WEST FORK WHITE RIVER

Madison, Hamilton, and Marion Counties 2011 Fish Research Report

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EXECUTIVE SUMMARY

- A survey of the upper West Fork White River, Mounds State Park in Madison County down to Lake Indy in Indianapolis, in fall 2011 was conducted at 16 stations as monitoring from the 1999 fish kill. A total of 7,128 fish from 57 species was collected from 16 stations.
- The average number of species per station was not significantly different between the reference zone, kill zone, and partial kill zone.
- The average Index of Biotic Integrity was not significantly different between the reference zone, kill zone, and partial kill zone.
- Quality size largemouth bass continue to increase but slight decreases in the number of premium and memorable were seen.
- Quality size smallmouth bass decreased in number since 2006 and 2007 but the number of premium and memorable smallmouth bass increased.
- Channel catfish were most common in the Lake Indy station. Overall 30% were greater than 14 in and 19% were greater than 20 in.
- Other angling opportunities for black and white crappie, sauger, and rock bass are available. White crappie and sauger were collected in the memorable length category (white crappie 12 in, sauger 20 in).

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INTRODUCTION

In December 1999, a fish kill devastated the West Fork White River (WFWR) starting at the outfall of the Anderson Waste Water Treatment Plant in Anderson, Indiana. Fish were completely killed from an estimated 43 mi of river from Anderson down to the upper portion of the Broad Ripple Impoundment (river mile 246.6; Keller 2000). A partial fish kill extended another 12 mi to the Lake Indy Dam. Dead fish were collected as far downstream as the Stout Generating Plant in Marion County. An estimated 4.3 million fish weighing 180 tons were lost (Ball 2002a). The party responsible for the fish kill was ordered to pay nearly \$14 million, of which \$6 million was for Natural Resource Damage Recovery (U.S. Department of Interior et al. 2003). The \$6 million was used for restoration activities, such as habitat restoration, improving or acquiring public access, and restocking fish, with over 50 projects funded to date.

Recovery of the fish populations throughout the WFWR has been monitored since January 6, 2000 when initial stream surveys were conducted to assess the extent of the fish kill (Keller 2000). Since the fish kill, the Indiana Department of Natural Resources (IDNR) has completed five annual fall surveys (2001-2007) and two recreational use surveys (2002 and 2004). Fish were stocked into the fish kill area because of the extensive loss of fish and because numerous dams would potentially limit colonization (Ball 2002b). The IDNR stocked fish that were present in the river before the fish kill, such as channel catfish, bluegill, and largemouth and smallmouth bass. The IDNR also stocked two species, bigmouth buffalo and shorthead redhorse, which had been collected prior to the fish kill, but had not been collected after the fish kill. Sauger and freshwater drum had not been collected in fisheries surveys before the fish kill, but are native to the drainage and were introduced as well.

METHODS

After the fish kill, sampling was initiated in January 2000 (Keller 2000) with additional sampling conducted in March and July 2000 to assess the recovery of the fishery and success of stocking efforts (Ball 2000, 2002b). Monitoring was continued each fall from 2001 to 2004, and 2007 using 16 sampling stations (Table 1). For the fall fishery surveys, the river was divided into a Reference Zone (RZ; above the kill zone, 7 river miles), an Upper River Zone (URZ; total kill zone, 43 river miles), and a Lower River Zone (LRZ; partial kill zone, 12 river miles; Figure 1).

Sixteen stations that have been consistently sampled since the fish kill were sampled from September 20th to October 24th, 2011. Instream habitat, water quality, and fish assemblages were documented (Appendix). Water chemistry parameters were measured at every station according to standard survey guidelines (IDFW 2001). Fish habitat was documented at riffle and run stations using the Qualitative Habitat Evaluation Index (QHEI) developed by Ohio EPA (Rankin 1989). Boat-mounted electrofishing gear was used to sample run stations for up to 1 h while riffle stations were sampled using barge electrofishing equipment based on previous station lengths. Impoundments were sampled with boat-mounted electrofishing gear, gill nets, and trap nets. Three gill nets and three trap nets were used in each impoundment, except for Landings Pit where two gill nets were used. Electrofishing sampling time in impoundments was 1 h, except in Landings Pit, where sampling was one complete circuit of the shoreline.

All fish were identified to the species level. Game species were measured to the nearest 0.1 in and weighed to the nearest 0.01 lb. Otolith and scale samples were taken from game fish for age and growth analysis. Non-game species were counted and bulk weighed with a species length range documented. Voucher specimens were placed in 10% formalin and later identified at the office. Body condition and size-structure were evaluated using relative weights and stock indices for selected species. Game species were separated into size groups according to length categories presented in Anderson and Neumann (1996). Relative weights were only calculated for game fish.

RESULTS

Fish habitat and water chemistry

Water temperature ranged from 53 to 69 °F while dissolved oxygen ranged from 8.1 to 16.0 ppm. The Secchi disk ranged from 14 to 84 in and pH ranged from 7.6 to 9.6. The conductivity ranged from 510 to 1020 µs. No significant difference in dissolved oxygen, Secchi disk, pH, or conductivity existed between the RZ, URZ, or LRZ.

QHEI data was collected from riffle (1, 4, 8, 9, 15, and 16) and run (2, 3, 5, 7, and 10) stations (Table 1). The lowest QHEI score was 62 at Station 7 and the highest QHEI score was Station 1 with a score of 84. All stations sampled were generally conducive to the existence of warmwater faunas and 45% of stations had habitat conditions which have the ability to support exceptional warmwater faunas. All stations had several substrate types with 64% having four or

more substrate types present. Instream cover was moderate in all stations except Station 2, and many stations had a variety of cover types including overhanging vegetation, shallows, deep pools, rootwads, boulders, aquatic macrophytes, and logs or woody debris. Channel development was variable across the survey with excellent examples of deep pools, runs, and riffles found in many stations and little embeddedness of substrates seen.

Fish survey data

A total of 7,128 fish was collected. Fifty-seven species and 1 hybrid representing 12 families were collected at the 16 stations sampled in 2011 weighing 1,580 pounds (Table 2). This is the greatest number of species collected since the fish kill (Table 3). Centrarchidae was the most numerous family caught at 41.2% of total catch, followed by Cyprinidae (37.6%), and Catostomidae (9.2%). Bluegill were the most numerous species collected (14.2%), followed by longear sunfish (14%), and spotfin shiner (11.8%). Game species including largemouth bass (3.1%), rock bass (3%), channel catfish (2.6%), smallmouth bass (2.2%), black crappie (1.1%), white crappie (0.3%), sauger (0.1%), and flathead catfish (0.1%) comprised about 12.4% of the total catch.

The two stations making up the RZ accounted for a total of 32 species and 1,116 fish. The average number of species per station was 21 (Table 4). Sand shiner made up the greatest percentage of catch with 26.5%, followed by central stoneroller (13.7%), and northern hog sucker (13.3%). Game species included smallmouth bass (3.1%), rock bass (2.3%), and largemouth bass (0.4%). The mean IBI score for riffle and run stations in the RZ was 48 (Table 5).

The URZ, comprised of eight stations, had a total of 46 species and 1 hybrid species totaling 2,401 fish. The average number of species per station was 22 (Table 2). Longear sunfish (14.1%) was the most abundant species collected, followed by spotfin shiner (13.0%), and bluegill (10.4%). Game species included largemouth bass (3.7%), smallmouth bass (3.7%), channel catfish (2.0%), rock bass (2.0%), and sauger (<0.1%). The mean IBI score for riffle and run stations in the URZ was 47 (Table 5).

A total of 3,611 fish was collected from the six stations making up the LRZ comprising 48 species and 1 hybrid species. The average number of species per station was 22 (Table 2). Bluegill made up the greatest percentage of fish collected with 20.1%, followed by longear

sunfish (17.6%), and spotfin shiner (11.0%). Game species included channel catfish (3.8%), largemouth bass (3.6%), rock bass (2.0%), black crappie (1.8%), smallmouth bass (0.8%), white crappie (0.6%), flathead catfish (0.1%), and sauger (0.1%). The mean IBI score for riffle and run stations in the LRZ was 49 (Table 5).

A total of 223 largemouth bass was collected. Largemouth bass were collected from every station except Station 3 and 7. Station 9 (21.1%) had the greatest percentage of largemouth bass collected, followed by Station 16 (16.1%), and Station 15 (14.3%). Largemouth bass ranged in size from 2.3 to 17.4 in and the oldest fish collected was age 10. Largemouth bass took 3 years to reach 12 in and 4 years to reach 14 in. The RSD-Q was 57 and the RSD-P was 20 which are within the acceptable range of a RSD-Q of 40 to 70, a RSD-P of 10 to 40, and a RSD-M of 0 to 10 for a balanced population (Table 6; Gablehouse 1984). No memorable or trophy size largemouth bass were collected. Mean relative weight indices were 99 for stock, 105 for quality, and 104 for preferred size bass with indices of 95 to 100 considered above average (Table 7; Anderson and Neumann 1996). Total annual mortality for largemouth bass was estimated to be 41% (r² =0.41; P=0.25) and exploitation was 7%.

A total of 221 rock bass was collected. Station 4 (18.9%) had the greatest percentage of rock bass collected, followed by Station 15 (14.2%), and Station 6 (10.4%). Rock bass ranged in size from 1.6 to 8.9 in and the oldest fish collected was age 8. The RSD-Q was 44 and rock bass reached 6.5 in by age 4 and 8.8 in by age 7 (Table 6). Mean relative weight indices were 100 for stock and 108 for quality (Table 7).

A total of 186 channel catfish totaling 304 lbs was collected. Station 17 had the greatest number of channel catfish collected (41.4%), followed by Station 12 with 18.3%, and Station 13 with 11.8%. Channel catfish ranged in size from 2.0 to 30.9 in. The RSD-Q was 81, RSD-P was 35, and RSD-M was 6 (Table 6).

A total of 154 smallmouth bass was collected with 18.8% collected from Station 1 and 14.9% from Station 15. Smallmouth bass ranged in size from 2.6 to 19.9 in. The majority of smallmouth bass were less than 12 in (86%). The RSD-Q was 43, RSD-P was 19, and the RSD-M was 5 and smallmouth bass reached 12 in by age 5 and 14 in by age 7 (Table 6). Mean relative weight indices were 90 for stock, 87 for quality, 84 for preferred, and 87 for memorable size bass with indices of 95 to 100 considered above average (Table 7; Anderson and Neumann

1996). Total annual mortality for smallmouth bass was estimated at 19% ($r^2 = 0.78$; P<0.01) and exploitation was 2%.

A total of 77 black crappie, primarily from Station 13 (74%), was collected. Black crappie ranged in size from 4.4 to 9.9 in and in age from 1 through 5. A total of 24 white crappie, primarily from Station 12 (38%), Station 13 (33%), and Station 17 (21%), were collected. White crappie ranged in size from 4.4 to 12.9 in and in age from 1 through 4.

Six sauger were collected, three from Station 13, two from Station 12, and one from Station 8. All sauger collected were age 7 and ranged in size from 17.5 to 21.0 in. Four flathead catfish were collected at Station 14 that ranged in size from 19.1 to 21.1 in.

DISCUSSION

The fish populations of the West Fork White River in Madison, Hamilton, and Marion counties have dramatically improved since the 1999 fish kill. Species richness continues to increase with 57 species in 2011 versus 49 in March of 2000. Kingsley (1983) conducted a fisheries survey on the West Fork White River in 1982 and collected only 35 species. An increase in darter and minnow species are an indication of improving habitat and water quality. Several species have been sampled consistently over the years including gizzard shad, bluntnose minnow, silver shiner, black redhorse, and white sucker. Others collected, but not consistently, include redfin shiner, rosyface shiner, silverjaw minnow, sauger, shorthead redhorse, blackside darter, and yellow perch. Three new species not previously sampled were collected (river chub, highfin carpsucker, and river redhorse). No significant differences in average number of species per station were found between the RZ, URZ, and LRZ for 2011. Average number of species per station was significantly different in January and March of 2000 but by July 2000 the community was recovering and average number of species was not significantly different from subsequent sampling events. The same trend could be seen with IBI scores where the IBI in the upper river zone in March 2000 was significantly lower than 2002, 2004, 2007, and 2011.

Game species have also recovered since 1999 and provide ample angling opportunities. The majority of largemouth bass collected in 2011 were < 12" (84%) indicating strong recruitment. Quality largemouth bass (\geq 12 in) represented 9% of the total largemouth bass collected and preferred (\geq 15") made up 3%. Greater numbers of larger largemouth bass were collected in 2006 during a targeted black bass survey but very few largemouth bass were

collected in 2007. Few large old largemouth bass (\geq 20") were collected during this survey. Quality smallmouth bass (\geq 11 in) represented 21% of the total smallmouth bass caught and preferred (\geq 14") made up 9%. About 50% of the smallmouth bass collected in 2011 were < 7" indicating strong recruitment. A better presentation of larger older fish was documented with smallmouth bass than with largemouth bass and may be due to better sampling efficiency in shallower habitats where smallmouth bass reside. Memorable smallmouth bass (\geq 17") made up 2.6% of smallmouth bass collected. The percentage of smallmouth bass \geq 14" and 17" was greater in 2011 than in 2007 or 2006. The RSD quality, preferred, and memorable indices for smallmouth bass was greater than most other Indiana streams including the Blue River, Eel River, and Sugar Creek (Carnahan 2011, Benson 2005, and Wisener 2011). Channel catfish of various sizes were collected with 31% of fish collected greater than 14 in and 19% greater than 20 in. Crappie were most prominent in lacustrine stations with several black crappie in the preferred and memorable categories.

Recreational usage of the West Fork White River was witnessed on a regular basis including fishing, boating, and kayaking. Hoffman (2005) found that black bass accounted for 44% of fishing effort in the study area and regular black bass tournaments are held at the Broad Ripple Impoundment. Hoffman (2005) found that angling pressure increased from 2002 to 2004 and it is assumed this trend has continued. Even with increasing angling pressure, harvest of fish on the West Fork White River is minimal, especially for black bass species (Hoffman 2005). Personal communication with anglers during the 2011 survey indicates that many still have concerns about water quality and fish contamination issues. According to the Indiana Department of Environmental Management (2010), the consumption advisory of "DO NOT EAT" is listed for channel catfish above the Broad Ripple Dam which affects all stations except 15, 16, and 17. Black bass and rock bass carry a Group 3 rating for the entire 2011 sample area which recommends one meal/month. Hoffman (2005) documented only 7.8% harvest for black bass and 15% harvest for channel catfish. Hoffman (2007a) found virtually no harvest of smallmouth bass based on modeling using otoliths. Similar techniques were used to analyze the 2011 survey data and exploitation was estimated at 2%. Hoffman (2007a) found an exploitation rate of 5% for largemouth bass which is similar to the 7% exploitation rate found in 2011. Six sauger were collected and are probably remnants from 2002 to 2005 stockings. Sauger typically live to about 8 years old but some have been documented as old as 13 and with no natural

reproduction documented, the sauger fishery will likely decline in the future. However, Hoffman (2005) found that no anglers were specifically targeting sauger and at this time no further stockings of sauger are recommended.

The 1999 fish kill zone has better habitat than a large portion of the WFWR. Hoffman (2007b) surveyed the stretches of the WFWR downstream of the fish kill zone and found QHEI scores ranging from 44 to 66 while the lowest QHEI score for the fish kill zone was 62 and several stations had QHEI scores in the 80s. Hoffman (2007b) had IBI scores ranging from fair to very good while IBIs in the fish kill zone ranged from good to exceptional. Even with good to very good habitat and good to exceptional IBI scores, water quality issues are still evident in the fish kill zone. Large algae blooms were evident in the lacustrine stations and aquatic vegetation is becoming a nuisance in bays with private docks and boat traffic according to residents. Combined sewage overflows from major municipalities are still a concern for water quality and the WFWR is still listed as impaired for *E. coli*. However, several major projects are underway which should reduce the amount of effluent discharged into the WFWR further improving water quality. Indianapolis, IN has a project underway which will reduce the average combined sewage overflow frequency from 80 times/year to 4 times/year by 2025 (City of Indianapolis 2006).

The West Fork White River has had a troubled history with the last major event being the 1999 fish kill. Since then, the river has recovered with the help of DNR fish stockings, monitoring, habitat improvements, and public awareness. Fish stockings likely accelerated the recovery of game fish species. Shorthead redhorse, bigmouth buffalo, and freshwater drum were not collected in subsequent surveys but were stocked at very low densities compared to other fish. As part of the settlement, 283 acres of land have been acquired with an additional 265 acres entered into conservation easements to protect the riparian corridor and improve access. Several DNR partners including Smallmouth Bass Alliance and Friends of the White River have contributed significant time and money to raise public awareness about the West Fork White River and improve habitat and the fishery. Habitat improvements within the watershed are ongoing and strides are being made to further improve water quality.

RECOMMENDATIONS

- Monitoring should be conducted in the next 5 to 10 years. The number of stations should be reduced to eliminate stations where access from private property is needed.
- Conduct targeted black bass sampling in 2013.

LITERATURE CITED

- Anderson, R. O. and R. M. Neumann. 1996. Length, weight, and structural indices. Pages 447-482 *in* B. R. Murphy and D. W. Willis, editors. Fisheries techniques, 2nd edition. American Fisheries Society, Bethesda, Maryland.
- Ball, R.L. 2000. The March 2000 fisheries survey of the West Fork White River that was affected by the December 1999 fish kill. Department of Natural Resources, Division of Fish and Wildlife, Indianapolis, Indiana.
- Ball, R.L. 2002a. The assessment of fish losses from the West Fork White River. Indiana Department of Natural Resources, Division of Fish and Wildlife, Indianapolis, Indiana.
- Ball, R. L. 2002b. The 2001 fisheries survey of the fish kill reaches of the West Fork White River in Marion, Hamilton and Madison Counties. Indiana Department of Natural Resources, Division of Fish and Wildlife, Indianapolis, Indiana.
- Benson, A.C. 2005. 2004 evaluation of game fish populations in the Eel River, Wabash, Miami, and Cass Counties. Indiana Department of Natural Resources, Division of Fish and Wildlife, Indianapolis, Indiana.
- Carnahan, D.P. 2011. Blue River game fish population estimates. Indiana Department of Natural Resources, Division of Fish and Wildlife, Indianapolis, Indiana.
- City of Indianapolis. 2006. Long term control plan report. http://www.citizenswater.com/pdf/LongTermControlPlan/Section07.pdf
- Gablehouse, D.W. 1984. A length-categorization system to assess fish stocks. North American Journal of Fisheries Management 4:273-285.
- Hoffman, K. 2005. 2004 recreational use survey of the West Fork White River. Indiana Department of Natural Resources, Division of Fish and Wildlife, Indianapolis, Indiana.
- Hoffman, K. 2007a. West Fork White River black bass, 2006. Management Brief, Indiana Department of Natural Resources, Division of Fish and Wildlife, Indianapolis, Indiana.
- Hoffman, K. 2007b. White River basin survey: West Fork White River, 2004. Indiana Department of Natural Resources, Division of Fish and Wildlife, Indianapolis, Indiana.

- Indiana Department of Environmental Management. 2010. 2010 Indiana Fish Consumption Advisory. Indianapolis, Indiana. http://www.in.gov/isdh/files/2010_FCA.pdf.
- Keller, D. C. 2000. Initial assessment of the December 1999 fish kill on the West Fork of White River. Indiana Department of Natural Resources, Division of Fish and Wildlife, Indianapolis, Indiana.
- Kingsley, D. 1983. West Fork White River Marion County Stream Survey Report. . Indiana Department of Natural Resources, Division of Fish and Wildlife, Indianapolis, Indiana.
- Rankin, E. T. 1989. The qualitative habitat evaluation index (QHEI): rationale, methods, and applications. State of Ohio Environmental Protection Agency, Division of Water Quality Planning and Assessment. Columbus, Ohio.
- U. S. Department of the Interior, Fish and Wildlife Service, Indiana Department of Natural Resources, and Indiana Department of Environmental Management. 2003. The natural resource damage assessment: final restoration plan, White River, Marion, Hamilton, and Madison County, Indiana.
- Wisener, J.R., 2011. Evaluation of game fish populations in Sugar Creek. Indiana Department of Natural Resources, Division of Fish and Wildlife, Indianapolis, Indiana.

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Table 1. Stations used in fall fishery surveys on the West Fork White River, 2001 to 2011.

Zone	Site No.	Station Location	Station Type	River Mile ¹
	1	Mounds State Park Canoe Launch	riffle	304.2
Reference zone	2	Raible Ave. Bridge, Anderson	run	297.2
	3	Madison County Rd 600W Bridge	run	291.6
	4	St. Rd. 13 bridge, Perkinsville	riffle	285.5
	5	Coffey Grounds, near Strawtown	run	282.3
Upper	6	Clare Impoundment	lacustrine	276.3
river zone	7	Noblesville Public Access Site	run	270.0
	8	St. Rd. 32 Bridge, Noblesville	riffle	269.4
	9	Above 116 th St. Bridge	riffle	259.7
	10	Below 116 th St. Bridge	run	259.3
	11	Allisonville Rd. Bridge ²	riffle	
	12	Upper Broad Ripple Impoundment	lacustrine	252.7
	13	Landings Pit	lacustrine	252.0
Lower	14	Lower Broad Ripple Impoundment	lacustrine	248.7
river zone	15	Meridian Street Bridge	riffle	246.9
	16	53 rd Street, Indianapolis	riffle	244.6
	17	Lake Indy	lacustrine	240.2

¹Calculated using: Rivermiles [computer file]. Indianapolis, IN: Indiana Department of Natural Resources, 2010.

²Not sampled in 2004, 2007, or 2011.

Table 2. Families and species collected from West Fork White River, fall 2011.

	Number	% No.	Weight	% Wt.
Clupeidae - Herrings	201	2.8	54.42	3.4
Gizzard shad				
Esocidae - Pikes	9	0.1	0.44	< 0.1
Redfin pickerel				
Cyprinidae - Carps and Minnows	2676	37.5	446.91	28.2
Blacknose dace	3	0.0	0.01	< 0.1
Bluntnose minnow	598	8.4	5.84	0.4
Central stoneroller	363	5.1	8.76	0.6
Common carp	46	0.6	422.36	26.6
Creek chub	29	0.4	0.16	< 0.1
Golden shiner	9	0.1	0.76	< 0.1
Redfin shiner	1	0.0	0.01	< 0.1
River chub	3	0.0	0.03	< 0.1
Rosyface shiner	29	0.4	0.26	< 0.1
Sand shiner	645	9.0	2.58	0.2
Silver shiner	25	0.4	0.55	< 0.1
Silverjaw minnow	10	0.1	0.03	< 0.1
Spotfin shiner	837	11.7	4.33	0.3
Striped shiner	10	0.1	0.32	< 0.1
Suckermouth minnow	68	1.0	0.91	0.1
Catostomidae - Suckers	651	9.1	439.33	27.7
Black redhorse	114	1.6	113.47	7.1
Golden redhorse	116	1.6	92.68	5.8
Highfin carpsucker	3	< 0.0	3.34	0.2
Northern hog sucker	292	4.1	69.44	4.4
Quillback	22	0.3	37.89	2.4
River carpsucker	21	0.3	33.34	2.1
River redhorse	2	<0.0	1.89	0.1
Silver redhorse	9	0.1	25.32	1.6
Spotted sucker	62	0.9	56.20	3.5
White sucker	10	0.1	5.76	0.4
Ictaluridae - Catfishes	200	2.8	317.57	20.0
Channel catfish	186	2.6	303.70	19.1
Flathead catfish	4	0.1	11.26	0.7
Stonecat	3	< 0.0	0.02	< 0.1
Yellow bullhead	7	0.1	2.59	0.2
Fundulidae - Killifishes	6	0.1	0.03	< 0.1
Blackstripe topminnow				
Poeciliidae - Livebearers	2	< 0.1	0.01	< 0.1
Western mosquitofish				
Atherinidae - Silversides	20	0.3	0.10	< 0.1
Brook silverside				
Cottidae - Sculpins	28	0.4	0.32	< 0.1
Mottled sculpin				
*				
Moronidae - Temperate basses	81	1.1	16.73	1.1
•	81 9	1.1 0.1	16.73 1.33	1.1 0.1

	Number	% No.	Weight	% Wt.
Centrarchidae - Sunfishes	2,946	41.3	299.51	18.9
Black crappie	77	1.1	19.95	1.3
Bluegill	1012	14.2	45.90	2.9
Green sunfish	183	2.6	6.21	0.4
Largemouth bass	223	3.1	47.72	3.0
Lepomis hybrid	6	0.1	0.51	< 0.1
Longear sunfish	992	13.9	45.20	2.8
Orangespotted sunfish	45	0.6	5.69	0.4
Redear sunfish	4	0.1	9.71	0.6
Rock bass	221	3.1	50.36	3.2
Smallmouth bass	154	2.2	60.91	3.8
Warmouth	5	0.1	0.31	< 0.1
White crappie	24	0.3	6.72	0.4
Percidae - Perches	317	4.4	11.87	0.7
Blackside darter	3	< 0.1	0.02	< 0.1
Greenside darter	103	1.4	0.90	0.1
Johnny darter	51	0.7	0.19	< 0.1
Logperch	44	0.6	0.73	< 0.1
Orangethroat darter	7	0.1	0.04	< 0.1
Rainbow darter	92	1.3	0.33	< 0.1
Sauger	6	0.1	9.61	0.6
Slenderhead darter	8	0.1	0.05	< 0.1
Yellow perch	3	< 0.1	0.32	< 0.1
			1,587.2	
Total	7,137		4	

Table 3. Families and species collected from West Fork White River, fall 1983, 2001 to 2004, 2007, and 2011.

	2011	2007	2004	2003*	2002	2001	1983
Amiidaie-Bowfin							
Bowfin							X
Clupeidae - Herrings							
Gizzard shad	X	X	X	X	X	X	X
Esocidae - Pikes							
Redfin pickerel	X	X	X	X	X		
Cyprinidae - Carps and Minnows							
Blacknose dace	X						
Bluntnose minnow	X	X	X	X	X	X	X
Central stoneroller	X	X	X		X	X	X
Common carp	X	X	X	X	X	X	X
Creek chub	X	X	X		X	X	X
Emerald shiner						X	
Fathead minnow		X	X			X	
Goldfish							X
Golden shiner	X	X	X		X	X	X
Redfin shiner	X				X		
River chub	X						
Roseyface shiner	X	X	X		X		
Sand shiner	X	X	X	X	X	X	X
Silver shiner	X	X	X	X	X	X	
Silverjaw minnow	X		X		X	X	X
Spotfin shiner	X	X	X	X	X	X	X
Steelcolor shiner						X	
Striped shiner	X	X	X	X	X	X	X
Suckermouth minnow	X	X	X		X	X	X
Catostomidae - Suckers							
Bigmouth buffalo							X
Black redhorse	X	X	X	X	X	X	
Golden redhorse	X	X	X	X	X	X	X
Highfin carpsucker	X						
Northern hog sucker	X	X	X	X	X	X	X
Quillback	X	X	X	X	X	X	X
River carpsucker	X	X	X	X		X	
River redhorse	X						
Shorthead redhorse			X	X			
Silver redhorse	X	X	X	X	X	X	
Spotted sucker	X	X	X	X	X	X	X
White sucker	X	X	X	X	X	X	X
Ictaluridae - Catfishes							
Black bullhead					X	X	
Channel catfish	X	X	X	X	X	X	X
Flathead catfish	X	X	X	X	X	X	X
Stonecat	X	X	X		X	X	
Yellow bullhead	X	X	X	X	X	X	X
Fundulidae - Killifishes							
Blackstripe topminnow	X	X	X	X	X		
Poeciliidae - Livebearers							
Western mosquitofish	X				X		
cotorii mooquitoribii	21	13			4.1		

13

Atherinidae - Silversides							
Brook silverside	X	X	X	X	X		X
Cottidae - Sculpins							
Mottled sculpin	X	X	X		X	X	
Moronidae - Temperate basses							
White bass	X	X	X	X	X		
Yellow bass	X	X	X	X	X	X	
Centrarchidae - Sunfishes							
Black crappie	X	X	X	X	X	X	X
Bluegill	X	X	X	X	X	X	X
Green sunfish	X	X	X	X	X	X	X
Largemouth bass	X	X	X	X	X	X	X
Longear sunfish	X	X	X	X	X	X	X
Orangespotted sunfish	X	X		X	X	X	X
Redear sunfish	X	X	X	X	X	X	
Rock bass	X	X	X	X	X	X	X
Smallmouth bass	X		X	X	X	X	X
Spotted bass		X		X	X	X	X
Warmouth	X	X	X	X	X		
White crappie	X	X	X	X	X	X	X
Percidae - Perches							
Blackside darter	X		X		X	X	
Greenside darter	X	X	X		X	X	
Johnny darter	X	X	X	X	X	X	
Logperch	X	X	X	X	X	X	
Orangethroat darter	X	X	X		X	X	
Rainbow darter	X	X	X		X	X	X
Sauger	X	X		X	X		
Slenderhead darter	X	X	X			X	X
Yellow perch	X		X		X	X	
			5				
Number of species	57	50	2	38*	53	49	35

^{*}Riffle stations not sampled

Table 4. Average number of species per station for the reference, upper river, and lower river zones, West Fork White River, 2000 to 2011.

Sample	Reference zone	Upper river zone	Lower river zone
January 2000	18.0	5.3*	10.3
March 2000	21.5	6.0*	17.8
July 2000	18.5	14.2	16.5
Fall 2001	21.0	18.0	22.8
Fall 2002	22.0	20.9	23.2
Fall 2003		20.2	17.8
Fall 2004	18.5	18.9	18.8
Fall 2007	19.5	18.4	24.2
Fall 2011	21.0	21.0	21.8

^{*} Indicates statistical difference (p=0.05).

Table 5. Average Index of Biological Integrity scores for run and riffle stations with in the reference, upper river, and lower river zones, West Fork White River, 2004 to 2011.

Sample	Reference zone	Upper river zone	Lower river zone
March 2000	45	23*	35
Fall 2002	48	43	49
Fall 2004	46	49	48
Fall 2007	43	46	47
Fall 2011	45	52	49

^{*} Indicates statistical difference (*p*=0.05).

Table 6. Relative stock density values of selected species from fall sampling of the West Fork White River, 2001 to 2011. Stock number is the number of fish of stock size in the sample. Only smallmouth and largemouth bass were collected in 2006.

Species	Index and length range	2001	2002	2003	2004	2006	2007	2011
Channel	RSD-Q (11.0-15.9")	28	39	80	88		91	81
catfish	RSD-P (16.0-23.9")	-	4	6	4		31	35
	RSD-M (24.0-27.9")	-	1	0	0		0	6
	Stock No.						65	63
	RSD-Q (4.0-6.9")	14	22	52	35		62	44
Rock bass	RSD-P (7.0-8.9")	-	0	2	1		6	0
	RSD-M (9.0-10.9")	-	0	0	0		0	0
	Stock No.						126	195
Largemouth	RSD-Q (8.0-11.9")	37	52	54	40	49	*	57
bass	RSD-P (12.0-14.9")	16	24	20	8	25	*	20
	RSD-M (15.0-19.9")	5	2	2	0	1	*	0
	Stock No.					68	23	35
Smallmouth	RSD-Q (7.0-10.9")	13	20	37	35	51	52	43
bass	RSD-P (11.0-13.9")	5	5	5	9	9	17	19
	RSD-M (14.0-16.9")	0	0	0	1	1	4	5
	Stock No.					147	104	74

^{*}Sample size too small for determining stock densities.

Table 7. Relative weight values of selected species from fall sampling of the West Fork White River, 2004 to 2011.

Species	Index and length range	2004	2007	2011
	W _r -S (4.0-6.9")	102.43	100.95	100.00
Rock bass	W _r -Q (7.0-8.9")	102.72	112.01	107.58
	W _r -P (9.0-10.9")	109.59	115.45	000.00
	W _r -S (8.0-11.9")	93.67	97.54	98.72
Largemouth bass	W _r -Q (12.0-14.9")	97.27	107.00	104.67
	W _r -P (15.0-19.9")	104.66	102.65	104.08
	W _r -S (7.0-10.9")	92.53	89.09	94.48
Smallmouth bass	W _r -Q (11.0-13.9")	85.30	90.26	90.19
	W _r -P (14.0-16.9")	91.72	91.72	87.27
	W _r -T (17.0-19.9")	85.75	83.84	86.88

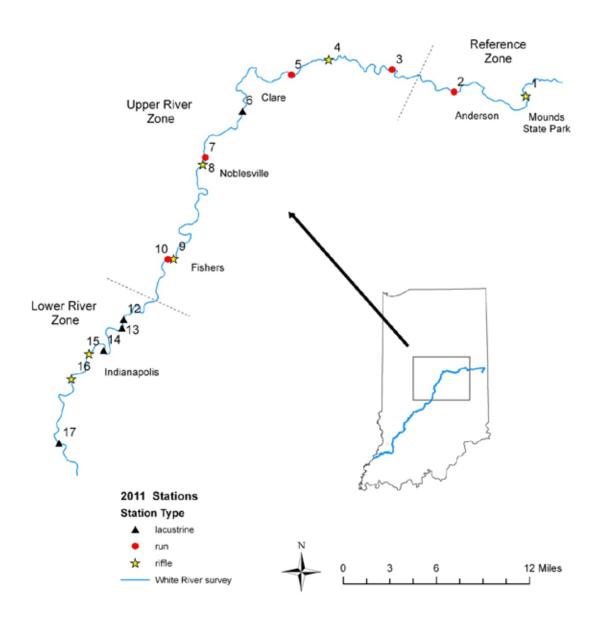


Figure 1. Fall fishery sampling stations for the West Fork White River 2011.

Appendix

Stream habitat evaluation form by station

QHEI form for riffle and run stations by station

Name, number, percentage, size, weight of fish collected by station

Fish length and age data

STREAM: W	REAM: West Fork White River, Mounds SP Canoe Launch RIVER MILE: 304.2										
NEAREST TO	WN: Anders	son			C	OUNTY: <u>Ma</u>	dison				
QUADRANGL	.E:	Middletov	wn	TWP:	19N	RNG: _	8E	_SEC:	16		
LATITUDE:	40.106063				LONGITUE	DE: <u>-85.624</u>	296				
LATITUDE:	40.105632				LONGITUE	DE: <u>-85.622</u>	631				
U.S.G.S. GUA	AGING STATIO	ON LOCATION	l:	Anderso	on 03348000		AVG. DISCHARGE	(cfs):	116		
IS REACH RE	EPRESENTAT	IVE OF STREA	AM (Y/N)	N	IF NOT, WHY? T	his is State	Park property;	downstre	am is		
the city of A	Anderson, a	nd upstream	n is private	land, mostly	farm land.						
DESCRIPTIO	N OF SAMPLE	E SITE (Access	s, length, dire	ection sampled):	Canoe launch a	t Mounds S	State Park. Wide	e ripariar	1		
corridor on	both sides	of river.									
				COLLECTIO	ON SUMMARY						
DATE:		9/20/2011		GEAR:	Barge	elect.	EFFORT:	0.88	83 h		
CREW: Kola	ıks, Kittaka,	Fisher, Dav	/is								
OTHER GEAL	R/EFFORT: N	one					WATER STAGE: _	Lo	ow		
CANOPY (%C	DPEN):	65		PHOTOS (Y/N):	Υ	SECC	HI DISK (inches):	3	3O		
AIR TEMP (F)):	65	\	WATER TEMP (F):	65.	3	D.O. (ppm): _	9	.3		
CONDUCTIVI	TY:	940	0	pH:	8.2		_ ALKALINITY: _	22	2.3		
TDS:					460						
STREAM ME	ASUREMENT	S AVG. WIE	OTH:	131.4'	AVG. DEPTH:	1.9	'MAX [DEPTH:	4'		
STATION LE	NGTH: (1st da	te)	4	492'	(2nd d	ate)					
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		DEDTH (in)									
WIDTH (ft)	23	DEPTH (in)	25	7							
117	25	24	25	1	Г	8	9				
135		14	9	1							
168	21	8	12	1		ECTIVE TING	AESTHETIC RATING				
144	8	18	29	1	(1-	10)	(1-10)				
93	38	36	48	1							
				<u></u>		-:	a baden	4 -! !	1		
		OLLUTION IMP	ACTS: <u>EX</u>	cellent riparia	n cover on east	side of rive	er, but iess on w	est side.	LOW		
banks islai	nd with tree:	s on it.									

STREAM: S	REAM: Station 2, Raible Ave. Bridge, West Fork White River RIVER MILE: 297.2											
NEAREST TO	WN: Ander	son			COUN	ITY: Mad	lison					
QUADRANGL	.E:	Anderson S	outh	TWP:	19N	RNG:	7E	_SEC:_	10,11			
LATITUDE:	40.11070				LONGITUDE: -	85.7110	2					
LATITUDE:	40.11296				LONGITUDE: -	85.7160	6					
U.S.G.S. GUA	AGING STATIO	ON LOCATION	l:	Anderso	on 03348000		AVG. DISCHARGE	(cfs):	161			
IS REACH RE	PRESENTAT	IVE OF STRE	AM (Y/N)	Y	IF NOT, WHY?							
				,	Access at Raible A				and			
sampled do	ownstream t	to WWTP o	utfall, sar	mpled entire so	outh bank and only l	ower 2/3	of north bank.					
water.				COLLECTIO	ON SUMMARY							
		0/00/0044						0.0	250 h			
				GEAR:	D.C. Boa	τ	EFFORT: _	0.6	153 N			
CREW: Wisener, King, Cole OTHER GEAR/EFFORT: none WATER STAGE: Low												
					N OO 4							
					63.1							
					8.8		ALKALINITY: _		NA			
						4.01			0.01			
			·		AVG. DEPTH:				_			
STATION LEI	NGTH: (1st da	te)		1,267'	(2nd date)							
WIDTH (ft)		DEPTH (in)		_								
123	24	29	8									
117	24	27	28									
132	28	27	13		SUBJECTI	VE	AESTHETIC					
135	30	26	17		RATING	i	RATING					
156	27	14	15		(1-10)		(1-10)					
ADDITIONAL (COMMENTS/P	OLLUTION IMP	ACTS: C	ity encroaches	on east bank, a go	If course	e is on west ba	nk. Not	much			
of a riparia	n corridor, a	and about ha	alf of sho	eline has no ri	parian habitat. Boa	ting and	fishing access	is locat	ed			
on the east	side above	bridge.										

STREAM: S	Station 3, County Road 600 W., West Fork White River RIVER MILE: 291.6										
NEAREST TO	WN: Perkin	sville			COUN	TY: Madis	son				
QUADRANGI	-E:	Frankto	n	TWP:	19 N	RNG:	6E	_SEC:_	1		
LATITUDE:	40.13252				LONGITUDE: -{	85.78627	7				
LATITUDE:	40.13453				LONGITUDE: -{	85.79384	4				
U.S.G.S. GUA	AGING STATIO	ON LOCATION	l:	Anderso	on 03348000	A\	/G. DISCHARGE	(cfs):	135		
IS REACH RE	EPRESENTAT	IVE OF STRE	AM (Y/N)	Υ	IF NOT, WHY?						
DESCRIPTIO	N OF SAMPLE	E SITE (Acces	s, length, di	rection sampled):	Started just above b	oridge an	d shocked dov	wnstrea	m on the		
north side	of the river t	o first riffle (15 min) a	nd then on so	uth side of stream be	elow riffle	to the next ri	ffle (15	min).		
				COLLECTIO	ON SUMMARY						
DATE:	1	0/24/2011		GEAR:	DC Boat		EFFORT: _	0.5	i04 h		
CREW: Wis	ener, Lang,	Bellman									
OTHER GEA	R/EFFORT: no	one				W	ATER STAGE: _	L	OW		
CANOPY (%C	DPEN):	85		PHOTOS (Y/N):	N	SECCHI	DISK (inches):	Во	ttom		
AIR TEMP (F):	60		WATER TEMP (F):	53.4		_ D.O. (ppm): _	8	3.9		
CONDUCTIV	TY:	520	0	pH:	9		ALKALINITY: _	١	NA		
TDS:											
STREAM ME	ASUREMENT	S AVG. WIE	OTH:	153'	AVG. DEPTH:	2.9'	MAX [DEPTH:_	7.5'		
STATION LEI	NGTH: (1st da	te)	2	2,713'	(2nd date)						
WIDTH (ft)		DEPTH (in)									
144	28	43	30								
159	27	26	33								
162	75	54	19		SUBJECTI\	/ F	AESTHETIC				
135	25	27	31		RATING	<i>-</i>	RATING				
165	41	28	40		(1-10)		(1-10)				
133	r 1		70	1							
ADDITIONAL (COMMENTS/D	OLLUTION IMP	PACTS:	<u> </u>							
ADDITIONAL V		OLLO I ION IIVIF									

STREAM: S	Station 4, Perkinsville, West Fork White River RIVER MILE: 285.5											
NEAREST TO	wn: Perkin	sville			COUNTY	∕: <u>Madison</u>						
QUADRANGL	.E:	Frankto	n	TWP:	20N R	NG: 6E	SEC:33					
LATITUDE:	40.142819				LONGITUDE: -85	5.858558						
LATITUDE:	40.142894				LONGITUDE: <u>-85</u>	5.860606						
U.S.G.S. GUA	AGING STATIO	ON LOCATION	:	Anderso	on 03348000	AVG. DISCHARG	E (cfs): 116					
IS REACH RE	EPRESENTAT	IVE OF STRE	AM (Y/N)	Y	IF NOT, WHY?							
DESCRIPTIO	N OF SAMPLE	E SITE (Access	s, length, di	rection sampled):	Overhanging maples	, island on west side	of site. Site was					
entire lengt	h of island.	Riffle, pool a	at head o	f site.								
				COLLECTIO	ON SUMMARY							
DATE:	!	9/20/2011		GEAR:	Barge elect.	EFFORT:	0.698 h					
CREW: Kola	ıks, Kittaka,	Fisher, Dav										
OTHER GEAL	R/EFFORT: no	one				WATER STAGE:	Low					
CANOPY (%C	DPEN):	70%		PHOTOS (Y/N):	Υ	SECCHI DISK (inches):	30					
AIR TEMP (F)):	70		WATER TEMP (F):	67.7	D.O. (ppm):	9.22					
CONDUCTIVI	TY:	860)	pH:	pH: 8.3 ALKALINITY:							
TDS:					430							
STREAM ME	ASUREMENTS	S AVG. WID	TH:	92.4'	AVG. DEPTH:	3.1' MAX	DEPTH: 4'					
STATION LE	NGTH: (1st da	te)		574'	(2nd date)							
WIDTH (ft)		DEPTH (in)										
102	20	22	29									
105	48	48	42		7	7						
75	37	36	32		SUBJECTIVE	AESTHETIC						
90	38	48	36		RATING	RATING						
90	38	39	37		(1-10)	(1-10)						
ADDITIONAL (COMMENTS/PO	OLLUTION IMP	ACTS: Ca	ampground with m	nowed area along north bar	nk. Slight smell of sewage	e. Houses close					
to shore on no	orth bank, also	much cultivate	ed land in cl	ose proximity. The	e upper river bottom had re	emnants of a fish weir in i	t, but had					

not been usable in years. Riffle had rocky bottom, mostly silt/and bottom elsewhere.

STREAM: S	EAM: Station 5, Coffey Grounds, West Fork White River RIVER MILE: 282.3										
NEAREST TO	OWN: Strawt	own			COUNT	Y: <u>Hamilto</u>	on				
QUADRANGI	.E:	Omega		TWP:	19N F	RNG:	5E	_SEC:_	1		
LATITUDE:	40.12857				LONGITUDE: -8	35.908452					
LATITUDE:	40.13131				LONGITUDE: -8	35.914104					
U.S.G.S. GUA	AGING STATIO	ON LOCATION	:	Noblesvi	ille 03350800	AVG	DISCHARGE	(cfs):	350		
IS REACH RE	EPRESENTAT	IVE OF STREA	AM (Y/N)	Υ	IF NOT, WHY?						
DESCRIPTIO	N OF SAMPLE	E SITE (Access	, length, dire	ection sampled):	Started at upper riffle	e, came do	own right sic	le, right	of		
island at lo	wer riffle. A	lso did left s	ide (NW s	ide) in both p	ools.						
				001150710	NA CUMANA A DV						
				COLLECTIO	ON SUMMARY						
DATE:	1	0/24/2011		GEAR:	DC Boat		EFFORT: _	0.3	89 h		
CREW: Wis	ener, Kolak	s, Cole									
OTHER GEA	R/EFFORT: no	one				WAT	ER STAGE: _	L	ow		
CANOPY (%C	DPEN):	90%	F	PHOTOS (Y/N):	N	SECCHI D	ISK (inches):	N	NA .		
AIR TEMP (F):	65	V	VATER TEMP (F):	56		D.O. (ppm): _	9	.66		
CONDUCTIV	TY:	510)	pH:	9.1	A	LKALINITY: _	١	NA .		
TDS:											
STREAM ME	ASUREMENTS	S AVG. WID	TH:	148'	AVG. DEPTH:	2.0'	MAX [DEPTH:_	4'		
STATION LEI	NGTH: (1st dat	te)	1,	950'	(2nd date)						
WIDTH (ft)		DEPTH (in)									
140	16	40	18	1							
138	41	44	21	1							
182	16	18	13]	SUBJECTIV	E A	AESTHETIC				
162	20	28	28		RATING		RATING				
117	18	26	17		(1-10)		(1-10)				
ADDITIONAL (COMMENTS/PO	OLLUTION IMPA	ACTS:	_							

STREAM: St	REAM: Station 6, Clare, West Fork White River RIVER MILE: 276.3										
NEAREST TO	พท: <u>Clare</u>				COUNT	Y: Hamilton					
QUADRANGL	.E:	Riverwoo	od	TWP:	19 N R	NG: 5	iΕ	SEC:	16		
LATITUDE:	40.10898				LONGITUDE: -8	5.96396					
LATITUDE:	40.09560				LONGITUDE: -8:	5.96839					
U.S.G.S. GUA	AGING STATIO	ON LOCATION	l:	Anderso	on 03348000	AVG. DIS	SCHARGE (cfs):	195		
IS REACH RE	PRESENTAT	IVE OF STRE	AM (Y/N)	N	IF NOT, WHY? Impour	nded stretch					
DESCRIPTIO	N OF SAMPLE	SITE (Acces	s, length, dire	ection sampled):	Sampled from dam upstre	am to above hig	h voltage tra	ansmissio	on lines.		
River has Cla	re on east ban	k, Riverwood c	on west bank;	very little riparia	an habitat. Many homes rig	ht on bank, also	RVs on US	E side.			
				COLLECTIO	ON SUMMARY						
DATE:		10/5/2011		GEAR:	DC Boat	E	FFORT:	1.02	28 h		
CREW: Cole	e, Kolaks, To	omaso									
OTHER GEAL	R/EFFORT: 3	Gill Nets, 3	Trap Nets			WATER S	STAGE:	Lo)W		
CANOPY (%C	DPEN):	75	F	PHOTOS (Y/N):	N	SECCHI DISK (inches):	60	O"		
AIR TEMP (F):	63	V	VATER TEMP (F):	57	D.O	. (ppm):	8.9	96		
CONDUCTIV	TY:	730	0	pH:	9.1	ALKA	LINITY:	N	Α		
TDS:											
STREAM ME	ASUREMENTS	S AVG. WIE	OTH:	282'	AVG. DEPTH:	5.6'	MAX DE	PTH:	11'		
STATION LE	NGTH: (1st dat	te)	4,	889'	(2nd date)						
		5-5-14									
WIDTH (ft)	00	DEPTH (in)	40	7							
398	36	30	48	-		Г	\neg				
286	66	60	42	-							
318	120	120	84	-	SUBJECTIVE RATING		HETIC TING				
240	84	72	84	-	(1-10)		·10)				
247	72	60	48	-	, ,	·	•				
201	48	72	72	_							
ADDITIONAL (COMMENTS/PO	OLLUTION IMP	ACTS: Por	wer plant hea	ated effluent discharge	ed at dam. Lit	tle riparia	n habita	at.		

STREAM: S	REAM: Station 7, Noblesville PAS, West Fork White River RIVER MILE: 270											
NEAREST TO	WN: Nobles	sville				COUNT	Y: <u>Hamil</u>	ton				
QUADRANGL	.E:	Noblesvi	lle	TWP:	19N	R	NG:	4E	SEC:	36		
LATITUDE:	40.05283				LON	IGITUDE: <u>-8</u>	6.01416					
LATITUDE:	40.04692				LON	IGITUDE: <u>-8</u> 0	6.01626					
U.S.G.S. GUA	AGING STATIO	ON LOCATION	l:	Noblesvi	lle 033508	00	AV	G. DISCHARGE	(cfs):	198		
IS REACH RE	EPRESENTAT	IVE OF STREA	AM (Y/N)	Υ	IF NOT, WH	łY?						
DESCRIPTIO	N OF SAMPLE	E SITE (Access	s, length, dir	ection sampled):	Access at	Noblesville	PAS, b	egan at shall	ow water	area		
upstream c	of access, sa	ampled both	banks do	wnstream to j	ust below	Logan St. I	oridge.					
				COLLECTIO	N SUMM	ARY						
DATE:		10/6/2011		GEAR:		DC Boat		EFFORT:	0.75	53 h		
CREW: Cole	CREW: Cole, Kolaks, Tomaso											
OTHER GEA	R/EFFORT: no	one					WA	TER STAGE:	Lo)W		
CANOPY (%0	OPEN):	90%		PHOTOS (Y/N):	N		SECCHI	DISK (inches):	Bot	tom		
AIR TEMP (F):	80		WATER TEMP (F):		59.2		_ D.O. (ppm): _	9.	.3		
CONDUCTIV	TY:	640)	pH:		9		ALKALINITY: _	23	9.4		
TDS:					460							
STREAM ME.	ASUREMENT	S AVG. WIE	DTH:	187'	AVG. DEP	ГН:	2.7'	MAX [DEPTH:	5'		
STATION LEI	NGTH: (1st da	te)	2	,112'		(2nd date)						
WIDTH (ft)		DEPTH (in)										
180	28	26	28	7								
183	54	42	33									
171	42	32	33			SUBJECTIVE	=	AESTHETIC				
192	53	28	17	1		RATING	-	RATING				
	40					(1-10)		(1-10)				
210	40	21	16									
ADDITIONAL	COMMENTO/D		ACTS: Pr	idaes homos	(E sida) k	vueinesses	(M) sids) infrings on l	hank Th	0		
		OLLUTION IMP		idges, homes	(⊏ siue), t	usinesses	(vv side	, mininge on i	ualik. In	.		
riparian cov	ver very nar	row to none:	xistent.									

STREAM: S	ation 8, HW	Y 32 bridge	, West F	ork White Rive	erRIVE	R MILE: <u>26</u>	9.4			
NEAREST TO	WN: Nobles	ville			COU	NTY: <u>Ham</u>	ilton			
QUADRANGI	.E:	Noblesvil	le	TWP:	19N	RNG:	4E	_SEC:_	36	
LATITUDE:	40.046745				LONGITUDE:	-86.0163	26			
LATITUDE:	40.046032				LONGITUDE:	-86.0174	16			
U.S.G.S. GUA	GING STATIC	N LOCATION	: <u> </u>	Noblesvi	lle 03350800	A	VG. DISCHARGE	E (cfs):	201	
IS REACH RE	PRESENTATI	VE OF STREA	AM (Y/N)	Y	IF NOT, WHY?					
DESCRIPTIO	N OF SAMPLE	SITE (Access	s, length, di	rection sampled):	Access from car lo	t on west	side of river. I	Highway	32	
bridge up to	and 20 fee	t above nex	t bridge.							
					ON SUMMARY					
DATE:	(9/20/2011		GEAR:	Barge ele	ct.	EFFORT:	0.5	85 h	
CREW: Kolaks, Kittaka, Fisher, Davis										
	R/EFFORT: nc									
					Y					
					66.9					
					7.5		ALKALINITY:	23	9.4	
·										
			·		AVG. DEPTH:	1.9'	MAX I	DEPTH:	3.8'	
STATION LEI	NGTH: (1st dat	e)		400'	(2nd date)					
WIDTH (ft)		DEPTH (in)								
186	16	16	35							
159	24	0	24		7		7			
165	11	15	16		SUBJECT	IVE	AESTHETIC			
141	42	28	24		RATINO	3	RATING			
129	46	26	26		(1-10)		(1-10)			
	27.8	17	25							
ADDITIONAL	COMMENTS/PC	DLLUTION IMP	ACTS: Ca	mpground with m	lowed area along north	bank. Hou	ses close			
to shore on no	orth bank, also	much cultivate	ed land in cl	ose proximity. The	e upper river bottom ha	d remnants	of a fish weir in it	, but had		
				stly silt/and botton						

STREAM: S	tation 9, Abo	ove 116th S	t. Bridge,	West Fork Wh	hite River RIV	ER MILE:	259.7		
NEAREST TO	own: <u>Trails</u>	End			COL	UNTY: <u>Ha</u>	milton		
QUADRANGI	-E:	Fishers	3	TWP:	17N	RNG:	4E	_SEC:	3
LATITUDE:	39.958346				LONGITUDE	:- <u>-86.05</u> 4	1240		
LATITUDE:	39.958107				LONGITUDE	: <u>-86.056</u>	6252		
U.S.G.S. GU	AGING STATIO	ON LOCATION	l:	Noblesvi	ille 03350800		AVG. DISCHARGE	cfs):	195
IS REACH RE	EPRESENTAT	IVE OF STRE	AM (Y/N)	Υ	IF NOT, WHY?				
		E SITE (Accesses, steep ba		•	Island 20 ft. wide	, riffles o	n both sides, sho	ocked bo	th
				COLLECTIO	ON SUMMARY				
DATE:		9/21/2011		GEAR:	Barge el	ect.	EFFORT:	0.74	48 h
CREW: Kola	aks, Kittaka,	Fisher, Dav	/is						
OTHER GEA	R/EFFORT: no	one					WATER STAGE:	Lo	ow
CANOPY (%0	DPEN):	70%		PHOTOS (Y/N):	Υ	SECO	CHI DISK (inches):	3	0"
AIR TEMP (F):	73		WATER TEMP (F):	69.9		D.O. (ppm):	9.	73
CONDUCTIV	ITY:	102	20	pH:	7.6		ALKALINITY:	23	9.4
TDS:					510				
STREAM ME	ASUREMENT	S AVG. WIE	OTH:	221.4'	AVG. DEPTH:	2.0	O' MAX I	DEPTH:	4.1'
STATION LE	NGTH: (1st da	te)		576'	(2nd dat	e)			
WIDTH (ft)		DEPTH (in)							
234	46	13	37						
249	28	10	25			1			
249	21	0	32		SUBJEC	TIVE	AESTHETIC		
204	19	8	18		RATIN	NG	RATING		
171	26	28	43		(1-10	0)	(1-10)		
ADDITIONAL	COMMENTS/P	OLLUTION IMP	ACTS: H	 lomes with law	ns on high east ba	ank. Rip	arian habitat mo	re extens	sive on .
west bank.									

STREAM: St	TREAM: Station 10, 116th St., West Fork White River RIVER MILE: 259.3										
NEAREST TO	wn: Fishers	3			COUNT	тү: <u>Hami</u>	lton				
QUADRANGL	E:	Fishers	i	TWP:	17N F	RNG:	4E	_SEC:	3		
LATITUDE:	39.95761				LONGITUDE: -8	36.06096	34				
LATITUDE:	39.95524				LONGITUDE: -8	36.06651	1				
U.S.G.S. GUA	GING STATIC	N LOCATION	:	Noblesvil	lle 03350800	A\	/G. DISCHARGE	(cfs):	198		
IS REACH RE	PRESENTATI	VE OF STREA	AM (Y/N)	Y	IF NOT, WHY?						
DESCRIPTION	N OF SAMPLE	SITE (Access	s, length, di	rection sampled):	Access at 116th St.	ramp, be	egan at shallo	w area			
upstream o	f ramp, sho	cked downs	tream to	riffle/island dov	wnstream of bridge,	sampled	l only west ba	nk and e	ast		
bank was e	xtremely sh	allow.									
				COLLECTIO	N SUMMARY						
DATE:	•	10/6/2011		GEAR:	DC Boat		EFFORT:	0.76	63 h		
CREW: Cole	, Kolaks, To	omaso									
OTHER GEAR	R/EFFORT: no	ne				W	ATER STAGE:	Lo	DW		
CANOPY (%C	PEN):	95%		PHOTOS (Y/N):	N	_ SECCHI	DISK (inches):	Bot	tom		
AIR TEMP (F)	:	82		WATER TEMP (F):	65.1		D.O. (ppm): _	10	.25		
CONDUCTIVI	TY:	650)	pH:	8.8		ALKALINITY: _	N	ΙΑ		
TDS:											
STREAM MEA	SUREMENTS	AVG. WID	TH:	210'	AVG. DEPTH:	2.8'	MAX I	DEPTH:	4'		
STATION LEN	IGTH: (1st dat	e)	•	1,801'	(2nd date)						
WIDTH (ft)		DEPTH (in)									
213	26	24	30								
213	18	25	41								
174	48	51	31		SUBJECTIV	/E	AESTHETIC				
231	63	50	43		RATING		RATING				
219	17	29	24	_	(1-10)		(1-10)				
ADDITIONAL O	COMMENTS/PC	DLLUTION IMP	ACTS: N	ot much riparia	ın habitat on east sh	ore; hon	nes on bank, l	awns, so	ome		
trees. More	trees on we	est shore, w	here ban	k is lower.							

STREAM: S	tation 12, U	pper Broad I	Ripple, W	est Fork White	e River RIVE	R MILE: <u>2</u>	252.7					
NEAREST TO	OWN: Nora				COU	NTY: <u>Hai</u>	milton					
QUADRANGL	-E:	Fishers	1	TWP:	17N	RNG:	4E	_SEC:_	30, 19			
LATITUDE:	39.89976				LONGITUDE:	-86.116	230					
LATITUDE:	39.90537				LONGITUDE:	-86.114	100					
U.S.G.S. GUA	AGING STATIO	ON LOCATION	l:	Indianapo	olis 03353000		AVG. DISCHARGE	(cfs):	482			
IS REACH RE	EPRESENTAT	IVE OF STREA	AM (Y/N)	N	IF NOT, WHY? Impo	ounded s	stretch and shor	eline hiç	ghly			
developed.												
DESCRIPTIO	N OF SAMPLE	E SITE (Access	s, length, di	rection sampled):	This station extend	ds upstre	eam 2.08 miles	from the	;			
upstream e	edge of outle	et which join	s William	s Creek to the	end of the impoun	dment a	bove the conne	ction to	Sand			
Point Pit. M	lany homes	on banks, c	locks, plu	ıs boat access	to two pits with big	condos	, docks.					
				COLLECTIO	ON SUMMARY							
DATE:	1	10/11/2011		GEAR:	DC Boa	t	EFFORT:	1.0	38 h			
CREW: King	CREW: King, Kolaks, Cole											
OTHER GEA	R/EFFORT: no	one					WATER STAGE: _	L	.ow			
CANOPY (%0	DPEN):	85%		PHOTOS (Y/N):	N	_ SECC	HI DISK (inches):	(60			
AIR TEMP (F):	78		WATER TEMP (F):	67.3	D.O. (ppm):	9	.63				
CONDUCTIV	ITY:	810)	pH:	9.5		ALKALINITY:	1	۱A			
TDS:												
STREAM ME	ASUREMENT	S AVG. WIE	DTH:	224'	AVG. DEPTH:	7.8	MAX [DEPTH:_	14'			
STATION LEI	NGTH: (1st da	te)	1	1,000'	(2nd date))						
WIDTH (ft)		DEPTH (in)										
312	120	168	144									
200	108	132	144									
224	156	120	84		SUBJECT	IVE	AESTHETIC					
248	24	36	120		RATINO	3	RATING					
200	72	48	60		(1-10)		(1-10)					
160	36	48	60									
ADDITIONAL (COMMENTS/P	OLLUTION IMP	ACTS: R	iver channel w	ith slow current wh	en low,	max depth 12-1	3 feet, r	nostly			
hard botton	n.											

STREAM: S	REAM: Station 13, Landings Pit, West Fork White River RIVER MILE: 252											
NEAREST TO	wn: Glenda	ale Heights			COUN	TY: <u>Hamilton</u>	1					
QUADRANGL	.E:	Fishers	5	TWP:	17N I	RNG:	4E	SEC:	30			
LATITUDE:	39.89682				LONGITUDE: -	86.119370						
LATITUDE:	39.89375				LONGITUDE: -{	86.117880						
U.S.G.S. GUA	GING STATIO	ON LOCATION	l:	Indianapo	olis 03353000	AVG. I	DISCHARGE	(cfs):	527			
IS REACH RE	PRESENTAT	IVE OF STREA	AM (Y/N)	N	IF NOT, WHY? Forme	er gravel pit	left with a	connecti	on to			
the river.												
DESCRIPTIO	DESCRIPTION OF SAMPLE SITE (Access, length, direction sampled): A small, rather shallow former gravel pit with a thin riparian bank											
between river to east and the pit. West of pit is the Landings Apartments, with open lawn and a boat rental concession. There is some												
bank fishing opportunity. A narrow channel that is adequately deep for access by boat at low river stages connects it to river.												
				COLLECTIO	N SUMMARY							
DATE:	1	0/12/2011		GEAR:	DC Boat		EFFORT:	0.62	28 h			
CREW: Kola	CREW: Kolaks, Cole, King											
OTHER GEA	R/EFFORT: 3	Gill Nets, 3	Trap Nets	3		WATE	R STAGE: _	Lo)W			
CANOPY (%C	DPEN):	85		PHOTOS (Y/N):	N	SECCHI DIS	K (inches): _	1	4"			
AIR TEMP (F):	80		WATER TEMP (F):	65.7	D	o.O. (ppm): _	16	.03			
CONDUCTIV	TY:	660	0	pH:	9.6	ALF	KALINITY: _	N	A			
TDS:												
STREAM ME	ASUREMENT	S AVG. WIE	OTH:	301'	AVG. DEPTH:	11.7'	MAX [DEPTH:	21'			
STATION LEI	NGTH: (1st da	te)			(2nd date)							
WIDTH (ft)		DEPTH (in)		\neg								
80	120	252	144	_								
240	108	132	168	_								
440	180	132	84	_	SUBJECTIV		STHETIC					
360	120	144	156	_	RATING (1-10)		(1-10)					
384	144	132	84	_	/		,					
ADDITIONAL (COMMENTS/P	OLLUTION IMP	ACTS: AI	gae bloom pre	esent.							

STREAM: Station 14, Lower Broad Ripple, West Fork White River RIVER MILE: 248.7									
NEAREST TOWN: Carmel COUNTY: Marion									
QUADRANGLE: Carmel				TWP:	17N	RNG:	4E	_SEC:_	25, 36
LATITUDE: 39.87351 LONGITUDE: -86.140550									
LATITUDE: 39.88707					LONGITUDE: -86.136180				
U.S.G.S. GUA	AGING STATIO	ON LOCATION	:	Indianap	olis 03353000		AVG. DISCHARGE	(cfs): _	548
IS REACH REPRESENTATIVE OF STREAM (Y/N) N IF NOT, WHY? Impounded by high dam.									
DESCRIPTION OF SAMPLE SITE (Access, length, direction sampled): One public and various private ramps. Perhaps 1/3 of									
shoreline is	developed	. Station ext	ends froi	m Broad Ripple	e Dam upstrean	n about 1.7	miles to, and in	cluding	
outlet which	n joins Willia	ams Creek.							
COLLECTION SUMMARY									
DATE:	ATE: 10/4/2011			GEAR:	DC E	DC Boat		1.0)16 h
CREW: Cole	e, Kolaks, W	/isener							
OTHER GEA	R/EFFORT: 3	Gill Nets, 3	Trap Net	ts			WATER STAGE:	L	.ow
CANOPY (%OPEN): 95%				PHOTOS (Y/N):	N SE		CCHI DISK (inches): 84"		34"
AIR TEMP (F):	50	WATER TEMI		5	7	D.O. (ppm):	8.95	
CONDUCTIVITY:		880		pH:	9.2		ALKALINITY:	NA	
TDS:									
STREAM MEASUREMENTS AVG. WIDTH:			TH:	234'	AVG. DEPTH:	7	" MAX [DEPTH:_	14'
STATION LENGTH: (1st date)				9,190'	(2nd	date)			
MIDTH (C)									
WIDTH (ft)	444	DEPTH (in)	70						
200	144	132	72		Γ				
240	24	84	72		L				
240	48	72	48			ECTIVE	AESTHETIC RATING		
300	72	60	72		(1	-10)	(1-10)		
188									
ADDITIONS	2014151:72:7	0111171011117	40T0 D	Uottom ombodi	lad graval share	nal mastic	rmud same arel	مططعط	grovel
		OLLUTION IMP.	ACTS: <u>B</u>	outom embedo	ieu gravei chani	nei, mostly	mud, some emb	jedaea (graver,
rock at out	et.								

INDIANA DIVISION OF FISH AND WILDLIFE STREAM HABITAT EVALUATION FORM

STREAM: St	ation 15, Me	ridian St., V	Vest Fork \	White River	RI	VER MILE: 24	46.9		
NEAREST TO	NEAREST TOWN: Holiday Park, Indianapolis COUNTY: Marion								
QUADRANGL	.E: <u>In</u>	dianapolis \	West	TWP:	17N	RNG:	3E	SEC:_	35
LATITUDE:	39.870624				LONGITUD	E: <u>-86.1570</u>	97		
LATITUDE:	LATITUDE: 39.869602 LONGITUDE: -86.158688								
U.S.G.S. GUA	GING STATIO	N LOCATION:		Indianapo	olis 03353000		VG. DISCHARGE	E (cfs):	443
IS REACH RE	PRESENTATI	VE OF STREA	M (Y/N)	Υ	IF NOT, WHY?				
DESCRIPTIO	N OF SAMPLE	SITE (Access	, length, dired	ction sampled):	Begins about 60	0' below M	eridian bridge,	continue	s
downstrear	n away from	bridge. A ri	ffle with me	ostly cobble	substrate, island	s, little dee	o water.		
				COLLECTIO	AN CHIMMADY				
					N SUMMARY				
DATE:	9	/22/2011		GEAR:	Barge E	ect.	EFFORT:	0.6	74 h
CREW: Kolaks, Kittaka, Fisher, Davis									
OTHER GEAR/EFFORT: none WATER STAGE: Lo									
CANOPY (%C	PEN):	90%	PI	HOTOS (Y/N):	Υ	SECCH	II DISK (inches):	3	0"
AIR TEMP (F)	:	63	w	ATER TEMP (F):	68.5	5	D.O. (ppm):	9.	86
CONDUCTIVI	TY:	920	<u> </u>	pH:	7.8		ALKALINITY:	20	5.5
TDS:					460				
STREAM ME	ASUREMENTS	AVG. WID	TH:	208'	AVG. DEPTH:	2.0'	MAX I	DEPTH:_	3.8'
STATION LEN	NGTH: (1st date	e)	58	80'	(2nd da	ate)			
WIDTH (ft)		DEPTH (in)							
183	28	32	36						
180	19	18	15						
180	28	26	44		SUBJE	 CTIVE	AESTHETIC		
273	18	12	0		RAT	ING	RATING		
222	24	31	22		(1	10)	(1-10)		
ADDITIONAL (COMMENTS/PO	LLUTION IMP	ACTS: A be	eautiful site,	with woods on b	oth sides at	least 100 feet	back. L	ow
ADDITIONAL COMMENTS/POLLUTION IMPACTS: A beautiful site, with woods on both sides at least 100 feet back. Low banks. Boulders, rubble, etc. A high levee is about 100 feet back from west shore. A bridge is visible near end.									

INDIANA DIVISION OF FISH AND WILDLIFE STREAM HABITAT EVALUATION FORM

STREAM: St	ation 16, 53	rd St., Wes	t Fork Whit	e River	RIVER M	ILE: <u>244.</u>	6		
NEAREST TO	WN: Rocky	Ripple			COUNTY	: Marion			
QUADRANGL	.E:	Indianapo	olis	TWP:	16N R	NG:	3E	_SEC:_	10
LATITUDE:	39.84708				LONGITUDE: <u>-86</u>	5.179681			
LATITUDE:	39.843362				LONGITUDE: <u>-86</u>	5.179136			
U.S.G.S. GUA	GING STATIC	N LOCATION	l:	Indianapo	olis 03353000	AVG	. DISCHARGE	(cfs):	443
IS REACH RE	PRESENTATI	VE OF STREA	AM (Y/N)	Υ	IF NOT, WHY?				
DESCRIPTIO	N OF SAMPLE	SITE (Access	s, length, dired	ction sampled):	Gained access from p	orivate pr	operty. Star	ted at is	land
downstrear	n and shock	ed upstrear	m on east s	side and end	ed at island near acce	ss point.			
			(COLLECTIO	ON SUMMARY				
DATE:	ę	9/22/2011		GEAR:	Barge elect.		EFFORT: _	0.9	19 h
CREW: Kola	CREW: Kolaks, Kittaka, Fisher, Davis								
OTHER GEAR/EFFORT: none WATER STAGE			ER STAGE: _	L	ow				
CANOPY (%C)PEN):	90%	Pl	HOTOS (Y/N):	Υ	SECCHI D	ISK (inches):	41" (b	ottom)
AIR TEMP (F)	:	70	w	ATER TEMP (F):	68.5		D.O. (ppm): _	10	.08
CONDUCTIVI	TY:	890)	pH:	7.7	A	LKALINITY: _	18	8.1
TDS:									
STREAM ME	ASUREMENTS	AVG. WIE	DTH:	204.5'	AVG. DEPTH:	2.2'	MAX [DEPTH:_	>4'
STATION LE	NGTH: (1st dat	e)	1,3	369'	(2nd date) _				
WIDTH (ft)		DEPTH (in)							
189	36	39	>48						
195	26	42	>48		7		8		
183	42	>48	>48		SUBJECTIVE		AESTHETIC		
189	19	43	>48	1	RATING	•	RATING		
240	15	19	18	1	(1-10)		(1-10)		
231	13	0	30	1					
<u>, </u>				ย sidences on เ	east side, 20-100' ripa	rian vege	etation. Stee	p bank o	on west
	iparian bord				.,	- 3			

INDIANA DIVISION OF FISH AND WILDLIFE STREAM HABITAT EVALUATION FORM

STREAM: S1	tation 17, La	ake Indy, We	est Fork \	White River	RIVER	MILE: 240.2		
NEAREST TOWN: Indianapolis COUNTY: Marion								
QUADRANGL	.E: <u>l</u>	ndianapolis	West	TWP:	16N R	NG: 3E	SEC:_	33, 34
LATITUDE:	39.80376				LONGITUDE: <u>-8</u>	6.198010		
LATITUDE:	39.78712				LONGITUDE: <u>-8</u>	6.195340		
U.S.G.S. GUA	AGING STATIO	ON LOCATION	l:	Indianapo	olis 03353000	AVG. DISCHA	ARGE (cfs):	548
IS REACH RE	EPRESENTAT	IVE OF STREA	AM (Y/N)	Y	IF NOT, WHY?			
DESCRIPTIO	N OF SAMPLE	E SITE (Access	s, length, di	rection sampled):	Approximately a 2 mi. imp	ooundment with bridge	es, various acc	ess
points. Include	es Riverside P	ark on east bai	nk which ha	as boat ramp and	a separate parking lot; I-6	5 bridge with street-si	de parking on	
west side; Far	mily Center on	west side with	massive c	oncrete fishing pie	er facing deepest portion o	f lake (14 feet); walk-	up access at d	am
with convenie	nt parking. A g	olf course on v	vest bank ι	ises bank right up				
					ON SUMMARY			
				GEAR:	DC Boat	EFFO	RT:1.0)39 h
CREW: Cole		-						
					N			
	·			-	57.7		·	
CONDUCTIVI	TY:	890)	pH:	8.9	ALKALINIT	Y:	NA
					AVG. DEPTH:		MAX DEPTH:_	14'
STATION LEN	NGTH: (1st da	te)		9,600'	(2nd date)			
WIDTH (ft)		DEPTH (in)						
402	84	96	84		_			
362	60	108	96					
563	96	120	12		SUBJECTIV	E AESTHET	IC	
322	10	84	48		RATING	RATING		
483	84	96	72		(1-10)	(1-10)		
ADDITIONAL (COMMENTS/P	OLLUTION IMP	ACTS: Pa	ark on east shore,	golf course on west shore	e encroaches on the ri	parian habitat	

except lower, upper portions of 4 mile length. Some undercut banks, root coils along banks.

STREAM: Station 1 Mounds Can	oe Launch RIVER MILE	304.2	DATE:	9/20/2011	QHEI SCORE 84
1) SUBSTRATE: (Check ONLY Two			TE ORIGIN (all)		JBSTRATE SCORE 18 VER (one)
BLDER/SLAB(10) BOULDER(9) X X COBBLE(8) X X HARDPAN(4) MUCK/SILT(2) TOTAL NUMBER OF SUBSTRATE TYPES: NOTE: (Ignore sludge that originates from COMMENTS:	DETRITUS(3) ARTIFIC(0) X >4(2) <4(0)	X LIMESTONE(1 X TILLS(1) SANDSTONE(1 SHALE(-1) COAL FINES(-1)	HARDPAN(0)	SILT-HEAVY(-2) X SILT-NORM(0) Extent of Embedd EXTENSIVE(-2) X LOW(0)	SILT-MOD(-1) SILT-FREE(1) edness (check one) MODERATE(-1) NONE(1)
2) INSTREAM COVER: (20)					COVER SCORE 15
,	X ROOTWADS(1) X AQUA	DWS(1) ATIC MACROPHYTES(1) S OR WOODY DEBRIS(1)	AMOUNT (C	EXTENSIVE >75 X MODERATE 25- SPARSE 5-25% NEARLY ABSEN	heck 2 and AVERAGE) 6%(11) 75%(7) (3)
3) CHANNEL MORPHOLOGY: (Ch	eck ONLY ONE per Category or	Check 2 and AVERAGE)	(20)		CHANNEL SCORE 15
DEVELOPMI		STABILITY X HIGH(3) MODERATE(2) LOW(1) VERY(1)	Sh RE C/	DIFICATION/OTHE NAGGING ELOCATION ANOPY REMOVAL REDGING NE SIDE CHANNEL MOI	IMPOUND ISLAND LEVEED BANK SHAPING
COMMENTS:					
4) RIPARIAN ZONE AND BANK EF	ROSION: (Check ONE box or Che	eck 2 and AVERAGE per	bank) (10)		RIPARIAN SCORE 10
River Right Looking Downstream RIPARIAN WIDTH (per bank)	EROSION/RUNOFF-FLO	ODPLAIN QUALITY		<u>BA</u>	NK EROSION
L R (per bank) X WIDE>150ft.(4) MODERATE 30-150 ft.(3) NARROW 15-30 ft.(2) VERY NARROW 3-15 ft.(1) NONE(0) COMMENTS:	L R (most predominan X X FOREST, SWAMP(3) OPEN PASTURE/ROW RESID.,PARK,NEW FIE FENCED PASTURE(1)	CROP(0) URB	r bank) HAN OR INDUSTRIAL(0) IRB OR OLD FIELD(2) ISERV. TILLAGE(1) ING/CONSTRUCTION(0	\Box	R (per bank) X NONE OR LITTLE(3) MODERATE(2) HEAVY OR SEVERE(1)
5) POOL/GLIDE AND RIFFLE/RUN	QUALITY (12)	NO POOL = 0			POOL SCORE 12
MAX. DEPTH (Check 1) X >4 ft.(6) 2.4-4 ft.(4) 1.2-2.4 ft.(2) <1.2 ft.(1) <0.6 ft.(Pool=0)(0) COMMENTS:	MORPHOLOGY (Check 1) X POOL WIDTH>RIFFLE WIDTH(2) POOL WIDTH=RIFFLE WIDTH(1) POOL WIDTH <riffle td="" width(0)<=""><td>TOR X FAS X MOD</td><td>RENTIAL(-1)</td><td>RRENT VELOCITY X EDDIES(1) INTERSTITIAL(- INTERMITTENT</td><td></td></riffle>	TOR X FAS X MOD	RENTIAL(-1)	RRENT VELOCITY X EDDIES(1) INTERSTITIAL(- INTERMITTENT	
RIFFLE/RUN DEPTH X GENERALLY >4 in. MAX.>20 in.(4) GENERALLY >4 in. MAX.<20 in.(3) GENERALLY 2-4 in.(1) GENERALLY <2 in.(Riffle=0)(0) COMMENTS: 6) GRADIENT (FEET/MILE)(10)	RIFFLE/RUN SUBST X STABLE (e.g., Cobble,B X MOD. STABLE (e.g., Pe UNSTABLE (Gravel, San NO RIFFLE(0)	oulder)(2) a Gravel)(1) nd)(0)	RIFFLE/RUN EXTENSIVE(- X MODERATE(- X LOW(1)	0) NO	=

STREAM: 2, Raible Ave	RIVER MILE 2	<u>297.2</u> DATE:	9/23/2011 QHEI SCORE 70
NOTE: (Ignore sludge that originates from poin			SILT-HEAVY(-2) SILT-MOD(-1)
UNDERCUT BANKS(1) X OVERHANGING VEGETATION(1)	Check all that apply) DEEP POOLS(2) X ROOTWADS(1) X BOULDERS(1) X LOGS OR WOO	PROPHYTES(1)	COVER SCORE 10 (Check only one or Check 2 and AVERAGE) EXTENSIVE >75%(11) X MODERATE 25-75%(7) SPARSE 5-25%(3) NEARLY ABSENT <5%(1)
3) CHANNEL MORPHOLOGY: (Check SINUOSITY DEVELOPMEN' HIGH(4) EXCELLENT(7) MODERATE(3) GOOD(5) X LOW(2) X FAIR(3) NONE(1) POOR(1) COMMENTS:	· · · · · · · · · · · · · · · · · · ·		CHANNEL SCORE 13 IODIFICATION/OTHER SNAGGING IMPOUND RELOCATION ISLAND CANOPY REMOVAL LEVEED DREDGING BANK SHAPING ONE SIDE CHANNEL MODIFICATION
4) RIPARIAN ZONE AND BANK EROS River Right Looking Downstream RIPARIAN WIDTH (per bank) L R (per bank) WIDE>150ft.(4) X MODERATE 30-150 ft.(3) NARROW 15-30 ft.(2) VERY NARROW 3-15 ft.(1) NONE(0) COMMENTS:	EROSION/RUNOFF-FLOODPLA L R (most predominant per ba FOREST, SWAMP(3) OPEN PASTURE/ROW CROP(0) X RESID.,PARK,NEW FIELD(1) FENCED PASTURE(1)	NIN QUALITY	MODERATE(2) HEAVY OR SEVERE(1)
5) POOL/GLIDE AND RIFFLE/RUN QL MAX. DEPTH (Check 1) >4 ft.(6) X 2.4-4 ft.(4) 1.2-2.4 ft.(2) <1.2 ft.(1) <0.6 ft.(Pool=0)(0) COMMENTS:	MORPHOLOGY (Check 1) X POOL WIDTH>RIFFLE WIDTH(2) POOL WIDTH=RIFFLE WIDTH(1) POOL WIDTH <riffle td="" width(0)<=""><td>POOL/RUN/RIFFLE OF TORRENTIAL(-1) X FAST(1) X MODERATE(1) X SLOW(1)</td><td>POOL SCORE 9 CURRENT VELOCITY (Check all that Apply) EDDIES(1) INTERSTITIAL(-1) INTERMITTENT(-2)</td></riffle>	POOL/RUN/RIFFLE OF TORRENTIAL(-1) X FAST(1) X MODERATE(1) X SLOW(1)	POOL SCORE 9 CURRENT VELOCITY (Check all that Apply) EDDIES(1) INTERSTITIAL(-1) INTERMITTENT(-2)
RIFFLE/RUN DEPTH X GENERALLY >4 in. MAX.>20 in.(4) GENERALLY >4 in. MAX.<20 in.(3) GENERALLY 2-4 in.(1) GENERALLY <2 in.(Riffle=0)(0) COMMENTS: 6) GRADIENT (FEET/MILE)(10)	RIFFLE/RUN SUBSTRATE STABLE (e.g., Cobble,Boulder)(2) X MOD. STABLE (e.g., Pea Gravel)(UNSTABLE (Gravel, Sand)(0) NO RIFFLE(0)	1) EXTENSIV MODERA: X LOW(1)	

STREAM: 3, County Road 600W	RIVER MILE291.6	DATE:	10/24/2011	QHEI SCORE 73
1) SUBSTRATE: (Check ONLY Two Substrate TYPE BLDER/SLAB(10) BOULDER(9) COBBLE(8) HARDPAN(4) MUCK/SILT(2) TOTAL NUMBER OF SUBSTRATE TYPES: X 3-4(2) NOTE: (Ignore sludge that originates from point sources: SCOMMENTS:	POOL RIFFLE	SUBSTRATE ORIGIN (all) LIMESTONE(1) TILLS(1) SANDSTONE(0) SHALE(-1) COAL FINES(-2)	SILT CO X SILT-HEAVY(-2) SILT-NORM(0) Extent of Embedde	BSTRATE SCORE 13 VER (one) SILT-MOD(-1) SILT-FREE(1) edness (check one) X MODERATE(-1) NONE(1)
2) INSTREAM COVER: (20) TYPE(Check all X UNDERCUT BANKS(1) DEEP P X OVERHANGING VEGETATION(1) X ROOTM X SHALLOWS (IN SLOW WATER)(1) X BOULDI	OOLS(2) OXBOWS(1) ADS(1) AQUATIC MACROPH	YTES(1)	Check only one or Cl EXTENSIVE >75' X MODERATE 25-7 SPARSE 5-25%(NEARLY ABSEN	75%(7)
3) CHANNEL MORPHOLOGY: (Check ONLY ONLY ONLY ONLY ONLY ONLY ONLY ONLY	CHANNELIZATION S NONE(6)		ODIFICATION/OTHE SNAGGING RELOCATION CANOPY REMOVAL DREDGING ONE SIDE CHANNEL MOD	IMPOUND ISLAND LEVEED BANK SHAPING
4) RIPARIAN ZONE AND BANK EROSION: (C River Right Looking Downstream RIPARIAN WIDTH (per bank) ERO L R (per bank) L WIDE>150ft.(4) X MODERATE 30-150 ft.(3) NARROW 15-30 ft.(2) X VERY NARROW 3-15 ft.(1) NONE(0) COMMENTS:	heck ONE box or Check 2 and AV OSION/RUNOFF-FLOODPLAIN Q R (most predominant per bank) FOREST, SWAMP(3) X OPEN PASTURE/ROW CROP(0) RESID.,PARK,NEW FIELD(1) FENCED PASTURE(1)		(0) X	RIPARIAN SCORE 7 NK EROSION R (per bank) X NONE OR LITTLE(3) MODERATE(2) HEAVY OR SEVERE(1)
X >4 ft.(6) 2.4-4 ft.(4) POOL V	OLOGY (Check 1) VIDTH>RIFFLE WIDTH(2) VIDTH=RIFFLE WIDTH(1) VIDTH <riffle td="" width(0)<=""><td>POOL/RUN/RIFFLE CU TORRENTIAL(-1) FAST(1) X MODERATE(1) X SLOW(1)</td><td>JRRENT VELOCITY EDDIES(1) INTERSTITIAL(-1</td><td>)</td></riffle>	POOL/RUN/RIFFLE CU TORRENTIAL(-1) FAST(1) X MODERATE(1) X SLOW(1)	JRRENT VELOCITY EDDIES(1) INTERSTITIAL(-1)
RIFFLE/RUN DEPTH GENERALLY >4 in. MAX.>20 in.(4) X GENERALLY >4 in. MAX.<20 in.(3) GENERALLY 2-4 in.(1) GENERALLY <2 in.(Riffle=0)(0) COMMENTS: 6) GRADIENT (FEET/MILE)(10) 3 0	RIFFLE/RUN SUBSTRATE STABLE (e.g., Cobble,Boulder)(2) X MOD. STABLE (e.g., Pea Gravel)(1) UNSTABLE (Gravel, Sand)(0) NO RIFFLE(0)	RIFFLE/RU EXTENSIV X MODERAT LOW(1)	E(0) NO F	

STREAM:	Station 4 Perkinsville	RIVER MILE	285.5	DATE:	9/20/2011	QHEI SCORE 68
•	RATE: (Check ONLY Two Substrat	e Type Boxes: Check all t	· · · · · · · · · · · · · · · · · · ·	RATE ORIGIN (all)		UBSTRATE SCORE 18
X X COE HAR MUC	CK/SILT(2) MBER OF SUBSTRATE TYPES: X >4(2) Inore sludge that originates from point sources	X GRAVEL(7) X SAND(6) X BEDROCK(5) DETRITUS(3) ARTIFIC(0) <4(0) : score is based on natural substrates.	X LIMESTON X TILLS(1) SANDSTO SHALE(-1) COAL FIN	NE(1) RIP/RAP(0) HARDPAN(0) NE(0)	SILT-HEAVY(-2) X SILT-NORM(0)	SILT-MOD(-1) SILT-FREE(1) dedness (check one) MODERATE(-1) NONE(1)
2) INSTRE	AM COVER: (20)					COVER SCORE 14
X overhan	IGING VEGETATION(1) X ROOT (S (IN SLOW WATER)(1) X BOUL	POOLS(2) OXBOWS WADS(1) X AQUATIC	S(1) MACROPHYTES(1) WOODY DEBRIS(1)	<u>AMOUNT</u> (Check only one or C EXTENSIVE >7: X MODERATE 25 SPARSE 5-25% NEARLY ABSEL	-75%(7) (3)
	EL MORPHOLOGY: (Check ONLY	ONE per Category or Che	eck 2 and AVERAG	GE)(20)		CHANNEL SCORE 11
SINUOSIT HIGH(4) MODERAT LOW(2) X NONE(1)	Y DEVELOPMENT EXCELLENT(7)	CHANNELIZATION X NONE(6) RECOVERED(4) RECOVERING(3) RECENT OR NO RECOVER	STABILIT X HIGH(3) MODERAT LOW(1)	Y <u>M</u>	ODIFICATION/OTH SNAGGING RELOCATION CANOPY REMOVAL DREDGING ONE SIDE CHANNEL MO	ER IMPOUND ISLAND LEVEED BANK SHAPING
COMMEN	ITS:					
	AN ZONE AND BANK EROSION: (Check ONE box or Check	2 and AVERAGE	per bank) (10)		RIPARIAN SCORE 8
_	t Looking Downstream WIDTH (per bank) EF	ROSION/RUNOFF-FLOOD	PLAIN QUALITY		BA	NK EROSION
X WID MODE		R (most predominant per FOREST, SWAMP(3) OPEN PASTURE/ROW CRC X RESID.,PARK,NEW FIELD(1) FENCED PASTURE(1)	DP(0)	(per bank) URBAN OR INDUSTRIAL(SHURB OR OLD FIELD(2) CONSERV. TILLAGE(1) MINING/CONSTRUCTION		R (per bank) X NONE OR LITTLE(3) MODERATE(2) HEAVY OR SEVERE(1)
5) POOL/G	GLIDE AND RIFFLE/RUN QUALITY	′ (12) NC	POOL = 0			POOL SCORE 11
MAX. DE X >4 ft.(6) 2.4-4 ft.(4) 1.2-2.4 ft.(1) <1.2 ft.(1) <0.6 ft.(Po	POOL X POOL POOL POOL	HOLOGY (Check 1) WIDTH>RIFFLE WIDTH(2) WIDTH=RIFFLE WIDTH(1) WIDTH <riffle td="" width(0)<=""><td> </td><td>OL/RUN/RIFFLE CI TORRENTIAL(-1) FAST(1) MODERATE(1) SLOW(1)</td><td>URRENT VELOCITY X EDDIES(1) INTERSTITIAL(</td><td></td></riffle>		OL/RUN/RIFFLE CI TORRENTIAL(-1) FAST(1) MODERATE(1) SLOW(1)	URRENT VELOCITY X EDDIES(1) INTERSTITIAL(
GENERAL GENERAL COMMEN	LY >4 in. MAX.>20 in.(4) LY >4 in. MAX.<20 in.(3) LY 2-4 in.(1) LY <2 in.(Riffle=0)(0) ITS:	RIFFLE/RUN SUBSTRA STABLE (e.g., Cobble,Bould MOD. STABLE (e.g., Pea Gr UNSTABLE (Gravel, Sand)(C	er)(2) avel)(1)))	EXTENSIV MODERAT LOW(1)	E(0) X NO	RIFFLE(0)
6) GRADIE	NT (FEET/MILE)(10) 1 9	% POOL 10	% RIFFI F	% R	un 90 gr	ADJENT SCORE 6

STREAM:	5, Coffey Grounds	RIVER MILE	282.3 D	OATE:10)/24/2011	QHEI SCORE 80
TYPE BLD BOU COB HARR TOTAL NUI NOTE: (Ig	POOL RIFFLE ER/SLAB(10) JLDER(9) SBLE(8) ZDPAN(4) CK/SILT(2) MBER OF SUBSTRATE TYPES: Incre sludge that originates from point	ARTIFIC(0) Sources: score is based on natural substrate Type Boxes: Check all typeOOL ARTIFIC(0) ARTIFIC(0) Sources: score is based on natural substrate	X LIMESTONE(1) X TILLS(1) SANDSTONE(0) SHALE(-1) COAL FINES(-2)	HARDPAN(0) X	SILT COV SILT-HEAVY(-2) SILT-NORM(0) ttent of Embedde	BSTRATE SCORE 15 /ER (one) SILT-MOD(-1) SILT-FREE(1) edness (check one) X MODERATE(-1) NONE(1)
X UNDERCU	AM COVER: (20) TYPE(CI JT BANKS(1) JGING VEGETATION(1) S (IN SLOW WATER)(1)		MACROPHYTES(1) WOODY DEBRIS(1)	AMOUNT (Chec	EXTENSIVE >759 X MODERATE 25-7 SPARSE 5-25%(3 NEARLY ABSEN	5%(7)
3) CHANN SINUOSIT HIGH(4) X MODERAT LOW(2) NONE(1) COMMEN	Y DEVELOPMENT X EXCELLENT(7) GOOD(5) FAIR(3) POOR(1)	ONLY ONE per Category or Che CHANNELIZATION X NONE(6) RECOVERED(4) RECOVERING(3) RECENT OR NO RECOVER	STABILITY HIGH(3) X MODERATE(2) LOW(1)	MODIF SNAG RELC CANC	FICATION/OTHE EGING DICATION DPY REMOVAL DGING SIDE CHANNEL MOD	IMPOUND ISLAND LEVEED BANK SHAPING
River Right RIPARIAN L R (pe WID X X MOD	t Looking Downstream WIDTH (per bank) r bank) E>150ft.(4) DERATE 30-150 ft.(3) ROW 15-30 ft.(2) Y NARROW 3-15 ft.(1) JE(0)	EROSION/RUNOFF-FLOOD L R (most predominant pe FOREST, SWAMP(3) OPEN PASTURE/ROW CRO RESID.,PARK,NEW FIELD(1) FENCED PASTURE(1)	PLAIN QUALITY Pr bank) L R (per URBA PP(0) SHUF CONS		<u>BAN</u> L	RIPARIAN SCORE 7 IK EROSION R (per bank) X NONE OR LITTLE(3) MODERATE(2) HEAVY OR SEVERE(1)
,	2) ol=0)(0)	MORPHOLOGY (Check 1) POOL WIDTH>RIFFLE WIDTH(1) POOL WIDTH <riffle td="" width(0)<=""><td>TORF FAST</td><td>RENTIAL(-1) (1) ERATE(1)</td><td>ENT VELOCITY EDDIES(1) INTERSTITIAL(-1) INTERMITTENT(-1)</td><td></td></riffle>	TORF FAST	RENTIAL(-1) (1) ERATE(1)	ENT VELOCITY EDDIES(1) INTERSTITIAL(-1) INTERMITTENT(-1)	
GENERAL GENERAL COMMEN	LY >4 in. MAX.>20 in.(4) LY >4 in. MAX.<20 in.(3) LY 2-4 in.(1) LY <2 in.(Riffle=0)(0) ITS:	RIFFLE/RUN SUBSTRAT X STABLE (e.g., Cobble,Boulde MOD. STABLE (e.g., Pea Gra UNSTABLE (Gravel, Sand)(0 NO RIFFLE(0)	er)(2) avel)(1)	RIFFLE/RUN EN EXTENSIVE(-1) MODERATE(0) X LOW(1)	NO F	RIFFLE SCORE 7 (2) RIFFLE(0) ADJENT SCORE 10

STREAM: Station 7, Noblesville	PAS RIVER MILE	270 DATE:	10/6/2011 QHEI SCORE	€ 62
TYPE POOL RIF	X X GRAVEL(7) X X X SAND(6) X BEDROCK(5) DETRITUS(3) ARTIFIC(0)	SUBSTRATE ORIGIN (all X	SILT-HEAVY(-2) X SILT-MOD(-1)	
2) INSTREAM COVER: (20) TYF UNDERCUT BANKS(1) OVERHANGING VEGETATION(1) X SHALLOWS (IN SLOW WATER)(1) COMMENTS:	——————————————————————————————————————		COVER SCORE (Check only one or Check 2 and AVERA EXTENSIVE >75%(11) X MODERATE 25-75%(7) SPARSE 5-25%(3) NEARLY ABSENT <5%(1)	
3) CHANNEL MORPHOLOGY: (C SINUOSITY DEVELOPM HIGH(4) EXCELLENT MODERATE(3) GOOD(5) X LOW(2) X FAIR(3) NONE(1) POOR(1) COMMENTS:		STABILITY X HIGH(3) MODERATE(2) LOW(1)	CHANNEL SCORE MODIFICATION/OTHER SNAGGING IMPOUND RELOCATION ISLAND CANOPY REMOVAL LEVEED DREDGING BANK SHAPING ONE SIDE CHANNEL MODIFICATION	12
4) RIPARIAN ZONE AND BANK E River Right Looking Downstream RIPARIAN WIDTH (per bank) L R (per bank) WIDE>150ft.(4) X MODERATE 30-150 ft.(3) NARROW 15-30 ft.(2) VERY NARROW 3-15 ft.(1) NONE(0) COMMENTS:	EROSION: (Check ONE box or Check 2 EROSION/RUNOFF-FLOODP L R (most predominant per FOREST, SWAMP(3) OPEN PASTURE/ROW CROP X RESID.,PARK,NEW FIELD(1) FENCED PASTURE(1)	PLAIN QUALITY bank)	moderate(2) HEAVY OR SEVERE)
5) POOL/GLIDE AND RIFFLE/RU MAX. DEPTH (Check 1) X >4 ft.(6) 2.4-4 ft.(4) 1.2-2.4 ft.(2) <1.2 ft.(1) <0.6 ft.(Pool=0)(0) COMMENTS:	MORPHOLOGY (Check 1) POOL WIDTH>RIFFLE WIDTH(2) POOL WIDTH=RIFFLE WIDTH(1) POOL WIDTH <riffle td="" width(0)<=""><td>POOL = 0 POOL/RUN/RIFFLE TORRENTIAL(-1) FAST(1) X MODERATE(1) X SLOW(1)</td><td>POOL SCORE CURRENT VELOCITY (Check all that Ap EDDIES(1) INTERSTITIAL(-1) INTERMITTENT(-2)</td><td>-</td></riffle>	POOL = 0 POOL/RUN/RIFFLE TORRENTIAL(-1) FAST(1) X MODERATE(1) X SLOW(1)	POOL SCORE CURRENT VELOCITY (Check all that Ap EDDIES(1) INTERSTITIAL(-1) INTERMITTENT(-2)	-
RIFFLE/RUN DEPTH GENERALLY >4 in. MAX.>20 in.(4) GENERALLY >4 in. MAX.<20 in.(3) GENERALLY 2-4 in.(1) X GENERALLY <2 in.(Riffle=0)(0) COMMENTS: 6) GRADIENT (FEET/MILE)(10)	RIFFLE/RUN SUBSTRATI STABLE (e.g., Cobble, Boulder) MOD. STABLE (e.g., Pea Grav UNSTABLE (Gravel, Sand)(0) X NO RIFFLE(0)	p(2) EXTENS wel)(1) MODER LOW(1)	V	

STREAM: Station 8 HWY 32 Bri	dge RIVER MILE	269.4	DATE:	9/21/2011	QHEI SCORE 66
1) SUBSTRATE: (Check ONLY Tw TYPE POOL RIF			TE ORIGIN (all)		JBSTRATE SCORE 14 VER (one)
X COBBLE(8) HARDPAN(4) MUCK/SILT(2) TOTAL NUMBER OF SUBSTRATE TYPES	X X GRAVEL(7) X SAND(6) X BEDROCK(5) DETRITUS(3) ARTIFIC(0) X SAND(6) X DETRITUS(3) ARTIFIC(0) X DETRITUS(3) ARTIFIC(3)	X X TILLS(1) SANDSTONE SHALE(-1) COAL FINES((0) HARDPAN(0) <u>E</u>	SILT-HEAVY(-2) SILT-NORM(0) Extent of Embedd	X SILT-MOD(-1) SILT-FREE(1) edness (check one) X MODERATE(-1) NONE(1)
COMMENTS:					COVER SCORE 14
,	ROOTWADS(1) X AQU	BOWS(1) JATIC MACROPHYTES(1) SS OR WOODY DEBRIS(1)	<u>AMOUNT</u> (Ch	EXTENSIVE >75 X MODERATE 25- SPARSE 5-25% NEARLY ABSEN	heck 2 and AVERAGE) %(11) 75%(7) (3)
3) CHANNEL MORPHOLOGY: (CHANNEL MORPHOLOGY: (CHANEL MORPHOLOGY: (CHANNEL MORPHOLOGY: (CHANNEL MORPHOLOGY: (CHANNEL	ENT CHANNELIZATION	STABILITY X HIGH(3) MODERATE(3) LOW(1)	2) MOD REI	DIFICATION/OTHI AGGING LOCATION NOPY REMOVAL EDGING E SIDE CHANNEL MOI	IMPOUND ISLAND LEVEED BANK SHAPING
COMMENTS:	POSION: (Check ONE boy or Ch	eack 2 and AVERAGE no	r hank) (10)		RIPARIAN SCORE 5
River Right Looking Downstream RIPARIAN WIDTH (per bank) L R (per bank) WIDE>150ft.(4) MODERATE 30-150 ft.(3) X X NARROW 15-30 ft.(2) VERY NARROW 3-15 ft.(1) NONE(0) COMMENTS:	EROSION/RUNOFF-FL(L R (most predominal FOREST, SWAMP(3) OPEN PASTURE/ROW RESID.,PARK,NEW FII FENCED PASTURE(1)	DODPLAIN QUALITY Int per bank) L R (per X X X URI I CROP(0) SHI ELD(1) CO	er bank) BAN OR INDUSTRIAL(0) URB OR OLD FIELD(2) NSERV. TILLAGE(1) IING/CONSTRUCTION(0)	BA L X	NK EROSION R (per bank) NONE OR LITTLE(3) MODERATE(2) HEAVY OR SEVERE(1)
5) POOL/GLIDE AND RIFFLE/RUM MAX. DEPTH (Check 1) >4 ft.(6) X 2.4-4 ft.(4) 1.2-2.4 ft.(2) <1.2 ft.(1) <0.6 ft.(Pool=0)(0) COMMENTS:	MORPHOLOGY (Check 1) X POOL WIDTH>RIFFLE WIDTH(2) X POOL WIDTH=RIFFLE WIDTH(1) POOL WIDTH <riffle td="" width(0)<=""><td>X FAS</td><td>RRENTIAL(-1) ST(1) DERATE(1)</td><td>RENT VELOCITY X EDDIES(1) INTERSTITIAL(-</td><td></td></riffle>	X FAS	RRENTIAL(-1) ST(1) DERATE(1)	RENT VELOCITY X EDDIES(1) INTERSTITIAL(-	
RIFFLE/RUN DEPTH GENERALLY >4 in. MAX.>20 in.(4) X GENERALLY >4 in. MAX.<20 in.(3) GENERALLY 2-4 in.(1) GENERALLY <2 in.(Riffle=0)(0) COMMENTS:	RIFFLE/RUN SUBS STABLE (e.g., Cobble, MOD. STABLE (e.g., P X UNSTABLE (Gravel, Sa NO RIFFLE(0)	Boulder)(2) ea Gravel)(1)	RIFFLE/RUN E EXTENSIVE(-1 X MODERATE(0) LOW(1)) NO	='

STREAM: Station 9, Above 116th	RIVER MILE	259.7 DATE:	9/21/2011 QHEI SCORE /5
Number of Substrate types:	$\begin{array}{c cccc} X & X & GRAVEL(7) & X & X \\ \hline & SAND(6) & X & X \end{array}$	X LIMESTONE(1) RIP/RAP(0) X TILLS(1) HARDPAN(0) SANDSTONE(0) SHALE(-1) COAL FINES(-2)	SILT-HEAVY(-2) SILT-MOD(-1)
2) INSTREAM COVER: (20)			COVER SCORE 15 (Check only one or Check 2 and AVERAGE) EXTENSIVE >75%(11) X MODERATE 25-75%(7) SPARSE 5-25%(3) NEARLY ABSENT <5%(1)
3) CHANNEL MORPHOLOGY: (Che SINUOSITY DEVELOPME EXCELLENT(7 MODERATE(3) X GOOD(5) FAIR(3) X NONE(1) POOR(1)		STABILITY HIGH(3) MODERATE(2) X LOW(1)	CHANNEL SCORE 11 MODIFICATION/OTHER SNAGGING IMPOUND RELOCATION X ISLAND CANOPY REMOVAL LEVEED DREDGING BANK SHAPING ONE SIDE CHANNEL MODIFICATION
4) RIPARIAN ZONE AND BANK ER River Right Looking Downstream RIPARIAN WIDTH (per bank) L R (per bank) WIDE>150ft.(4) X MODERATE 30-150 ft.(3) NARROW 15-30 ft.(2) VERY NARROW 3-15 ft.(1) NONE(0) COMMENTS:	EROSION: (Check ONE box or Check 2 a EROSION/RUNOFF-FLOODPL L R (most predominant per b FOREST, SWAMP(3) OPEN PASTURE/ROW CROP(0) RESID.,PARK,NEW FIELD(1) FENCED PASTURE(1)	AIN QUALITY Dank) L R (per bank) X X URBAN OR INDUSTRIA	2) X MODERATE(2) HEAVY OR SEVERE(1)
5) POOL/GLIDE AND RIFFLE/RUN MAX. DEPTH (Check 1) >4 ft.(6) X 2.4-4 ft.(4) 1.2-2.4 ft.(2) <1.2 ft.(1) <0.6 ft.(Pool=0)(0) COMMENTS:	QUALITY (12) MORPHOLOGY (Check 1) X POOL WIDTH>RIFFLE WIDTH(2) POOL WIDTH=RIFFLE WIDTH(1) POOL WIDTH <riffle td="" width(0)<=""><td>POOL/RUN/RIFFLE (TORRENTIAL(-1) X FAST(1) X MODERATE(1) X SLOW(1)</td><td>POOL SCORE 10 CURRENT VELOCITY (Check all that Apply) X EDDIES(1) INTERSTITIAL(-1) INTERMITTENT(-2)</td></riffle>	POOL/RUN/RIFFLE (TORRENTIAL(-1) X FAST(1) X MODERATE(1) X SLOW(1)	POOL SCORE 10 CURRENT VELOCITY (Check all that Apply) X EDDIES(1) INTERSTITIAL(-1) INTERMITTENT(-2)
RIFFLE/RUN DEPTH X GENERALLY >4 in. MAX.>20 in.(4) GENERALLY >4 in. MAX.<20 in.(3) GENERALLY 2-4 in.(1) GENERALLY <2 in.(Riffle=0)(0) COMMENTS: 6) GRADIENT (FEET/MILE)(10)	RIFFLE/RUN SUBSTRATE X STABLE (e.g., Cobble,Boulder)(: MOD. STABLE (e.g., Pea Gravel UNSTABLE (Gravel, Sand)(0) NO RIFFLE(0)	extensi d)(1) Modera X Low(1)	

STREAM: Station 10, Below 116	Sth St Bridge RIVER MILE 25	59.3 DATE:	10/6/2011 QHEI SCORE 64
TYPE POOL RIF BLDER/SLAB(10) BOULDER(9) COBBLE(8) HARDPAN(4) MUCK/SILT(2) TOTAL NUMBER OF SUBSTRATE TYPES	X GRAVEL(7) X X SAND(6) X BEDROCK(5) DETRITUS(3) ARTIFIC(0)		SUBSTRATE SCORE 11 SILT COVER (one) SILT-HEAVY(-2) X SILT-MOD(-1) SILT-NORM(0) SILT-FREE(1) Extent of Embeddedness (check one) EXTENSIVE(-2) X MODERATE(-1) LOW(0) NONE(1)
2) INSTREAM COVER: (20)	E(Check all that apply) X DEEP POOLS(2) OXBOWS(1) ROOTWADS(1) X AQUATIC MACRO X BOULDERS(1) X LOGS OR WOOD	OPHYTES(1)	COVER SCORE 14 (Check only one or Check 2 and AVERAGE) EXTENSIVE >75%(11) X MODERATE 25-75%(7) SPARSE 5-25%(3) NEARLY ABSENT <5%(1)
3) CHANNEL MORPHOLOGY: (Channel Morphology):	<u> </u>	, , ,	CHANNEL SCORE 14 ODIFICATION/OTHER SNAGGING IMPOUND RELOCATION ISLAND CANOPY REMOVAL LEVEED DREDGING BANK SHAPING ONE SIDE CHANNEL MODIFICATION
4) RIPARIAN ZONE AND BANK E River Right Looking Downstream RIPARIAN WIDTH (per bank) L R (per bank) WIDE>150ft.(4) MODERATE 30-150 ft.(3) X NARROW 15-30 ft.(2) VERY NARROW 3-15 ft.(1) NONE(0) COMMENTS:	ROSION: (Check ONE box or Check 2 and EROSION/RUNOFF-FLOODPLAIN L R (most predominant per bank FOREST, SWAMP(3) OPEN PASTURE/ROW CROP(0) X X RESID.,PARK,NEW FIELD(1) FENCED PASTURE(1)	N QUALITY	MODERATE(2) HEAVY OR SEVERE(1)
5) POOL/GLIDE AND RIFFLE/RUN MAX. DEPTH (Check 1) >4 ft.(6) X 2.4-4 ft.(4) 1.2-2.4 ft.(2) <1.2 ft.(1) <0.6 ft.(Pool=0)(0) COMMENTS:	MORPHOLOGY (Check 1) POOL WIDTH>RIFFLE WIDTH(1) POOL WIDTH+RIFFLE WIDTH(1) POOL WIDTH+RIFFLE WIDTH(0)		POOL SCORE 6 CURRENT VELOCITY (Check all that Apply) EDDIES(1) INTERSTITIAL(-1) INTERMITTENT(-2)
RIFFLE/RUN DEPTH GENERALLY >4 in. MAX.>20 in.(4) X GENERALLY >4 in. MAX.<20 in.(3) GENERALLY 2-4 in.(1) GENERALLY <2 in.(Riffle=0)(0) COMMENTS: 6) GRADIENT (FEET/MILE)(10)	RIFFLE/RUN SUBSTRATE STABLE (e.g., Cobble,Boulder)(2) MOD. STABLE (e.g., Pea Gravel)(1) X UNSTABLE (Gravel, Sand)(0) NO RIFFLE(0)	RIFFLE/RU EXTENSIV X MODERAT LOW(1) % RIFFLE 5 % R	NO RIFFLE(0)

STREAM: Station 15, Merdian St	RIVER MILE	246.9 DATE:	9/22/2011	QHEI SCORE 85
1) SUBSTRATE: (Check ONLY Two SubTYPE POOL RIFFLE BLDER/SLAB(10) BOULDER(9) X X X COBBLE(8) X X HARDPAN(4) MUCK/SILT(2) TOTAL NUMBER OF SUBSTRATE TYPES: X NOTE: (Ignore sludge that originates from point so	X X GRAVEL(7) X X SAND(6) X SEDROCK(5) DETRITUS(3) ARTIFIC(0) >4(2) <4(0)	X LIMESTONE(1) RIP/RAP(0) X ILILS(1) HARDPAN(1) SANDSTONE(0) SHALE(-1) COAL FINES(-2)	SILT CO SILT-HEAVY(-2) X SILT-NORM(0)	UBSTRATE SCORE 16 OVER (one) SILT-MOD(-1) SILT-FREE(1) dedness (check one) MODERATE(-1) NONE(1)
2) INSTREAM COVER: (20) TYPE(Che X UNDERCUT BANKS(1) X OVERHANGING VEGETATION(1)			Check only one or C EXTENSIVE >7: X MODERATE 25 SPARSE 5-25% NEARLY ABSE	-75%(7) 6(3)
3) CHANNEL MORPHOLOGY: (Check Control of the contro	CHANNELIZATION X NONE(6) RECOVERED(4) RECOVERING(3) RECENT OR NO RECOVERY(1)	STABILITY X HIGH(3) MODERATE(2) LOW(1)	MODIFICATION/OTH SNAGGING RELOCATION CANOPY REMOVAL DREDGING ONE SIDE CHANNEL MO	IMPOUND ISLAND LEVEED BANK SHAPING
4) RIPARIAN ZONE AND BANK EROSIC River Right Looking Downstream RIPARIAN WIDTH (per bank) L R (per bank) X WIDE>150ft.(4) X MODERATE 30-150 ft.(3) NARROW 15-30 ft.(2) VERY NARROW 3-15 ft.(1) NONE(0) COMMENTS:	EROSION/RUNOFF-FLOODPI L R (most predominant per I) X FOREST, SWAMP(3) OPEN PASTURE/ROW CROP(X X RESID.,PARK,NEW FIELD(1) FENCED PASTURE(1)	LAIN QUALITY bank) L R (per bank) X URBAN OR INDUSTRI	AL(0) X D(2)	RIPARIAN SCORE 10 NK EROSION R (per bank) X NONE OR LITTLE(3) MODERATE(2) HEAVY OR SEVERE(1)
>4 ft.(6) X 2.4-4 ft.(4)	NO PORPHOLOGY (Check 1) POOL WIDTH>RIFFLE WIDTH(2) POOL WIDTH=RIFFLE WIDTH(1) POOL WIDTH+RIFFLE WIDTH(0)	POOL = 0 POOL/RUN/RIFFLE TORRENTIAL(-1) X FAST(1) X MODERATE(1) X SLOW(1)	CURRENT VELOCIT X eddies(1) INTERSTITIAL(Γ(-2)
RIFFLE/RUN DEPTH GENERALLY >4 in. MAX.>20 in.(4) X GENERALLY >4 in. MAX.<20 in.(3) GENERALLY 2-4 in.(1) GENERALLY <2 in.(Riffle=0)(0) COMMENTS: 6) GRADIENT (FEET/MILE)(10)	RIFFLE/RUN SUBSTRATE X STABLE (e.g., Cobble,Boulder) MOD. STABLE (e.g., Pea Grave UNSTABLE (Gravel, Sand)(0) NO RIFFLE(0)	(2) EXTENS MODER LOW(1)		

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)(20) SUBSTRATE TYPE POOL RIFFLE POOL RIFFLE SUBSTRATE ORIGIN (all) SILT COVER (one) SILT-HEAVY(-2) X SILT-MOD SILT-HEAVY(-2) X SILT-HEAVY(-2) X SILT-HEAVY(-2) X SILT-REE SUBSTRATE ORIGIN (all) SILT-HEAVY(-2) SILT-HEAVY(-2) X MODERAT COAL FINES(-2) NONE(1) NOTE: (Ignore sludge that originates from point sources: score is based on natural substrates) COMMENTS:	(-1) E(1) eck one)
	SCORE 15 AVERAGE)
3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)(20) SINUOSITY DEVELOPMENT CHANNELIZATION STABILITY HIGH(4) MODIFICATION/OTHER SNAGGING MODERATE(3) MODIFICATION/OTHER SNAGGING MODERATE(2) MODIFICATION/OTHER SNAGGING MODIFICATION MODIFICATION MODIFICATION SNAGGING MODIFICATION MODIFICATIO	
River Right Looking Downstream RIPARIAN WIDTH (per bank) L R (per bank) X WIDE>150ft.(4) X MODERATE 30-150 ft.(3) EROSION/RUNOFF-FLOODPLAIN QUALITY BANK EROSION X V URBAN OR INDUSTRIAL(0) X NONE OR MODERATE 30-150 ft.(3)	nk) LITTLE(3)
	SCORE 12 that Apply)
RIFFLE/RUN DEPTH GENERALLY >4 in. MAX.>20 in.(4) X GENERALLY >4 in. MAX.>20 in.(4) X GENERALLY >4 in. MAX.>20 in.(3) GENERALLY >4 in. MAX.<20 in.(3) GENERALLY 2-4 in.(1) GENERALLY 2-2 in.(Riffle=0)(0) COMMENTS: 6) GRADIENT (FEET/MILE)(10) 2.3 RIFFLE/RUN EMBEDDEDNESS EXTENSIVE(-1) NONE(2) X MODERATE(0) LOW(1) NO RIFFLE(0) ONO RIFFLE(0) RIFFLE 25 % RUN 65 GRADIENT SO	SCORE 5

STATION: 1, Mounds

NAME OF STREAM: West Fork White River

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Sand shiner	296	27.92	2.5-13.8	1.15	2.17
Central stoneroller	153	14.43	2.0-5.8	1.24	2.34
Northern hog sucker	132	12.45	2.5-13.8	29.79	56.31
Spotfin shiner	128	12.08	1.1-3.9	1.15	2.17
Bluntnose minnow	83	7.83	1.0-3.2	0.30	0.57
Bluegill	35	3.30	2.6-4.1	0.88	1.66
Smallmouth bass	29	2.74	3.0-11.2	3.38	6.39
Creek chub	26	2.45	1.7-3.0	0.12	0.23
Mottled sculpin	21	1.98	1.7-3.2	0.27	0.51
Greenside darter	19	1.79	2.0-3.4	0.10	0.19
Rosyface shiner	19	1.79	2.0-3.5	0.16	0.30
Longear sunfish	17	1.60	1.3-5.6	0.52	0.98
Green sunfish	16	1.51	1.1-5.0	0.63	1.19
Rock bass	15	1.42	1.6-8.7	1.85	3.50
Black redhorse	12	1.13	2.7-14.7	8.03	15.18
Rainbow darter	12	1.13	1.7-2.4	0.04	0.08
Silverjaw minnow	9	0.85	2.0-3.2	0.02	0.04
Striped shiner	9	0.85	2.5-5.7	0.31	0.59
Silver shiner	7	0.66	4.1-4.7	0.09	0.17
Golden redhorse	6	0.57	2.1-16.7	2.71	5.12
Blacknose dace	3	0.28	1.7-2.0	0.01	0.02
Largemouth bass	3	0.28	2.8-4.0	0.06	0.11
River chub	3	0.28	2.1-5.0	0.03	0.06
Brook silverside	2	0.19	1.7-2.5	0.01	0.02
Johnny darter	1	0.09	2.2	0.01	0.02
Orangethroat darter	1	0.09	1.6	0.01	0.02
Redfin shiner	1	0.09	2.2	0.01	0.02
Stonecat	1	0.09	3.0	0.01	0.02
Yellow bullhead	1	0.09	2	0.01	0.02
Total - 29 Species	1,060			52.90	

STATION: 2, Raible Ave

NAME OF STREAM: West Fork White River

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Northern hog sucker	16	28.57	16.8-11.1	3.44	19.91
Rock bass	11	19.64	4.8-8.0	2.65	15.34
Smallmouth bass	6	10.71	2.7-13.1	2.36	13.66
Bluegill	5	8.93	4.2-6.1	0.56	3.24
Golden redhorse	5	8.93	8.7-15.7	3.54	20.49
Black redhorse	4	7.14	8.7-15.3	3.00	17.36
Longear sunfish	2	3.57	4.1-5.8	0.22	1.27
Gizzard shad	2	3.57	9.9-10.0	0.87	5.03
White sucker	1	1.79	8.4	0.20	1.16
Blackside darter	1	1.79	2.3	0.01	0.06
Black crappie	1	1.79	9.0	0.38	2.20
Largemouth bass	1	1.79	3.6	0.02	0.12
Silver shiner	1	1.79	4.5	0.03	0.17
Total - 13 Species	56			17.28	

STATION: 3, County Road 600W

NAME OF STREAM: West Fork White River

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Golden redhorse	18	28.57	12.2-15.0	17.50	21.16
Black redhorse	14	22.22	13.4-15.9	12.75	15.42
Northern hog sucker	6	9.52	6.1-9.6	1.49	1.80
Common carp	4	6.35	23.1-26.7	35.00	42.32
Spotfin shiner	4	6.35	2.7-3.9	0.04	0.05
Rock bass	3	4.76	6.4-8.9	1.28	1.55
Spotted sucker	3	4.76	9.7-13.7	2.17	2.62
Rosyface shiner	2	3.17	2.4-2.8	0.06	0.07
Silver shiner	2	3.17	4.9-5.3	0.06	0.07
Smallmouth bass	2	3.17	13.1-16.5	3.02	3.65
Bluntnose minnow	1	1.59	3.3	0.01	0.01
Brook silverside	1	1.59	2.7	0.01	0.01
Channel catfish	1	1.59	27.0	9.00	10.88
Longear sunfish	1	1.59	5.2	0.11	0.13
Redear sunfish	1	1.59	6.5	0.21	0.25
Total - 15 Species	63			82.71	

STATION: 4, Perkinsville

NAME OF STREAM: West Fork White River

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Longear sunfish	122	30.81	0.9-5.6	3.35	9.51
Spotfin shiner	68	17.17	1.4-3.3	0.23	0.65
Rock bass	40	10.10	3.2-7.8	6.43	18.26
Bluegill	21	5.30	3.3-5.6	1.02	2.90
Rainbow darter	19	4.80	1.4-2.5	0.06	0.17
Bluntnose minnow	17	4.29	1.0-2.6	0.03	0.09
Green sunfish	17	4.29	2.0-5.3	0.60	1.70
Greenside darter	14	3.54	2.0-3.1	0.06	0.17
Smallmouth bass	11	2.78	3.4-16.2	3.33	9.45
Johnny darter	10	2.53	1.6-2.1	0.02	0.06
Central stoneroller	9	2.27	2.1-3.1	0.07	0.20
Largemouth bass	6	1.52	3.0-4.0	0.15	0.43
Northern hog sucker	6	1.52	3.2-13.8	2.52	7.16
Sand shiner	6	1.52	1.5-2.5	0.02	0.06
Mottled sculpin	5	1.26	1.4-3.0	0.03	0.09
Black redhorse	3	0.76	13.4-14.8	2.83	8.04
Golden redhorse	3	0.76	8.6-15.0	2.50	7.10
Warmouth	3	0.76	3.5-4.4	0.14	0.40
Blackside darter	2	0.51	2.3-2.4	0.01	0.03
Common carp	2	0.51	18.0-20.0	10.00	28.39
Orangethroat darter	2	0.51	1.6-1.8	0.01	0.03
Yellow bullhead	2	0.51	8.5-10.4	0.97	0.02
Black crappie	1	0.25	7.4	0.20	0.57
Blackstripe topminnow	1	0.25	1.6	0.01	0.04
Brook silverside	1	0.25	2.5	0.01	0.04
Channel catfish	1	0.25	3	0.01	0.03
Creek chub	1	0.25	2.3	0.01	0.03
Logperch	1	0.25	6.2	0.07	0.20
Roseyface shiner	1	0.25	2.3	0.01	0.03
White sucker	1	0.25	11.8	0.52	1.48
Total - 30 Species	396			35.22	

STATION: 5, Coffey Grounds

NAME OF STREAM: West Fork White River

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Northern hog sucker	8	17.02	3.4-12.3	1.30	1.84
Rock bass	8	17.02	5.0-8.5	2.05	2.90
Smallmouth bass	8	17.02	5.7-14.4	3.33	4.72
Bluntnose minnow	5	10.64	1.5-1.7	0.01	0.01
Common carp	4	8.51	23.3-27.4	61.00	86.44
Longear sunfish	4	8.51	1.2-5.5	0.41	0.58
Spotfin shiner	4	8.51	2.9-3.6	0.04	0.06
Black redhorse	2	4.26	13.5-15.7	2.30	3.26
Brook silverside	2	4.26	2.4-2.5	0.01	0.01
Redfin pickerel	1	2.13	6.7	0.06	0.09
Largemouth bass	1	2.13	5.0	0.06	0.09
Total - 11 Species	47			70.57	

STATION: 6, Clare

NAME OF STREAM: West Fork White River

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Bluntnose minnow	59	22.43	1.5-3.1	0.13	0.23
Longear sunfish	36	13.69	2.8-5.6	2.12	3.70
Bluegill	33	12.55	1.2-5.9	0.70	1.22
Spotfin shiner	29	11.03	2.0-3.8	0.26	0.45
Rock bass	22	8.37	1.7-8.7	6.39	11.16
Golden redhorse	16	6.08	6.5-10.2	7.67	13.39
River carpsucker	11	4.18	14.7-14.9	2.88	5.03
Channel catfish	10	3.80	7.8-11.0	2.60	4.54
Spotted sucker	8	3.04	10.7-13.6	5.90	10.30
Smallmouth bass	7	2.66	3.1-19.9	8.42	14.70
Gizzard shad	6	2.28	7.7-12.5	3.25	5.67
White sucker	6	2.28	9.8-14.6	4.48	7.82
Central stoneroller	4	1.52	3.1-4.6	0.08	0.14
Northern hog sucker	4	1.52	8.7-13.6	2.65	4.63
Silver shiner	2	0.76	4.6-4.9	0.05	0.09
Yellow bullhead	2	0.76	8.7-11.9	1.34	2.34
Black redhorse	1	0.38	14.9	1.17	2.04
Common carp	1	0.38	21.1	4.94	8.63
Redfin pickerel	1	0.38	6.9	0.10	0.17
Highfin carpsucker	1	0.38	14.5	1.48	2.58
Largemouth bass	1	0.38	10.5	0.61	1.07
Lepomis hybrid	1	0.38	4.4	0.03	0.05
Sand shiner	1	0.38	1.3	0.01	0.02
Suckermouth minnow	1	0.38	3.0	0.01	0.02
Total - 23 Species 1 Hybrid	263			57.27	

STATION: 7, Noblesville PAS

NAME OF STREAM: West Fork White River

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Spotfin shiner	29	18.59	1.3-3.2	0.10	0.05
Bluegill	27	17.31	1.3-7.1	1.06	0.57
Common carp	16	10.26	16.5-22.1	126.39	68.04
Gizzard shad	13	8.33	8.5-12.6	6.60	3.55
Rock bass	13	8.33	2.1-8.9	4.66	2.51
Smallmouth bass	13	8.33	3.1-17.0	4.12	2.22
Golden redhorse	8	5.13	6.7-14.7	6.93	3.73
Longear sunfish	6	3.85	3.7-5.5	0.59	0.32
Black redhorse	5	3.21	13.4-15.9	5.47	2.94
Channel catfish	5	3.21	17.9-24.7	23.74	12.78
Black crappie	4	2.56	7.9-9.8	1.58	0.85
Green sunfish	4	2.56	2.2-4.4	0.13	0.07
Northern hog sucker	3	1.92	7.5-10.4	0.85	0.46
Johnny darter	2	1.28	2.1-2.2	0.01	0.01
Lepomis hybrid	2	1.28	3.3-6.6	0.23	0.12
Silver redhorse	2	1.28	14.0-16.6	2.82	1.52
Greenside darter	1	0.64	3.0	0.01	0.01
Logperch	1	0.64	6	0.04	0.02
Spotted sucker	1	0.64	3.4	0.01	0.01
White crappie	1	0.64	8.8	0.43	0.23
Total - 19 Species 1 Hybrid	156			185.77	

STATION: 8, HWY 32 Bridge

NAME OF STREAM: West Fork White River

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Longear sunfish	110	15.28	1.2-5.4	2.78	2.91
Spotfin shiner	95	13.19	1.7-3.7	0.47	0.49
Sand shiner	73	10.14	1.5-2.9	0.33	0.35
Green sunfish	51	7.08	2.0-5.9	1.65	1.73
Central stoneroller	44	6.11	2.7-4.2	0.90	0.94
Northern hog sucker	42	5.83	3.2-13.0	10.45	10.95
Black redhorse	40	5.56	8.4-19.7	47.50	49.75
Bluegill	36	5.00	1.3-6.5	1.82	1.91
Logperch	36	5.00	3.7-4.1	0.29	0.30
Largemouth bass	30	4.17	3.5-14.9	4.10	4.29
Smallmouth bass	29	4.03	2.8-17.0	8.44	8.84
Johnny darter	22	3.06	2.0-2.5	0.08	0.08
Rock bass	21	2.92	1.7-8.4	4.79	5.02
Bluntnose minnow	19	2.64	1.5-3.1	0.08	0.08
Greenside darter	17	2.36	2.4-2.9	0.15	0.16
Suckermouth minnow	11	1.53	2.8-3.6	0.14	0.15
Gizzard shad	9	1.25	8.4-13.8	4.04	0.01
Redfin pickerel	7	0.97	3.7-6.9	0.28	0.29
Rainbow darter	5	0.69	1.7-1.9	0.01	0.01
Blackstripe topminnow	4	0.56	1.5-1.7	0.01	0.01
Golden redhorse	4	0.56	12.8-15.2	4.35	4.56
Spotted sucker	4	0.56	3.6-3.9	0.08	0.08
Channel catfish	3	0.42	2.8-3.0	0.02	0.01
Brook silverside	2	0.28	2.0-2.2	0.01	0.04
Orangethroat darter	2	0.28	1.5-2.0	0.01	0.01
Black crappie	1	0.14	8.9	0.48	0.50
Lepomis hybrid	1	0.14	4.6	0.06	0.06
Quillback	1	0.14	2.9	0.01	0.01
Sauger	1	0.14	19.8	2.14	2.24
Total - 29 Species 1 Hybrid	720			95.47	

STATION: 9, Above 116th St. Bridge

NAME OF STREAM: West Fork White River

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Bluegill	110	17.46	1.6-7.3	6.50	13.54
Spotfin shiner	84	13.33	1.2-4.0	0.59	1.23
Sand shiner	64	10.16	1.1-3.0	0.13	0.27
Largemouth bass	47	7.46	2.7-9.3	2.12	4.42
Green sunfish	42	6.67	2.2-5.9	1.33	2.77
Longear sunfish	39	6.19	1.3-5.4	2.78	5.79
Central stoneroller	36	5.71	2.2-4.7	0.80	1.67
Bluntnose minnow	32	5.08	1.0-3.2	0.44	0.92
Suckermouth minnow	32	5.08	2.3-4.2	0.44	0.92
Northern hog sucker	30	4.76	3.4-14.1	4.50	9.37
Channel catfish	23	3.65	2.0-5.0	0.38	0.79
Greenside darter	21	3.33	2.2-3.4	0.16	0.33
Rainbow darter	14	2.22	1.5-2.6	0.05	0.10
Black redhorse	12	1.90	9.5-15.8	13.00	27.08
Gizzard shad	10	1.59	3.0-9.5	1.75	3.65
Smallmouth bass	8	1.27	2.6-14.9	4.99	10.39
Johnny darter	7	1.11	1.8-2.3	0.03	0.06
Golden redhorse	6	0.95	8.3-18.1	7.50	15.62
Orangethroat darter	2	0.32	1.9-2.1	0.01	0.02
Stonecat	2	0.32	2.1-2.8	0.01	0.02
Black crappie	1	0.16	6.7	0.16	0.33
Blackstripe topminnow	1	0.16	1.2	0.01	0.02
Brook silverside	1	0.16	2.0-2.2	0.01	0.04
Lepomis hybrid	1	0.16	5.6	0.15	0.31
Silverjaw minnow	1	0.16	1.9	0.01	0.02
Slenderhead darter	1	0.16	2.3	0.01	0.02
Spotted sucker	1	0.16	3.8	0.02	0.04
Rock bass	1	0.16	5.5	0.10	0.21
White crappie	1	0.16	4.4	0.03	0.06
Total - 28 Species 1 Hybrid	630			48.01	

STATION: 10, Below 116th Street

NAME OF STREAM: West Fork White River

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Golden redhorse	28	22.22	6.7-18.9	2.04	1.80
Bluegill	22	17.46	2.7-7.8	2.53	2.24
Longear sunfish	21	16.67	3.7-5.7	2.17	1.92
Smallmouth bass	11	8.73	4.3-16.3	8.88	7.85
Green sunfish	7	5.56	3.6-4.7	0.36	0.32
Northern hog sucker	7	5.56	4.5-14.5	3.83	3.39
Rock bass	7	5.56	6.2-8.6	2.81	2.48
Channel catfish	5	3.97	20.5-25.8	31.50	27.85
Common carp	5	3.97	22.0-28.2	57.50	50.84
Spotted sucker	4	3.17	3.7-9.2	0.72	0.64
Black crappie	3	2.38	6.0-8.0	0.54	0.48
Largemouth bass	3	2.38	3.5-4.8	0.11	0.10
Logperch	3	2.38	4.3-5.7	0.10	0.09
Total - 13 Species	126			113.09	

STATION: 12, Upper Broad Ripple

NAME OF STREAM: West Fork White River

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Bluegill	71	25.27	1.3-8.1	6.22	2.78
Gizzard shad	49	17.44	5.3-14.3	15.53	6.95
Channel catfish	34	12.10	6.8-20.9	92.31	41.29
Yellow bass	32	11.39	6.8-10.0	7.70	3.44
Spotted sucker	21	7.47	11.5-17.8	30.10	13.46
Largemouth bass	15	5.34	4.3-17.4	12.56	5.62
Spotfin shiner	9	3.20	2.7-4.1	0.16	0.07
White crappie	9	3.20	5.3-11.7	2.48	1.11
Longear sunfish	7	2.49	3.2-5.6	0.52	0.23
Black crappie	6	2.14	5.5-6.9	0.66	0.30
Common carp	4	1.42	12.0-28.6	40.10	17.94
Bluntnose minnow	3	1.07	2.7-2.9	0.01	0.00
Green sunfish	3	1.07	3.3-5.5	0.15	0.07
White bass	3	1.07	5.5-7.1	0.28	0.13
Yellow perch	3	1.07	5.9-8.0	0.32	0.14
Quillback	2	0.71	15.8-17.0	3.78	1.69
Rock bass	2	0.71	5.5-7.6	0.46	0.21
River redhorse	2	0.71	8.2-15.9	1.89	0.85
Sauger	2	0.71	17.5-21.0	4.88	2.18
Warmouth	2	0.71	4.7-5.3	0.17	0.08
Black redhorse	1	0.36	15.3	1.30	0.58
Golden redhorse	1	0.36	17.4	2.00	0.89
Total - 22 Species	281			223.58	

STATION: 13, Landings Pit

NAME OF STREAM: West Fork White River

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Bluegill	191	42.07	2.1-7.6	7.30	8.66
Gizzard shad	98	21.59	5.4-13.9	5.88	6.97
Black crappie	57	12.56	5.5-7.9	7.93	9.41
Yellow bass	35	7.71	6.9-8.9	6.30	7.47
Channel catfish	22	4.85	7.7-24.0	19.96	23.67
Largemouth bass	20	4.41	3.2-17.2	10.13	0.04
White crappie	8	1.76	4.7-8.7	1.42	1.68
White bass	6	1.32	5.8-8.3	1.05	1.25
Spotted sucker	5	1.10	11.4-17.3	6.47	7.67
Quillback	2	0.44	7.5-18.4	5.40	6.40
River carpsucker	3	0.66	16.1-17.7	4.25	5.04
Sauger	3	0.66	19.1-20.1	7.47	8.86
Golden redhorse	1	0.22	8.8	0.26	0.31
Golden shiner	1	0.22	5.2	0.05	0.06
Green sunfish	1	0.22	6.1	0.10	0.12
Redear sunfish	1	0.22	7.6	0.34	0.40
Total - 16 Species	454			84.31	

STATION: 14, Lower Broad Ripple

NAME OF STREAM: West Fork White River

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Longear sunfish	111	50.92	1.5-5.6	4.09	5.42
Green sunfish	17	7.80	2.3-4.7	0.53	0.70
Bluegill	31	14.22	1.6-6.9	1.92	2.54
Golden redhorse	14	6.42	15.8-18.8	27.60	36.54
Rock bass	14	6.42	6.1-8.9	4.83	6.39
Largemouth bass	7	3.21	2.6-17.2	2.70	3.57
Spotfin shiner	5	2.29	1.5-3.5	0.03	0.04
Flathead catfish	4	1.83	19.1-21.1	11.26	14.91
Yellow bass	3	1.38	4.4-10.0	0.78	1.03
Black crappie	2	0.92	4.4-7.5	0.22	0.29
Quillback	2	0.92	16.9-17.3	4.93	6.53
Spotted sucker	2	0.92	15.6-15.9	3.20	4.24
Bluntnose minnow	1	0.46	2.4	0.01	0.01
Central stoneroller	1	0.46	3.6	0.01	0.01
Common carp	1	0.46	27.0	12.00	15.89
Gizzard shad	1	0.46	12.5	0.81	1.07
Orangespotted sunfish	1	0.46	5.1	0.05	0.07
Redear sunfish	1	0.46	9.1	0.56	0.74
Total - 18 Species	218			75.53	

STATION: 15, Meridian

NAME OF STREAM: West Fork White River

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Bluegill	246	30.90	1.0-6.9	7.25	11.71
Longear sunfish	155	19.47	1.2-5.9	8.50	13.73
Spotfin shiner	82	10.30	0.9-4.1	0.55	0.89
Central stoneroller	70	8.79	2.9-5.6	1.30	2.10
Largemouth bass	32	4.02	2.3-10.1	1.41	2.28
Rock bass	30	3.77	3.4-8.5	6.61	10.68
Bluntnose minnow	27	3.39	1.8-3.5	0.24	0.39
Greenside darter	24	3.02	2.6-3.7	0.33	0.53
Rainbow darter	23	2.89	1.8-2.5	0.09	0.15
Smallmouth bass	23	2.89	3.2-12.0	8.54	13.80
Green sunfish	21	2.64	2.1-5.0	0.60	0.97
Northern hog sucker	20	2.51	3.2-11.2	5.25	8.48
Black redhorse	14	1.76	10.1-17.2	15.00	24.23
Johnny darter	5	0.63	1.9-2.2	0.02	0.03
Rosyface shiner	5	0.63	2.3-2.5	0.02	0.03
Brook silverside	3	0.38	2.5-3.0	0.01	0.02
Channel catfish	3	0.38	2.6-3.9	0.03	0.05
Sand shiner	3	0.38	1.5-2.6	0.01	0.02
Mottled sculpin	2	0.25	2.0-3.2	0.02	0.04
Yellow bullhead	2	0.25	4.4-7.7	0.27	0.44
Creek chub	1	0.13	3.2	0.01	0.02
Golden redhorse	1	0.13	14.9	1.17	1.89
Lepomis hybrid	1	0.13	3.7	0.04	0.06
Logperch	1	0.13	6.7	0.09	0.15
Silver redhorse	1	0.13	21.0	4.00	6.46
White sucker	1	0.13	11.2	0.54	0.87
Total - 25 Species 1 Hybrid	796	60		61.90	

STATION: <u>16, 53rd St.</u>

NAME OF STREAM: West Fork White River

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Bluntnose minnow	333	23.29	1.8-3.4	2.06	5.84
Spotfin shiner	286	20.00	1.1-3.4	0.55	1.56
Longear sunfish	281	19.65	1.1-5.9	13.50	38.28
Sand shiner	202	14.13	1.7-2.9	0.93	2.64
Bluegill	98	6.85	1.8-6.9	4.47	12.67
Central stoneroller	46	3.22	2.8-4.5	0.77	2.18
Largemouth bass	36	2.52	3.1-5.8	1.09	3.09
Suckermouth minnow	24	1.68	3.1-3.6	0.32	0.91
Rainbow darter	19	1.33	1.6-2.0	0.08	0.23
Northern hog sucker	18	1.26	3.5-13.4	3.37	9.55
Rock bass	16	1.12	5.2-8.1	3.40	9.64
Silver shiner	13	0.91	4.7-5.6	0.32	0.91
Brook silverside	8	0.56	2.4-3.0	0.03	0.04
Greenside darter	7	0.49	1.3-2.5	0.09	0.26
Slenderhead darter	7	0.49	2.2-2.6	0.04	0.11
Smallmouth bass	7	0.49	3.2-11.1	2.10	5.95
Black redhorse	6	0.42	4.0-9.4	1.12	3.18
Green sunfish	4	0.28	3.5-4.1	0.13	0.37
Johnny darter	4	0.28	1.9-2.2	0.02	0.06
Channel catfish	2	0.14	2.5-2.8	0.02	0.06
Logperch	2	0.14	5.6-6.5	0.14	0.40
Rosyface shiner	2	0.14	1.9-3.0	0.01	0.03
Western mosquitofish	2	0.14	1.5-1.7	0.01	0.03
Common carp	1	0.07	8.6	0.33	0.94
Golden redhorse	1	0.07	7.5	0.16	0.45
Creek chub	1	0.07	3.1	0.02	0.06
Redear sunfish	1	0.07	4.3	0.06	0.17
Spotted sucker	1	0.07	6.7	0.10	0.28
Striped shiner	1	0.07	2.8	0.01	0.03
White sucker	1	0.07	3.7	0.02	0.06
Total - 30 Species	1430			35.27	

STATION: 17, Lake Indy

NAME OF STREAM: West Fork White River

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Bluegill	86	19.91	0.9-7.2	3.67	1.22
Longear sunfish	80	18.52	1.5-5.5	3.54	1.18
Channel catfish	77	17.82	4.8-28.6	124.13	41.42
Orangespotted sunfish	44	10.19	1.8-3.9	0.59	0.20
Largemouth bass	21	4.86	4.1-15.9	12.60	0.04
Quillback	15	3.47	12.8-17.7	23.77	7.93
Bluntnose minnow	18	4.17	1.2-3.5	0.13	0.04
Spotfin shiner	14	3.24	2.4-3.7	0.16	0.05
Gizzard shad	13	3.01	6.7-11.1	4.00	1.33
Spotted sucker	12	2.78	7.0-14.7	7.43	2.48
Rock bass	9	2.08	4.7-8.3	2.05	0.68
Common carp	8	1.85	19.6-28.1	60.10	20.05
Golden shiner	8	1.85	4.5-7.4	0.71	0.24
River carpsucker	7	1.62	13.3-20.4	26.21	8.75
Silver redhorse	6	1.39	9.8-24.7	18.50	6.17
White crappie	5	1.16	5.1-12.9	2.36	0.79
Golden redhorse	4	0.93	15.7-17.0	6.75	2.25
Highfin carpsucker	2	0.46	13.0-13.2	1.86	0.62
Yellow bass	2	0.46	8.3-8.9	0.62	0.21
Black crappie	1	0.23	9.9	0.50	0.17
Total - 20 Species	432			299.68	

	IBER, PERCEN	TAGE, WEIGHT		OF LARGEM		WEST FORK			2011
TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	AVERAGE WEIGHT (pounds)	AGE OF FISH	TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	AVERAGE WEIGHT (pounds)	AGE OF FISH
1.0					18.0				
1.5					18.5				
2.0	1	0.4	0.00	YOY	TOTAL	223			
2.5	5	2.2	0.00	YOY					
3.0	24	10.8	0.02	YOY					
3.5	62	27.8	0.02	YOY					
4.0	37	16.6	0.04	YOY					
4.5	34	15.2	0.05	YOY					
5.0	13	5.8	0.05	YOY					
5.5	7	3.1	0.07	YOY					
6.0									
6.5	1	0.4	0.14	not aged					
7.0	2	0.9	0.15	1					
7.5	2	0.9	0.23	1					
8.0	5	2.2	0.27	1					
8.5									
9.0	4	1.8	0.38	1,2					
9.5	1	0.4	0.51	2					
10.0	1	0.4	0.00	not aged					
10.5	1	0.4	0.61	2					
11.0	1	0.4	0.74	1					
11.5	2	0.9	0.77	2,3					
12.0	3	1.3	1.00	3					
12.5	3	1.3	1.12	3,4					
13.0	3	1.3	1.27	4					
13.5	1	0.4	1.44	4					
14.0	2	0.9	1.64	4					
14.5	1	0.4	2.11	4					
15.0	3	1.3	1.90	4,5					
15.5	1	0.4	2.37	4					
16.0									
16.5									
17.0	3	1.3	3.08	9,10					
17.5									

ELECTROFISHING CATCH	18/hr	GILL NET CATCH	/lift	TRAP NET CATCH	/lift
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WE	EST FORK WHITE F	RIVER LARGEMOUTH	I BASS	S AG	E-L	ENG	TH	KEY	′			
Length	Total #						Αg	je				
group (in)	number	Subsample	1	2	3	4	5		7	8	9	10
2.0	1	•										
2.5	5											
3.0	24	6										
3.5	62	6										
4.0	37	5										
4.5	34	5										
5.0	13	6										
5.5	7	4										
6.0												
6.5	1											
7.0	2	1	2									
7.5	2	1	2									
8.0	5	4	5									
8.5												
9.0	4	4	2	2								
9.5	1	1		1								
10.0	1											
10.5	1	1		1								
11.0	1	1			1							
11.5	2	2		1	1							
12.0	3	3			3							
12.5	3	3			2	1						
13.0	3	3				3						
13.5	1	1				1						
14.0	2	2				2						
14.5	1	1				1						
15.0	3	3				2	1					
15.5	1	1				1						
16.0												
16.5												
17.0	3	3									2	1
Total	223	67	11	5	7	11	1	0	0	0	2	1

NU	MBER, PERCE	NTAGE, WEIG		GE OF SMALL	MOUTH BASS	WEST FORK WI	HITE RIVER 9/2)11
TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	AVERAG E WEIGHT (pounds)	AGE OF FISH	TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	AVERAG E WEIGHT (pounds)	AGE OF FISH
1.0					18.0				
1.5					18.5				
2.0					19.0				
2.5	3	1.9	0.02	YOY	19.5	1	0.6	3.62	11
3.0	21	13.6	0.01	YOY					
3.5	18	11.7	0.01	YOY					
4.0	8	5.2	0.03	YOY	TOTAL	154			
4.5	6	3.9	0.05	YOY					
5.0	6	3.9	0.06	YOY					
5.5	8	5.2	0.08	YOY					
6.0	1	0.6	0.13	YOY					
6.5	9	5.8	0.14	1					
7.0	5	3.2	0.12	1					
7.5	10	6.5	0.21	2					
8.0	5	3.2	0.19	2					
8.5	5	3.2	0.31	2,3					
9.0	4	2.6	0.27	2,3					
9.5	7	4.5	0.42	2,3,4,5					
10.0	3	1.9	0.28	4					
10.5	3	1.9	0.58	3,4					
11.0	6	3.9	0.57	4,5					
11.5	4	2.6	0.75	4,5					
12.0	2	1.3	0.86	4					
12.5	1	0.6	0.96	4					
13.0	3	1.9	1.05	4,8,10					
13.5	2	1.3	0.61	7					
14.0	2	1.3	0.56	8,9					
14.5	1	0.6	1.50	7					
15.0	2	1.3	1.84	5,7					
15.5									
16.0	4	2.6	2.00	8,9					
16.5	1	0.6	2.03	10					
17.0	2	1.3	2.35	8,9					
17.5	1	0.6	3.16	8					

ELECTROFISHING CATCH	13/hr	GILL NET CATCH	/lift	TRAP NET CATCH	/lift
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WES	ST FORK WHITE	RIVER SMALLMOU	TH BA	SS A	GE-	LEN	IGTH	I KE	Y				
Length	Total #						Age)					
group (in)	number	Subsample	1	2	3	4	5	6	7	8	9	10	11
2.0													
2.5	3												
3.0	21	6											
3.5	18	5											
4.0	8	5											
4.5	6	6											
5.0	6	5											
5.5	8	5											
6.0	1	1											
6.5	9	7	8										
7.0	5	4	5										
7.5	10	5		10									
8.0	5	4		5									
8.5	5	4		4	1								
9.0	4	3		1	3								
9.5	7	6		1	4	1	1						
10.0	3	2				3							
10.5	3	3			1	2							
11.0	6	4				2	5						
11.5	4	3				3	1						
12.0	2	2				2							
12.5	1	1				1							
13.0	3	3				1				1		1	
13.5	2	1							2				
14.0	2	2								1	1		
14.5	1	1							1				
15.0	2	2					1		1				
15.5													
16.0	4	4								2	2		
16.5	1	1										1	
17.0	2	2								1	1		
17.5	1	1								1			
18.0													
18.5													
19.0													
19.5	1	1											1
20.0													
Total	154	77	13	21	8	14	8	0	4	6	4	2	1

NUMBER, PERCENTAGE, WEIGHT, AND AGE OF ROCK BASS WEST FORK WHITE RIVER 9/20-10/24, 2011									
TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	AVERAGE WEIGHT (pounds)	AGE OF FISH	TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	AVERAGE WEIGHT (pounds)	AGE OF FISH
1.0									
1.5	12	5.4	0.01	1					
2.0	3	1.3	0.01	1					
2.5									
3.0	6	2.7	0.03	1					
3.5	5	2.3	0.03	1,2					
4.0	5	2.3	0.05	2					
4.5	7	3.2	0.08	2,3					
5.0	20	9.0	0.10	3					
5.5	22	10.0	0.07	4					
6.0	25	11.3	0.17	4					
6.5	30	13.6	0.22	4					
7.0	29	13.1	0.27	4,5					
7.5	24	10.9	0.36	5					
8.0	15	6.8	0.45	5,6					
8.5	18	8.1	0.51	7,8					
9.0									
9.5									
Total	221								

ELECTROFISHING CATCH	18/hr	GILL NET CATCH	/lift	TRAP NET CATCH	/lift
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WEST FORK WHITE RIVER ROCK BASS AGE-LENGTH KEY										
Length	Total #		Age							
group (in)	number	Subsample	1	2	3	4	5	6	7	8
1.5	12	1	12							
2.0	3	1	3							
2.5		1	0							
3.0	6	1	6							
3.5	5	5	4	1						
4.0	5	5		5						
4.5	7	5		1	6					
5.0	20	6			20					
5.5	22	5				22				
6.0	25	5				25				
6.5	30	8				30				
7.0	29	10				9	20			
7.5	24	6					24			
8.0	15	7					4	11		
8.5	18	6							15	3
Total	221	72	25	7	26	86	49	11	15	3

NUMBER, PERCENTAGE, WEIGHT, AND AGE OF CHANNEL CATFISH WEST FORK WHITE RIVER 9/20-10/2								/24, 2011	
TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	AVERAGE WEIGHT (pounds)	AGE OF FISH	TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	AVERAGE WEIGHT (pounds)	AGE OF FISH
1.0					18.0	3	1.6	1.90	not aged
1.5					18.5	1	0.5	1.95	not aged
2.0	5	2.7	0.01	not aged	19.0	1	0.5	2.21	not aged
2.5	5	2.7	0.01	not aged	19.5	1	0.5	2.68	not aged
3.0	5	2.7	0.02	not aged	20.0				
3.5	5	2.7	0.02	not aged	20.5	2	1.1	3.55	not aged
4.0	5	2.7	0.02	not aged	21.0	3	1.6	3.93	not aged
4.5	2	1.1	0.02	not aged	21.5				
5.0	1	0.5	0.02	not aged	22.0	3	1.6	4.80	not aged
5.5					22.5	1	0.5	5.00	not aged
6.0					23.0	3	1.6	5.83	not aged
6.5	16	8.6	0.08	not aged	23.5	1	0.5	5.30	not aged
7.0					24.0	4	2.2	6.25	not aged
7.5	2	1.1	0.18	not aged	24.5	3	1.6	6.53	not aged
8.0	3	1.6	0.16	not aged	25.0				
8.5	15	8.1	0.19	not aged	25.5	4	2.2	7.40	not aged
9.0	20	10.8	0.21	not aged	26.0	1	0.5	8.20	not aged
9.5	24	12.9	0.27	not aged	26.5	1	0.5	9.10	not aged
10.0	14	7.5	0.28	not aged	27.0	1	0.5	9.00	not aged
10.5	1	0.5	0.34	not aged	27.5	4	2.2	9.88	not aged
11.0	3	1.6	0.26	not aged	28.0	1	0.5	8.90	not aged
11.5	1	0.5	0.40	not aged	28.5	1	0.5	10.30	not aged
12.0					29.0	1	0.5	11.00	not aged
12.5					29.5				
13.0					30.0				
13.5					30.5	1	0.5	13.00	not aged
14.0	2	1.1	0.90	not aged					
14.5	1	0.5	1.15	not aged	Total	186			
15.0	4	2.2	1.01	not aged					
15.5	1	0.5	1.09	not aged					
16.0	1	0.5	1.60	not aged					
16.5	2	1.1	1.51	not aged					
17.0	3	1.6	1.64	not aged					
17.5	4	2.2	1.92	not aged					
ELECTROFISHING CATCH		5/h	nr	GILL NET CATCH		9/lift	TRAP NE CATCH		/lift