductance (Field)	237 umho/cm		SM2510B
Temperature	22.9 °C		SM2550B(2)
Turbidity (Hach)	192 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB42100	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	980.4 MPN/100mL	1	SM9223B

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

SiteID: WWL-10-0048 **Sample Date:** 8/10/2020 **IDEM Sample #:** AB42302
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: HOBO #4
 SN: 10932929

Lab ID #:	Result	Reporting Limit	Method
% Sat	117.2 %		ASTM D888-09(C)
DO	9.39 mg/L		ASTM D888-09(C)
pH (Field)	8.12 SU		EPA 150.2
Specific Conductance (Field)	408.5 umho/cm		SM2510B
Temperature	26.678 °C		SM2550B(2)
Turbidity (Hach)	46.7 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	2 Lookup		Observation

SiteID: WWL-10-0048 **Sample Date:** 8/24/2020 **IDEM Sample #:** AB42320
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Pickup
 HOBO #4
 SN: 10932929

Lab ID #:	Result	Reporting Limit	Method
% Sat	140.7 %		ASTM D888-09(C)
DO	11.01 mg/L		ASTM D888-09(C)
pH (Field)	8.46 SU		EPA 150.2
Specific Conductance (Field)	507 umho/cm		SM2510B
Temperature	28.127 °C		SM2550B(2)
Turbidity (Hach)	37.5 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 707244	Result	Reporting Limit	Method
Phosphorus, ortho	0.003 mg/L	0.002	EPA 365.1

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

SiteID: WWL-10-0048 **Sample Date:** 8/27/2020 **IDEM Sample #:** AB42124
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	108.2 %		ASTM D888-09(C)
DO	8.38 mg/L		ASTM D888-09(C)
pH (Field)	8.27 SU		EPA 150.2
Specific Conductance (Field)	502 umho/cm		SM2510B
Temperature	28.5 °C		SM2550B(2)
Turbidity (Hach)	36.1 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: WWL-10-0048 **Sample Date:** 10/6/2020 **IDEM Sample #:** AB41955
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	127.7 %		ASTM D888-09(C)
DO	12.44 mg/L		ASTM D888-09(C)
pH (Field)	8.44 SU		EPA 150.2
Specific Conductance (Field)	749 umho/cm		SM2510B
Temperature	16.527 °C		SM2550B(2)
Turbidity (Hach)	18 NTU		EPA 180.1
Air Temp	4 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 #: 50269557002	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	227 mg/L	2	SM2320B
Chloride	58.1 mg/L	5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	285 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	26 mg/L	5	SM2540D
Solids, Total (TS)	478 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	414 mg/L	10	SM2540C
Sulfate	76.6 mg/L	5	EPA 300.0
Aluminum (Dissolved)	< 0.01 mg/L	0.01	EPA 200.8
Aluminum (Total)	0.35 mg/L	0.01	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	1.1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 1 ug/L	1	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	71.9 mg/L	1	EPA 200.7
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 1 ug/L	1	EPA 200.8
Copper (Total)	1.3 ug/L	1	EPA 200.8
Lead (Total)	< 1 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Magnesium (Total)	25.6 mg/L	1	EPA 200.7
Nickel (Dissolved)	2.6 ug/L	0.5	EPA 200.8
Nickel (Total)	2.9 ug/L	0.5	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
Zinc (Total)	< 3 ug/L	3	EPA 200.8
COD	22.2 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.68 mg/L	0.1	EPA 353.2
Phosphorus, Total	< 0.05 mg/L	0.05	EPA 365.1
TKN	0.69 mg/L	0.5	EPA 351.2
TOC	2.2 mg/L	1	SM5310C

Lab ID #: AB41955 peri	Result	Reporting Limit	Method
Chlorophyll a	2965.08 ug/L	0.95	EPA 445M
Periphyton Algal Biomass	49.98 mg/M2	0.95	EPA 445M

Lab ID #: AB41955 phy	Result	Reporting Limit	Method
Phytoplankton Chlorophyll-a	50.11 ug/L	0.95	EPA 445M

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

SiteID: WWL-10-0048

Sample Date: 11/2/2020

IDEM Sample #: AB42340

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	82.4 %		ASTM D888-09(C)
DO	8.99 mg/L		ASTM D888-09(C)
pH (Field)	7.78 SU		EPA 150.2
Specific Conductance (Field)	418.1 umho/cm		SM2510B
Temperature	11.413 °C		SM2550B(2)
Turbidity (Hach)	102 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: 712843	Result	Reporting Limit	Method
Phosphorus, ortho	0.099 mg/L	0.002	EPA 365.1

Weather Code Definitions			
SC Sky Conditions	WD Wind Direction	WS Wind Strength	AT 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: WWL-10-0055 **USGS Hydrologic Unit:** 051202021006
Stream Name: White River **County:** Pike
Description: Stern Bottoms Road **Latitude:** 38 31 55.29820 **Longitude:** -87 27 16.61130
Drainage: 11184.856 **Site Number:** 20WR062

SiteID: WWL-10-0055 **Sample Date:** 6/22/2020 **IDEM Sample #:** AB42905
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	146.6 %		ASTM D888-09(C)
DO	11.6 mg/L		ASTM D888-09(C)
pH (Field)	8.39 SU		EPA 150.2
Specific Conductance (Field)	527 umho/cm		SM2510B
Temperature	27.3 °C		SM2550B(2)
Turbidity (Hach)	43.4 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: 2006012-14	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	190 mg/L	20	SM2320B
Chloride	30.4 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	226 mg/L	2.07	SM2340B
Sulfate	44.7 mg/L	0.12	EPA 300.0
Aluminum (Total)	1.31 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	57.6 mg/L	0.5	EPA 200.7
Chromium (Total)	2.12 ug/L	2	EPA 200.8
Copper (Total)	2.05 ug/L	2	EPA 200.8
Lead (Total)	1.22 ug/L	0.5	EPA 200.8
Magnesium (Total)	19.9 mg/L	0.2	EPA 200.7
Nickel (Total)	3.08 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006012-14RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.5 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50260783014	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	11.2 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.47 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.075 mg/L	0.05	EPA 365.1
TKN	1.1 mg/L	0.5	EPA 351.2
TOC	2.6 mg/L	1	SM5310C

SiteID: WWL-10-0055 **Sample Date:** 7/21/2020 **IDEM Sample #:** AB43307
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: pictures: u/s-277, d/s-278

Lab ID #:	Result	Reporting Limit	Method
% Sat	146.7 %		ASTM D888-09(C)
DO	10.87 mg/L		ASTM D888-09(C)
pH (Field)	8.43 SU		EPA 150.2
Specific Conductance (Field)	255.1 umho/cm		SM2510B
Temperature	31 °C		SM2550B(2)
Turbidity (Hach)	90.3 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	18 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 #: 2007016-15	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	170 mg/L	20	SM2320B
Chloride	35.3 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	223 mg/L	2.07	SM2340B
Sulfate	45.4 mg/L	0.12	EPA 300.0
Aluminum (Total)	2.63 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.35 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	55.2 mg/L	0.5	EPA 200.7
Chromium (Total)	3.56 ug/L	2	EPA 200.8
Copper (Total)	3.59 ug/L	2	EPA 200.8
Lead (Total)	2.95 ug/L	0.5	EPA 200.8
Magnesium (Total)	20.7 mg/L	0.2	EPA 200.7
Nickel (Total)	4.87 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	12.4 ug/L	10	EPA 200.8

Lab ID #: 2007016-15RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.61 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50262925015	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	25 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.12 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.22 mg/L	0.05	EPA 365.1
TKN	0.94 mg/L	0.5	EPA 351.2
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: WWL-10-0055 **Sample Date:** 10/7/2020 **IDEM Sample #:** AB42834
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	138.2 %		ASTM D888-09(C)
DO	12.15 mg/L		ASTM D888-09(C)
pH (Field)	8.44 SU		EPA 150.2
Specific Conductance (Field)	737 umho/cm		SM2510B
Temperature	21.5 °C		SM2550B(2)
Turbidity (Hach)	29.1 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

SiteID: WWL-10-0055 **Sample Date:** 11/2/2020 **IDEM Sample #:** AB44495
Water Flow Type Run **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	84.9 %		ASTM D888-09(C)
DO	9.3 mg/L		ASTM D888-09(C)
pH (Field)	7.81 SU		EPA 150.2
Specific Conductance (Field)	391 umho/cm		SM2510B
Temperature	11.2 °C		SM2550B(2)
Turbidity (Hach)	267 NTU		EPA 180.1
Air Temp	2 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

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

Lab ID #: 2011004-11	Result	Reporting Limit	Method
Hardness (as CaCO3)	168 mg/L	2.07	SM2340B
Aluminum (Total)	1.17 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.51 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	48.3 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	3 ug/L	2	EPA 200.8
Lead (Total)	2.01 ug/L	0.5	EPA 200.8
Magnesium (Total)	11.5 mg/L	0.2	EPA 200.7
Nickel (Total)	3.31 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2011004-11RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.63 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50272163011	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	118 mg/L	2	SM2320B
Chloride	25.3 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	122 mg/L	12.5	SM2540D
Solids, Total (TS)	306 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	224 mg/L	10	SM2540C
Sulfate	34.5 mg/L	2.5	EPA 300.0
COD	24.6 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.4 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.22 mg/L	0.05	EPA 365.1
TKN	0.95 mg/L	0.5	EPA 351.2
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**

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: WWL-10-0051 **USGS Hydrologic Unit:** 051202021006
Stream Name: White River **County:** Gibson
Description: 1st Street **Latitude:** 38 30 17.22867 **Longitude:** -87 31 58.98876
Drainage: 11238.118 **Site Number:** INRB20-066

SiteID: WWL-10-0051 **Sample Date:** 5/18/2020 **IDEM Sample #:** AB41838
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	77.8 %		ASTM D888-09(C)
DO	7.13 mg/L		ASTM D888-09(C)
pH (Field)	7.96 SU		EPA 150.2
Specific Conductance (Field)	493.7 umho/cm		SM2510B
Temperature	19.545 °C		SM2550B(2)
Turbidity (Hach)	365 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

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

Lab ID #: 50257770013	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	148 mg/L	2	SM2320B
Chloride	26.9 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	289 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	222 mg/L	38.5	SM2540D
Solids, Total (TS)	947 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	285 mg/L	10	SM2540C
Sulfate	58.8 mg/L	2.5	EPA 300.0
Aluminum (Total)	15 mg/L	0.5	EPA 200.8
Aluminum (Dissolved)	0.48 mg/L	0.01	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	1.1 ug/L	1	EPA 200.8
Arsenic (Total)	7.4 ug/L	1	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Total)	0.41 ug/L	0.2	EPA 200.8
Calcium (Total)	73.7 mg/L	1	EPA 200.7
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Chromium (Total)	18.3 ug/L	2	EPA 200.8
Copper (Dissolved)	1.9 ug/L	1	EPA 200.8
Copper (Total)	18 ug/L	1	EPA 200.8
Lead (Total)	17.3 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Magnesium (Total)	25.4 mg/L	1	EPA 200.7
Nickel (Dissolved)	2.1 ug/L	0.5	EPA 200.8
Nickel (Total)	20.3 ug/L	0.5	EPA 200.8
Selenium (Total)	1.5 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
Zinc (Total)	71.9 ug/L	3	EPA 200.8
COD	32.8 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.35 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.9 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.55 mg/L	0.05	EPA 365.1
TKN	1.7 mg/L	0.5	EPA 351.2
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: WWL-10-0051 **Sample Date:** 6/22/2020 **IDEM Sample #:** AB42275
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	123.7 %		ASTM D888-09(C)
DO	9.81 mg/L		ASTM D888-09(C)
pH (Field)	8.28 SU		EPA 150.2
Specific Conductance (Field)	507 umho/cm		SM2510B
Temperature	26.855 °C		SM2550B(2)
Turbidity (Hach)	66.5 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 702113	Result	Reporting Limit	Method
Phosphorus, ortho	< 0.002 mg/L	0.002	EPA 365.1

SiteID: WWL-10-0051 **Sample Date:** 7/28/2020 **IDEM Sample #:** AB41893
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	92.4 %		ASTM D888-09(C)
DO	7.03 mg/L		ASTM D888-09(C)
pH (Field)	8.11 SU		EPA 150.2
Specific Conductance (Field)	522 umho/cm		SM2510B
Temperature	29.569 °C		SM2550B(2)
Turbidity (Hach)	49 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 #: 50263470003	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	148 mg/L	2	SM2320B
Chloride	36.7 mg/L	5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	207 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	74 mg/L	10	SM2540D
Solids, Total (TS)	367 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	273 mg/L	10	SM2540C
Sulfate	42.7 mg/L	5	EPA 300.0
Aluminum (Dissolved)	< 0.01 mg/L	0.01	EPA 200.8
Aluminum (Total)	1.9 mg/L	0.05	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	1.7 ug/L	1	EPA 200.8
Arsenic (Dissolved)	1.2 ug/L	1	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	55.5 mg/L	1	EPA 200.7
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Chromium (Total)	2.1 ug/L	2	EPA 200.8
Copper (Dissolved)	1.5 ug/L	1	EPA 200.8
Copper (Total)	3.1 ug/L	1	EPA 200.8
Lead (Total)	1.6 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Magnesium (Total)	16.5 mg/L	1	EPA 200.7
Nickel (Dissolved)	1.6 ug/L	0.5	EPA 200.8
Nickel (Total)	3.5 ug/L	0.5	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
Zinc (Total)	7.7 ug/L	3	EPA 200.8
COD	17.9 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.8 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.11 mg/L	0.05	EPA 365.1
TKN	0.93 mg/L	0.5	EPA 351.2
TOC	5.2 mg/L	1	SM5310C

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

SitID: WWL-10-0051 Sample Date: 8/10/2020 IDEM Sample #: AB42295
 Water Flow Type Run Water Appearance Murky Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: HOBO #1
 SN: 10904731

Lab ID #:	Result	Reporting Limit	Method
% Sat	104.2 %		ASTM D888-09(C)
DO	8.46 mg/L		ASTM D888-09(C)
pH (Field)	7.87 SU		EPA 150.2
Specific Conductance (Field)	398.2 umho/cm		SM2510B
Temperature	25.919 °C		SM2550B(2)
Turbidity (Hach)	65 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	0 Lookup		Observation

SitID: WWL-10-0051 Sample Date: 8/24/2020 IDEM Sample #: AB42313
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: Pickup
 HOBO #1
 SN: 10904731

Lab ID #:	Result	Reporting Limit	Method
% Sat	119.6 %		ASTM D888-09(C)
DO	9.43 mg/L		ASTM D888-09(C)
pH (Field)	8.37 SU		EPA 150.2
Specific Conductance (Field)	477.3 umho/cm		SM2510B
Temperature	27.559 °C		SM2550B(2)
Turbidity (Hach)	33 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 #: 707253	Result	Reporting Limit	Method
Phosphorus, ortho	0.0029 mg/L	0.002	EPA 365.1

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

SiteID: WWL-10-0051 **Sample Date:** 9/8/2020 **IDEM Sample #:** AB42265
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	120.8 %		ASTM D888-09(C)
DO	9.86 mg/L		ASTM D888-09(C)
pH (Field)	8.05 SU		EPA 150.2
Specific Conductance (Field)	643 umho/cm		SM2510B
Temperature	25 °C		SM2550B(2)
Turbidity (Hach)	39.8 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: WWL-10-0051 **Sample Date:** 9/28/2020 **IDEM Sample #:** AB41948
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	132.5 %		ASTM D888-09(C)
DO	11.54 mg/L		ASTM D888-09(C)
pH (Field)	8.28 SU		EPA 150.2
Specific Conductance (Field)	703 umho/cm		SM2510B
Temperature	22.11 °C		SM2550B(2)
Turbidity (Hach)	28 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	3 Lookup		Observation

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

Lab ID #: 50268823006	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	209 mg/L	2	SM2320B
Chloride	58.9 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	268 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	36 mg/L	12.5	SM2540D
Solids, Total (TS)	435 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	369 mg/L	10	SM2540C
Sulfate	72.8 mg/L	2.5	EPA 300.0
Aluminum (Total)	0.42 mg/L	0.01	EPA 200.8
Aluminum (Dissolved)	< 0.01 mg/L	0.01	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	1.1 ug/L	1	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	65 mg/L	1	EPA 200.7
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	1.1 ug/L	1	EPA 200.8
Copper (Total)	1.5 ug/L	1	EPA 200.8
Lead (Total)	< 1 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Magnesium (Total)	25.7 mg/L	1	EPA 200.7
Nickel (Dissolved)	2.1 ug/L	0.5	EPA 200.8
Nickel (Total)	2.7 ug/L	0.5	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Total)	3.7 ug/L	3	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
COD	21 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.3 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.073 mg/L	0.05	EPA 365.1
TKN	0.91 mg/L	0.5	EPA 351.2
TOC	2.6 mg/L	1	SM5310C

Lab ID #: AB41948 peri	Result	Reporting Limit	Method
Chlorophyll a	2510.42 ug/L	0.95	EPA 445M
Periphyton Algal Biomass	39.69 mg/M2	0.95	EPA 445M

Lab ID #: AB41948 phy	Result	Reporting Limit	Method
Phytoplankton Chlorophyll-a	76.66 ug/L	0.95	EPA 445M

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

SiteID: WWL-10-0051 Sample Date: 11/2/2020 IDEM Sample #: AB42333
 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	82 %		ASTM D888-09(C)
DO	8.97 mg/L		ASTM D888-09(C)
pH (Field)	7.68 SU		EPA 150.2
Specific Conductance (Field)	384.3 umho/cm		SM2510B
Temperature	11.329 °C		SM2550B(2)
Turbidity (Hach)	127 NTU		EPA 180.1
Air Temp	2 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 712852	Result	Reporting Limit	Method
Phosphorus, ortho	0.084 mg/L	0.002	EPA 365.1

Weather Code Definitions			
SC Sky Conditions	WD Wind Direction	WS Wind Strength	AT 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: WWL-10-0056 **USGS Hydrologic Unit:** 051202021007
Stream Name: White River **County:** Knox
Description: Carter Road **Latitude:** 38 27 25.10524 **Longitude:** -87 38 28.84790
Drainage: 11311.722 **Site Number:** 20WR064

SiteID: WWL-10-0056 **Sample Date:** 6/22/2020 **IDEM Sample #:** AB42904
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	128.5 %		ASTM D888-09(C)
DO	10.24 mg/L		ASTM D888-09(C)
pH (Field)	8.28 SU		EPA 150.2
Specific Conductance (Field)	506 umho/cm		SM2510B
Temperature	27 °C		SM2550B(2)
Turbidity (Hach)	98.9 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	3 Lookup		Observation

Lab ID #: 2006012-15	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	190 mg/L	20	SM2320B
Chloride	28.8 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	224 mg/L	2.07	SM2340B
Sulfate	42.2 mg/L	0.12	EPA 300.0
Aluminum (Total)	1.32 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	57 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.26 ug/L	2	EPA 200.8
Lead (Total)	1.5 ug/L	0.5	EPA 200.8
Magnesium (Total)	19.7 mg/L	0.2	EPA 200.7
Nickel (Total)	2.91 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

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

Lab ID #: 2006012-15RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.4 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50260783015	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	10.2 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.32 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.062 mg/L	0.05	EPA 365.1
TKN	0.9 mg/L	0.5	EPA 351.2
TOC	2.4 mg/L	1	SM5310C

SiteID: WWL-10-0056 **Sample Date:** 7/21/2020 **IDEM Sample #:** AB43308
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: pictures: u/s-279, d/s-280

Lab ID #:	Result	Reporting Limit	Method
% Sat	162.5 %		ASTM D888-09(C)
DO	11.99 mg/L		ASTM D888-09(C)
pH (Field)	8.53 SU		EPA 150.2
Specific Conductance (Field)	514 umho/cm		SM2510B
Temperature	31 °C		SM2550B(2)
Turbidity (Hach)	55.6 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	18 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 #: 2007016-16	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	170 mg/L	20	SM2320B
Chloride	35.8 mg/L	0.12	EPA 300.0
Hardness (as CaCO3)	207 mg/L	2.07	SM2340B
Sulfate	46.2 mg/L	0.12	EPA 300.0
Aluminum (Total)	1.12 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	< 2 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	51 mg/L	0.5	EPA 200.7
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Total)	2.39 ug/L	2	EPA 200.8
Lead (Total)	1.05 ug/L	0.5	EPA 200.8
Magnesium (Total)	19.4 mg/L	0.2	EPA 200.7
Nickel (Total)	3.04 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2007016-16RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.57 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50262925016	Result	Reporting Limit	Method
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
COD	50.9 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	< 0.1 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.16 mg/L	0.05	EPA 365.1
TKN	0.88 mg/L	0.5	EPA 351.2
TOC	3.8 mg/L	1	SM5310C

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

SiteID: WWL-10-0056 **Sample Date:** 10/6/2020 **IDEM Sample #:** AB42796
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	132.1 %		ASTM D888-09(C)
DO	12.59 mg/L		ASTM D888-09(C)
pH (Field)	8.21 SU		EPA 150.2
Specific Conductance (Field)	728 umho/cm		SM2510B
Temperature	17.6 °C		SM2550B(2)
Turbidity (Hach)	9.18 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: WWL-10-0056 **Sample Date:** 11/2/2020 **IDEM Sample #:** AB44496
Water Flow Type Run **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	82.1 %		ASTM D888-09(C)
DO	9.02 mg/L		ASTM D888-09(C)
pH (Field)	7.78 SU		EPA 150.2
Specific Conductance (Field)	360 umho/cm		SM2510B
Temperature	11.1 °C		SM2550B(2)
Turbidity (Hach)	115 NTU		EPA 180.1
Air Temp	2 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

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

Lab ID #: 2011004-12	Result	Reporting Limit	Method
Hardness (as CaCO3)	164 mg/L	2.07	SM2340B
Aluminum (Total)	1.23 mg/L	0.5	EPA 200.7
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	2.51 ug/L	2	EPA 200.8
Cadmium (Total)	< 1 ug/L	1	EPA 200.8
Calcium (Total)	48.2 mg/L	0.5	EPA 200.7
Chromium (Total)	2.02 ug/L	2	EPA 200.8
Copper (Total)	3.31 ug/L	2	EPA 200.8
Lead (Total)	2.32 ug/L	0.5	EPA 200.8
Magnesium (Total)	10.7 mg/L	0.2	EPA 200.7
Nickel (Total)	3.46 ug/L	1	EPA 200.8
Selenium (Total)	< 2 ug/L	2	EPA 200.8
Silver (Total)	< 1 ug/L	1	EPA 200.8
Zinc (Total)	< 10 ug/L	10	EPA 200.8

Lab ID #: 2011004-12RE1	Result	Reporting Limit	Method
Aluminum (Dissolved)	< 0.5 mg/L	0.5	EPA 200.7
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 2 ug/L	2	EPA 200.8
Cadmium (Dissolved)	< 1 ug/L	1	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	< 2 ug/L	2	EPA 200.8
Lead (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.62 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 2 ug/L	2	EPA 200.8
Silver (Dissolved)	< 1 ug/L	1	EPA 200.8
Zinc (Dissolved)	< 10 ug/L	10	EPA 200.8

Lab ID #: 50272163012	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	116 mg/L	2	SM2320B
Chloride	20 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Solids, Suspended Total, (TSS)	164 mg/L	12.5	SM2540D
Solids, Total (TS)	347 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	202 mg/L	10	SM2540C
Sulfate	31.7 mg/L	2.5	EPA 300.0
COD	26.6 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.3 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.14 mg/L	0.05	EPA 365.1
TKN	0.99 mg/L	0.5	EPA 351.2
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**

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: WWL-10-0050 **USGS Hydrologic Unit:** 051202021007
Stream Name: White River **County:** Gibson
Description: CR 400 North **Latitude:** 38 24 56.83959 **Longitude:** -87 43 43.33052
Drainage: 11340.484 **Site Number:** INRB20-042

SiteID: WWL-10-0050 **Sample Date:** 5/18/2020 **IDEM Sample #:** AB41833
Water Flow Type Run **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	85.9 %		ASTM D888-09(C)
DO	7.91 mg/L		ASTM D888-09(C)
pH (Field)	8.13 SU		EPA 150.2
Specific Conductance (Field)	471.4 umho/cm		SM2510B
Temperature	19.375 °C		SM2550B(2)
Turbidity (Hach)	328 NTU		EPA 180.1
Air Temp	4 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 #: 50257770010	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	156 mg/L	2	SM2320B
Chloride	27 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	237 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	356 mg/L	31.2	SM2540D
Solids, Total (TS)	659 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	275 mg/L	10	SM2540C
Sulfate	38 mg/L	2.5	EPA 300.0
Aluminum (Dissolved)	0.048 mg/L	0.01	EPA 200.8
Aluminum (Total)	8.1 mg/L	0.2	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	1.1 ug/L	1	EPA 200.8
Arsenic (Total)	4.6 ug/L	1	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	62.4 mg/L	1	EPA 200.7
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Chromium (Total)	9.5 ug/L	2	EPA 200.8
Copper (Dissolved)	1.4 ug/L	1	EPA 200.8
Copper (Total)	10.8 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Lead (Total)	9.7 ug/L	1	EPA 200.8
Magnesium (Total)	19.6 mg/L	1	EPA 200.7
Nickel (Dissolved)	1.3 ug/L	0.5	EPA 200.8
Nickel (Total)	10.2 ug/L	0.5	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
Zinc (Total)	40.1 ug/L	3	EPA 200.8
COD	26.3 mg/L	10	EPA 410.4
Nitrogen, Ammonia	0.14 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	1.6 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.48 mg/L	0.05	EPA 365.1
TKN	1.1 mg/L	0.5	EPA 351.2
TOC	3.3 mg/L	1	SM5310C

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

SiteID: WWL-10-0050 Sample Date: 6/22/2020 IDEM Sample #: AB42271
 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	120 %		ASTM D888-09(C)
DO	9.61 mg/L		ASTM D888-09(C)
pH (Field)	8.27 SU		EPA 150.2
Specific Conductance (Field)	492.3 umho/cm		SM2510B
Temperature	26 °C		SM2550B(2)
Turbidity (Hach)	68.3 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 702109	Result	Reporting Limit	Method
Phosphorus, ortho	< 0.002 mg/L	0.002	EPA 365.1

SiteID: WWL-10-0050 Sample Date: 7/6/2020 IDEM Sample #: AB42002
 Water Flow Type Run Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	90.8 %		ASTM D888-09(C)
DO	6.89 mg/L		ASTM D888-09(C)
pH (Field)	8.13 SU		EPA 150.2
Specific Conductance (Field)	482 umho/cm		SM2510B
Temperature	29.7 °C		SM2550B(2)
Turbidity (Hach)	109 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: AB42002	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	54.5 MPN/100mL	1	SM9223B

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

SiteID: WWL-10-0050 Sample Date: 7/6/2020 IDEM Sample #: AB41888
 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	94.1 %		ASTM D888-09(C)
DO	7.09 mg/L		ASTM D888-09(C)
pH (Field)	8.01 SU		EPA 150.2
Specific Conductance (Field)	486.9 umho/cm		SM2510B
Temperature	30.061 °C		SM2550B(2)
Turbidity (Hach)	95 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

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

Lab ID #: 50261918010	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	157 mg/L	2	SM2320B
Chloride	28.2 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	213 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	124 mg/L	25	SM2540D
Solids, Total (TS)	347 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	254 mg/L	10	SM2540C
Sulfate	30.8 mg/L	2.5	EPA 300.0
Aluminum (Total)	2.4 mg/L	0.05	EPA 200.8
Aluminum (Dissolved)	0.024 mg/L	0.01	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	1.1 ug/L	1	EPA 200.8
Arsenic (Total)	2 ug/L	1	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	56.5 mg/L	1	EPA 200.7
Chromium (Total)	3.2 ug/L	2	EPA 200.8
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Copper (Total)	4.3 ug/L	1	EPA 200.8
Copper (Dissolved)	1.9 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Lead (Total)	2.7 ug/L	1	EPA 200.8
Magnesium (Total)	17.4 mg/L	1	EPA 200.7
Nickel (Total)	4.4 ug/L	0.5	EPA 200.8
Nickel (Dissolved)	1.5 ug/L	0.5	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Total)	11.6 ug/L	3	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
COD	19.5 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	2.6 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.2 mg/L	0.05	EPA 365.1
TKN	0.88 mg/L	0.5	EPA 351.2
TOC	3 mg/L	1	SM5310C

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

SiteID: WWL-10-0050 Sample Date: 7/13/2020 IDEM Sample #: AB42024
 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	115.5 %		ASTM D888-09(C)
DO	9.03 mg/L		ASTM D888-09(C)
pH (Field)	8.35 SU		EPA 150.2
Specific Conductance (Field)	507 umho/cm		SM2510B
Temperature	28 °C		SM2550B(2)
Turbidity (Hach)	65.9 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: AB42024	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	63.7 MPN/100mL	1	SM9223B

SiteID: WWL-10-0050 Sample Date: 7/20/2020 IDEM Sample #: AB42046
 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	141.5 %		ASTM D888-09(C)
DO	10.8 mg/L		ASTM D888-09(C)
pH (Field)	8.23 SU		EPA 150.2
Specific Conductance (Field)	493 umho/cm		SM2510B
Temperature	29.4 °C		SM2550B(2)
Turbidity (Hach)	44.9 NTU		EPA 180.1
Air Temp	5 Lookup		Observation
Sky Conditions	7 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB42046	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	19.9 MPN/100mL	1	SM9223B

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

SiteID: WWL-10-0050 Sample Date: 7/27/2020 IDEM Sample #: AB42068
 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	94.4 %		ASTM D888-09(C)
DO	7.1 mg/L		ASTM D888-09(C)
pH (Field)	8.08 SU		EPA 150.2
Specific Conductance (Field)	446 umho/cm		SM2510B
Temperature	30.2 °C		SM2550B(2)
Turbidity (Hach)	93.9 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	2 Lookup		Observation

Lab ID #: AB42068	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	62 MPN/100mL	1	SM9223B

SiteID: WWL-10-0050 Sample Date: 8/3/2020 IDEM Sample #: AB42090
 Water Flow Type Run Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments: Minor flooding, trees floating DS.

Lab ID #:	Result	Reporting Limit	Method
% Sat	60.7 %		ASTM D888-09(C)
DO	5.16 mg/L		ASTM D888-09(C)
pH (Field)	7.67 SU		EPA 150.2
Specific Conductance (Field)	240 umho/cm		SM2510B
Temperature	23.4 °C		SM2550B(2)
Turbidity (Hach)	258 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	7 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: AB42090	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1299.7 MPN/100mL	1	SM9223B

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

SiteID: WWL-10-0050 **Sample Date:** 8/10/2020 **IDEM Sample #:** AB42291
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: HOBO #2
 SN: 10904732

Lab ID #:	Result	Reporting Limit	Method
% Sat	111.8 %		ASTM D888-09(C)
DO	8.93 mg/L		ASTM D888-09(C)
pH (Field)	8.14 SU		EPA 150.2
Specific Conductance (Field)	390.3 umho/cm		SM2510B
Temperature	26.845 °C		SM2550B(2)
Turbidity (Hach)	82 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	18 Lookup		Observation
Wind Strength	1 Lookup		Observation

SiteID: WWL-10-0050 **Sample Date:** 8/24/2020 **IDEM Sample #:** AB42309
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Pickup
 HOBO #2
 SN: 10904732

Lab ID #:	Result	Reporting Limit	Method
% Sat	136 %		ASTM D888-09(C)
DO	10.64 mg/L		ASTM D888-09(C)
pH (Field)	8.5 SU		EPA 150.2
Specific Conductance (Field)	450.9 umho/cm		SM2510B
Temperature	28.063 °C		SM2550B(2)
Turbidity (Hach)	45.1 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 #: 707249	Result	Reporting Limit	Method
Phosphorus, ortho	0.005 mg/L	0.002	EPA 365.1

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

SiteID: WWL-10-0050 **Sample Date:** 8/26/2020 **IDEM Sample #:** AB42139
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	125 %		ASTM D888-09(C)
DO	9.79 mg/L		ASTM D888-09(C)
pH (Field)	8.37 SU		EPA 150.2
Specific Conductance (Field)	491 umho/cm		SM2510B
Temperature	28 °C		SM2550B(2)
Turbidity (Hach)	28.5 NTU		EPA 180.1
Air Temp	6 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	0 Lookup		Observation

SiteID: WWL-10-0050 **Sample Date:** 9/28/2020 **IDEM Sample #:** AB41943
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	107.9 %		ASTM D888-09(C)
DO	9.67 mg/L		ASTM D888-09(C)
pH (Field)	8.12 SU		EPA 150.2
Specific Conductance (Field)	694 umho/cm		SM2510B
Temperature	20.649 °C		SM2550B(2)
Turbidity (Hach)	31.8 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	4 Lookup		Observation

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

Lab ID #: 50268823004	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	214 mg/L	2	SM2320B
Chloride	54.4 mg/L	2.5	EPA 300.0
Cyanide (Total)	< 0.005 mg/L	0.005	EPA 335.4
Hardness (as CaCO3)	273 mg/L	1	SM2340B
Solids, Suspended Total, (TSS)	34 mg/L	12.5	SM2540D
Solids, Total (TS)	421 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	356 mg/L	10	SM2540C
Sulfate	71.3 mg/L	2.5	EPA 300.0
Aluminum (Total)	0.45 mg/L	0.01	EPA 200.8
Aluminum (Dissolved)	< 0.01 mg/L	0.01	EPA 200.8
Antimony (Dissolved)	< 1 ug/L	1	EPA 200.8
Antimony (Total)	< 1 ug/L	1	EPA 200.8
Arsenic (Dissolved)	< 1 ug/L	1	EPA 200.8
Arsenic (Total)	1.1 ug/L	1	EPA 200.8
Cadmium (Dissolved)	< 0.2 ug/L	0.2	EPA 200.8
Cadmium (Total)	< 0.2 ug/L	0.2	EPA 200.8
Calcium (Total)	66.7 mg/L	1	EPA 200.7
Chromium (Dissolved)	< 2 ug/L	2	EPA 200.8
Chromium (Total)	< 2 ug/L	2	EPA 200.8
Copper (Dissolved)	1.2 ug/L	1	EPA 200.8
Copper (Total)	1.5 ug/L	1	EPA 200.8
Lead (Dissolved)	< 1 ug/L	1	EPA 200.8
Lead (Total)	< 1 ug/L	1	EPA 200.8
Magnesium (Total)	25.8 mg/L	1	EPA 200.7
Nickel (Dissolved)	2.1 ug/L	0.5	EPA 200.8
Nickel (Total)	2.7 ug/L	0.5	EPA 200.8
Selenium (Total)	< 1 ug/L	1	EPA 200.8
Selenium (Dissolved)	< 1 ug/L	1	EPA 200.8
Silver (Dissolved)	< 0.5 ug/L	0.5	EPA 200.8
Silver (Total)	< 0.5 ug/L	0.5	EPA 200.8
Zinc (Total)	3.4 ug/L	3	EPA 200.8
Zinc (Dissolved)	< 3 ug/L	3	EPA 200.8
COD	19.2 mg/L	10	EPA 410.4
Nitrogen, Ammonia	< 0.1 mg/L	0.1	EPA 350.1
Nitrogen, Nitrate+Nitrite	0.31 mg/L	0.1	EPA 353.2
Phosphorus, Total	0.062 mg/L	0.05	EPA 365.1
TKN	0.9 mg/L	0.5	EPA 351.2
TOC	2.4 mg/L	1	SM5310C

Lab ID #: AB41943 peri	Result	Reporting Limit	Method
Chlorophyll a	1084.05 ug/L	0.95	EPA 445M
Periphyton Algal Biomass	117.51 mg/M2	0.95	EPA 445M

Lab ID #: AB41943 phy	Result	Reporting Limit	Method
Phytoplankton Chlorophyll-a	75.89 ug/L	0.95	EPA 445M

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

SiteID: WWL-10-0050 Sample Date: 11/2/2020 IDEM Sample #: AB42329
 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	82.6 %		ASTM D888-09(C)
DO	9.04 mg/L		ASTM D888-09(C)
pH (Field)	7.76 SU		EPA 150.2
Specific Conductance (Field)	369.6 umho/cm		SM2510B
Temperature	11.296 °C		SM2550B(2)
Turbidity (Hach)	150 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	27 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 712848	Result	Reporting Limit	Method
Phosphorus, ortho	0.075 mg/L	0.002	EPA 365.1

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