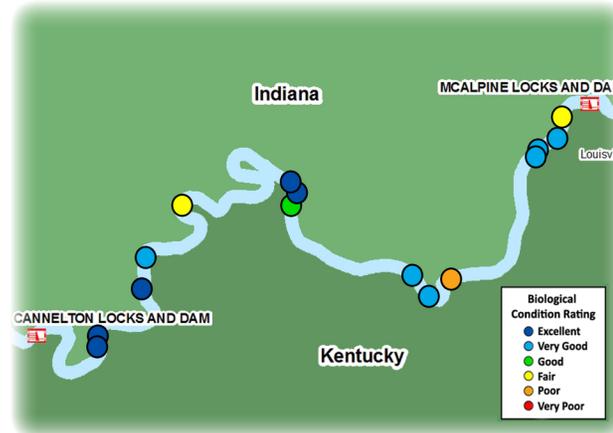
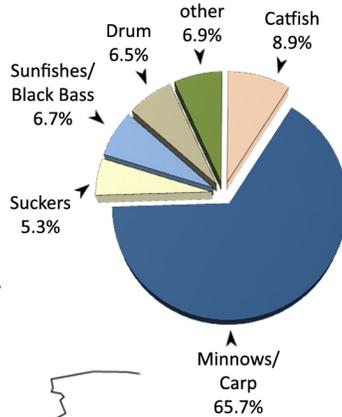


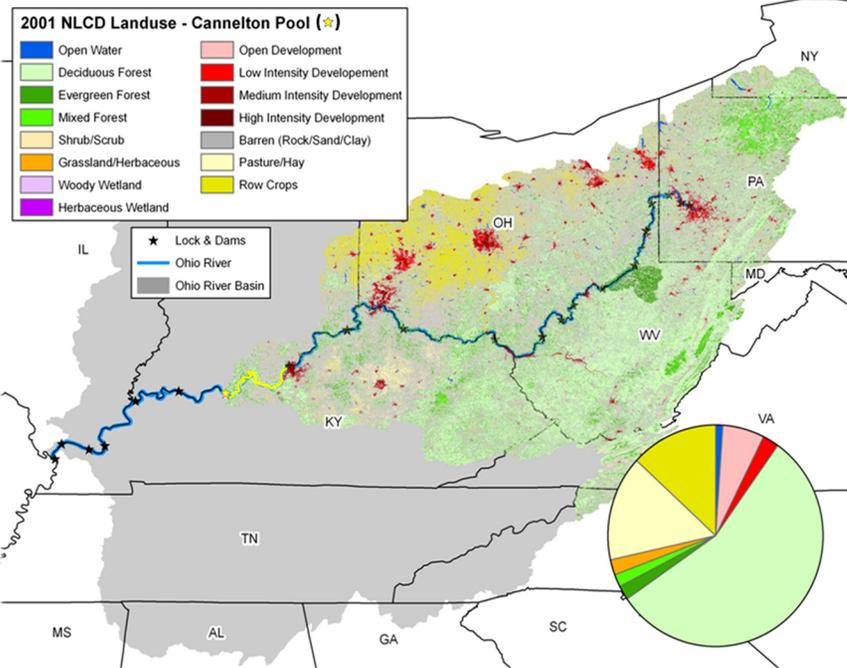
Cannelton Pool - 2011

The Cannelton pool is 113.9 miles long, extending from McAlpine Locks and Dam (ORM 606.8) to Cannelton Locks and Dam (ORM 720.7). The pool has a gradient of 0.3 feet per mile and averages 1,674 feet wide and 32 feet deep. The pool is bordered by the states of Kentucky and Indiana. The Cannelton pool receives water from the Salt River, Big Indiana Creek, Sinking Creek, and Blue River. The Falls of Ohio (Clarksville, Indiana) is located in Cannelton pool and provides a unique habitat in the river, therefore a unique fish community is also present. Many species such as blue suckers (*Cyprinus elongatus*) and striped bass (*Morone saxatilis*) take advantage of the high velocities and shallow water. This riffle-like habitat offers quasi-natural, historical conditions that were once intermittent along the entire length of the river.

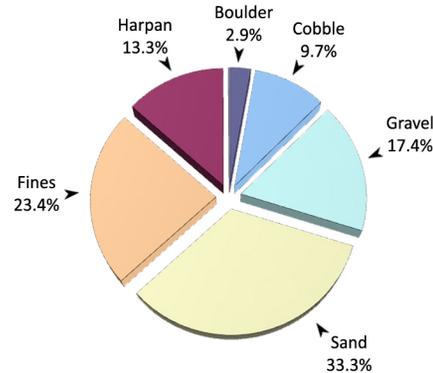


Locations of the 15 randomly chosen electrofishing sites in Cannelton Pool

Densely wooded shorelines with natural rocky cover are a common sight throughout the scarcely populated middle and lower portions of Cannelton Pool



Land-use types within the Cannelton Pool watershed



redear sunfish (*Lepomis microlophus*)

Site Performance

Site No.	River Mile	Habitat Class	ORFIn Exp	ORFIn Obs	mORFIn Score
1	610.5	B	46.71	54.42	29.25
2	612.8	D	41.80	59.17	41.19
3	614.9	D	41.80	68.22	49.67
4	615.6	C	44.55	61.70	40.46
5	634.1	D	41.80	40.39	18.63
6	638.1	D	41.80	62.53	44.34
7	641.0	D	41.80	65.94	47.52
8	656.8	C	44.55	58.02	36.50
9	658.2	B	46.71	75.87	50.27
10	659.7	D	41.80	72.41	54.56
11	681.7	D	41.80	47.29	26.93
12	692.4	D	41.80	66.36	47.92
13	695.9	D	41.80	70.88	52.73
14	705.8	D	41.80	71.38	53.33
15	707.4	E	39.59	71.14	60.00

Average Pool mORFIn Score 43.6

Cannelton Pool - Results Overview

Sampling Results

Environmental Measures

Dominant Habitat Class: D - shallow sand/fines
 Notable Measures: higher velocities in the upper reaches

Biological Measures

Total No. of Fish Species: 48
 Average No. of Individuals: 182
 Dominant Family (*minus herring/shad*): Minnows/Carp
 Dominant Species (*minus shad/shiners*): freshwater drum
 Threatened and Endangered Species: none were captured
 Rare Ohio River Mainstem Species: warmouth
 Notable Catch: walleye (more common upstream)

Assessment Results

Highest scoring ORFIn metric (*minus DELTs*): % Non-natives
 Lowest scoring ORFIn metric: % Lithophils
 Sites Above 25th percentile (i.e. mORFIn Score = 20): 14
 Sites Below 25th percentile (i.e. mORFIn Score = 20): 1
 Aquatic Life-Use Designation: Met

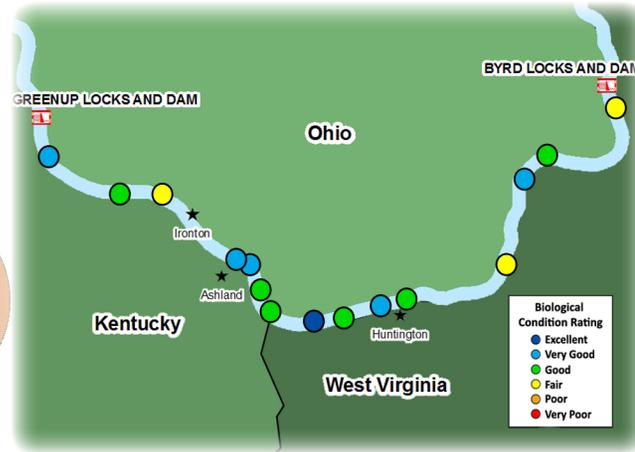
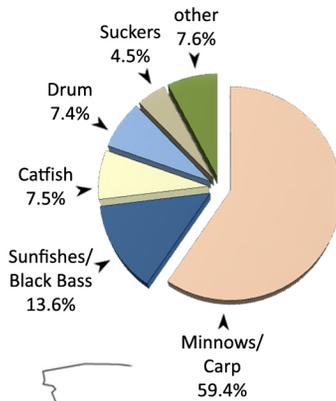
Overall Biological Condition Rating: Very Good



longnose gar (*Lepisosteus osseus*)

Greenup Pool - 2011

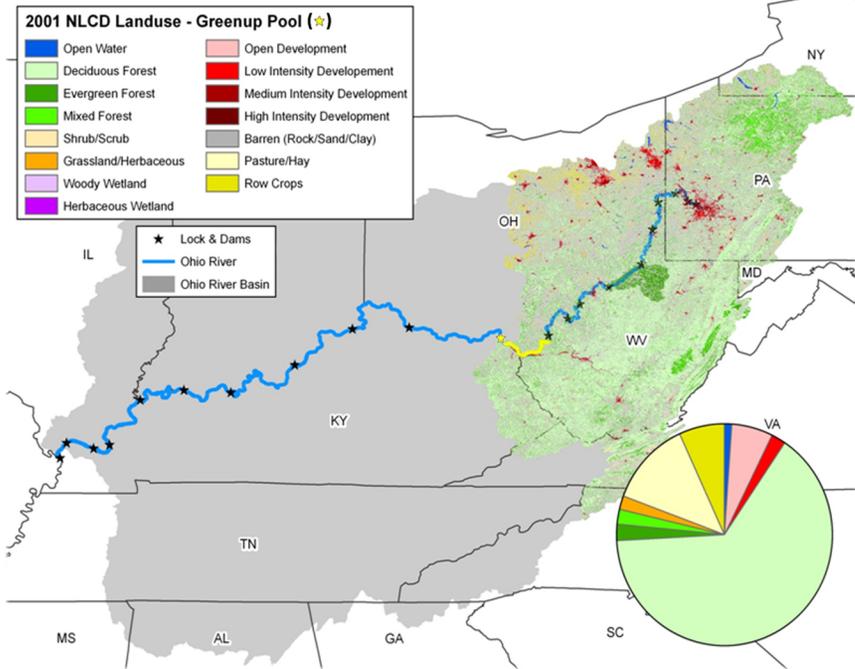
The Greenup pool is 61.8 miles long, extending from Robert C. Byrd Locks and Dam (ORM 279.2) to Greenup Locks and Dam (ORM 341.0). The pool has a gradient drop of 0.4 feet per mile and averages 1,111 feet wide and 26 feet deep. The pool is bordered by the states of West Virginia and Ohio at the upper end and by Ohio and Kentucky downstream of the Big Sandy River. This pool is heavily influenced by industry with a large amount of barge activity near urban centers. The Greenup pool receives water from five major sub-basins: the Guyandotte, Big Sandy, and Little Sandy rivers and Twelvepole and Symmes creeks. These watersheds are primarily forested, but also have significant urban influences including the cities of Huntington, WV and Ashland, KY. Green Bottom Wildlife Management Area (WV) and the mouth of the Little Sandy (KY) provide great wetland and backwater habitat for rare mainstem species like the bowfin.



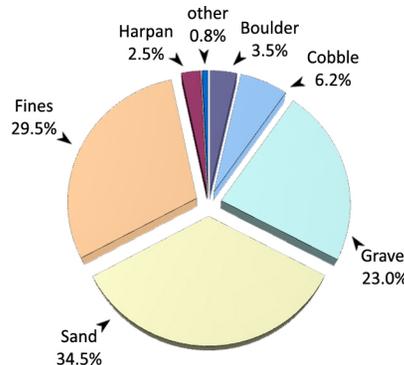
Locations of the 15 randomly chosen electrofishing sites in Greenup Pool



Sunset over the bridges connecting two of the larger cities in Greenup Pool, Ashland (KY) and Ironton (OH)



Land-use types within the Greenup Pool watershed



spotted bass (*Micropterus punctulatus*)

Site Performance

Site No.	River Mile	Habitat Class	ORFIn Exp	ORFIn Obs	mORFIn Score
1	283.0	C	44.55	49.85	26.90
2	288.2	C	44.55	57.21	35.59
3	292.4	C	44.55	63.53	41.98
4	299.3	C	44.55	48.37	24.98
5	307.3	D	41.80	50.98	31.55
6	309.1	D	41.80	60.01	41.97
7	311.6	C	44.55	60.81	39.63
8	313.6	D	41.80	73.01	55.26
9	316.8	D	41.80	53.63	34.78
10	318.9	C	44.55	54.73	32.81
11	321.1	B	46.71	74.49	48.98
12	322.0	C	44.55	72.81	49.69
13	329.2	E	39.59	47.69	27.41
14	331.8	D	41.80	56.03	37.72
15	337.6	E	39.59	60.29	41.37

Average Pool mORFIn Score **38.0**

Greenup Pool - Results Overview

Sampling Results

Environmental Measures

Dominant Habitat Class: C – equal mix of coarse and fines
 Notable Measures: relatively high percentage of barge traffic

Biological Measures

Total No. of Fish Species: 47
 Average No. of Individuals: 183
 Dominant Family (*minus herring/shad*): Minnows/Carp
 Dominant Species (*minus shad/shiners*): bluegill
 Species of Concern: river redhorse (OH), black buffalo (KY)
 Rare Ohio River Mainstem Species: bowfin
 Notable Catch: river redhorse, numerous catfish and basses

Assessment Results

Highest scoring ORFIn metric (*minus DELTs*): % Tolerants
 Lowest scoring ORFIn metric: % Lithophils
 Sites Above 25th percentile (i.e. mORFIn Score = 20): 15
 Sites Below 25th percentile (i.e. mORFIn Score = 20): 0
 Aquatic Life-Use Designation: Met

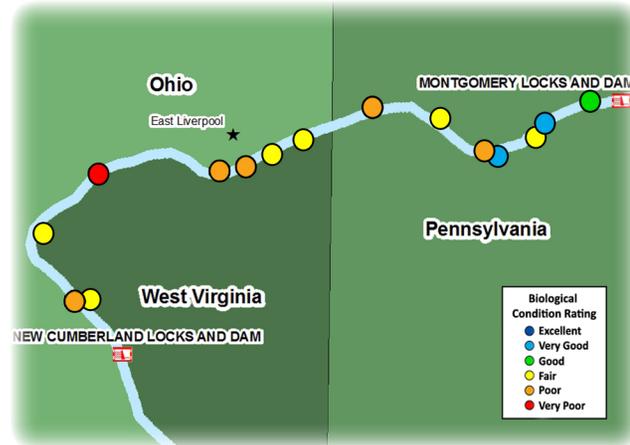
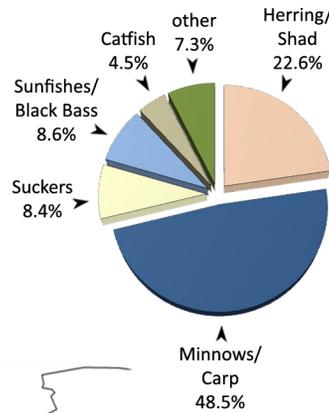
Overall Biological Condition Rating: Good



bowfin (*Amia calva*)

New Cumberland Pool - 2011

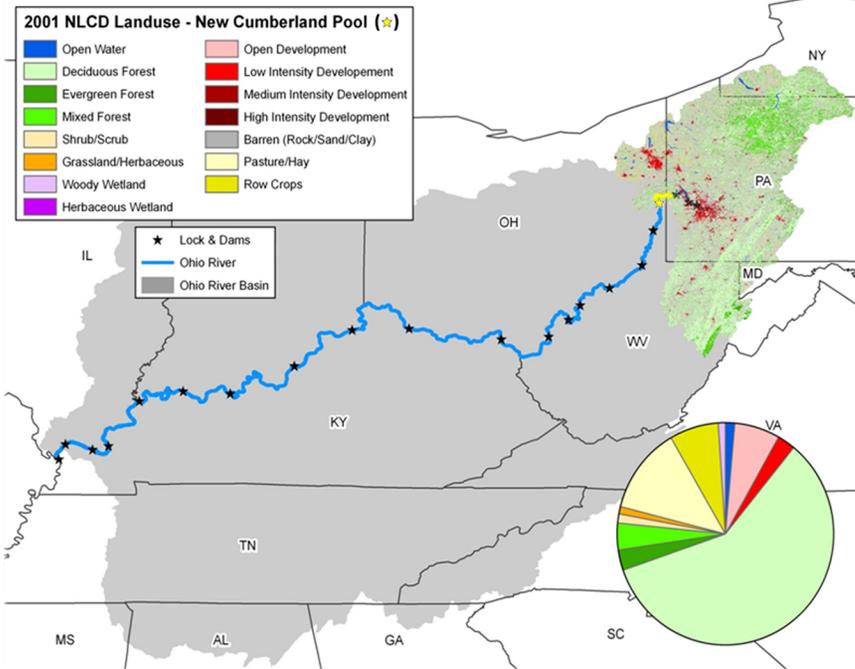
The New Cumberland pool is 22.7 miles long, extending from Montgomery Locks and Dam (ORM 31.7) to New Cumberland Locks and Dam (ORM 54.4). The pool has a gradient drop of 0.2 feet per mile, averages 1,439 feet wide and 22 feet deep. The pool flows within the state of Pennsylvania for the upper nine miles and is bordered by Ohio and West Virginia for the remaining 13.7 miles. Though the pool has few major metropolises (East Liverpool, OH), New Cumberland lies in a portion of the Ohio River heavily influenced by industry and is just 31.7 miles below the city of Pittsburgh. The New Cumberland pool receives water from two small tributaries: Little Beaver Creek and Yellow Creek. The pool's watershed is primarily forested with some agricultural land usage (crops and pasture), but also has significant urban influences. In unmodified sections of the pool the shoreline largely consists of coarse substrates.



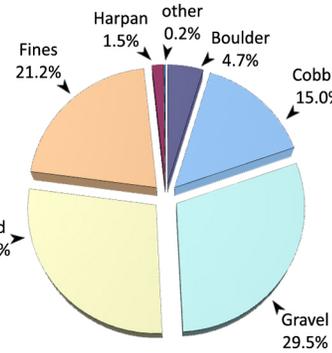
Locations of the 15 randomly chosen electrofishing sites in New Cumberland Pool



Shippingsport, PA which lies in the northern reach of New Cumberland Pool, is home to the only nuclear power plant on the mainstem



Land-use types within the New Cumberland Pool watershed



rock bass (*Ambloplites rupestris*)



yellow perch (*Perca flavescens*)

Site Performance

Site No.	River Mile	Habitat Class	ORFIn Exp	ORFIn Obs	mORFIn Score
1	32.3	D	41.80	54.20	35.47
2	33.6	C	44.55	64.03	42.40
3	34.2	C	44.55	48.72	25.43
4	35.2	C	44.55	67.13	44.97
5	35.6	B	46.71	42.49	15.21
6	37.2	D	41.80	45.35	24.48
7	39.0	C	44.55	35.67	13.84
8	41.0	C	44.55	49.91	26.98
9	42.0	B	46.71	50.62	24.69
10	42.7	B	46.71	45.35	18.46
11	43.5	B	46.71	43.16	15.97
12	47.0	A	50.03	34.70	8.40
13	49.4	C	44.55	45.24	20.90
14	52.2	A	50.03	40.69	13.03
15	52.5	B	46.71	54.70	29.57

Average Pool mORFIn Score 23.9

New Cumberland Pool - Results Overview

Sampling Results

Environmental Measures

Dominant Habitat Class: C – equal mix of coarse and fines
 Notable Measures: relatively high percentage of coarse shoreline

Biological Measures

Total No. of Fish Species: 39
 Average No. of Individuals: 149
 Dominant Family (*minus herring/shad*): Minnows/Carp
 Dominant Species (*minus shad/shiners*): golden redbreast
 Threatened & Endangered Species: mooneye, silver chub (PA)
 Rare Ohio River Mainstem Species: channel darter
 Notable Catch: abundant game fishes (sm. bass and bluegill)

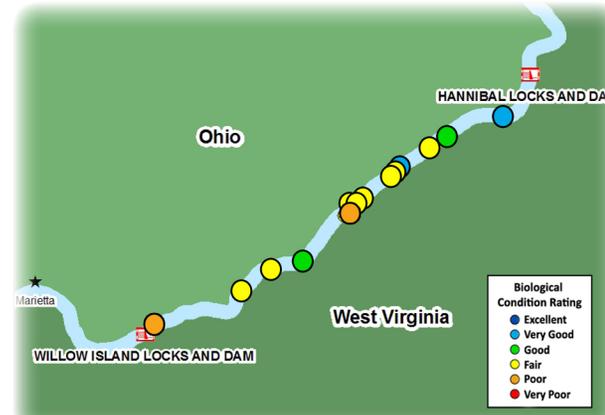
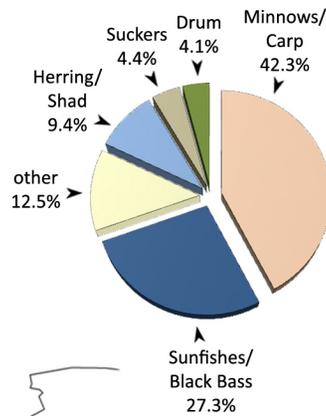
Assessment Results

Highest scoring ORFIn metric (*minus DELTs*): % Non-natives
 Lowest scoring ORFIn metric: % Piscivores
 Sites Above 25th percentile (i.e. mORFIn Score = 20): 9
 Sites Below 25th percentile (i.e. mORFIn Score = 20): 6
 Aquatic Life-Use Designation: Met

Overall Biological Condition Rating: Fair

Willow Island Pool - 2011

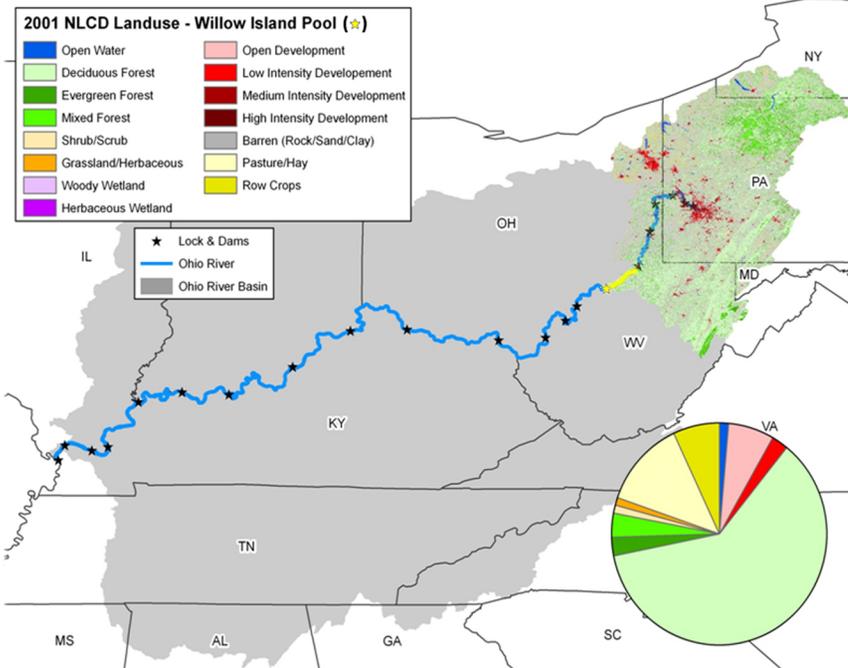
The Willow Island pool is 35.3 miles long, extending from Hannibal Locks and Dam (ORM 126.4) to Willow Island Locks and Dam (ORM 161.7). The pool has a gradient drop of 0.6 feet per mile, averages 1,194 feet wide and 21 feet deep. The pool flows adjacent to the states of Ohio and West Virginia. The Willow Island pool receives water from two sub-basins: the Fishing and Middle Island creeks, both draining parts of West Virginia. This pool lies in a portion of the Ohio River where the land use consists primarily of forested and cropland activities, but is also impacted by the presence of animal farming and urban influences. Almost the entire Ohio shoreline of Willow Island pool is a federally protected national forest (Wayne National Forest), and only a few smaller towns border the West Virginia shoreline (St. Marys, Sistersville, and New Martinsville).



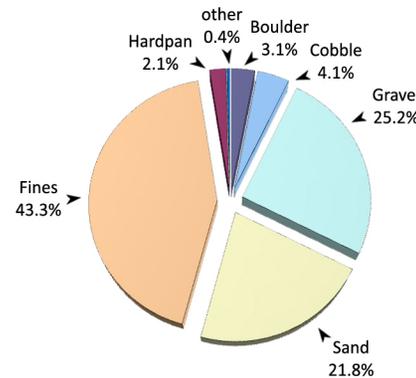
Locations of the 15 randomly chosen electrofishing sites in Willow Island Pool



An abundance of wildlife was observed throughout Willow Island pool, including various species of waterfowl, raptors, and mammals



Land-use types within the Willow Island Pool watershed



longear sunfish (*Lepomis megalotis*)



largemouth bass (*Micropterus salmoides*)

Site Performance

Site No.	River Mile	Habitat Class	ORFIn Exp	ORFIn Obs	mORFIn Score
1	130.7	D	41.80	65.76	47.36
2	134.9	C	44.55	52.88	30.73
3	136.4	C	44.55	50.34	27.54
4	139.1	D	41.80	60.31	42.26
5	139.4	D	41.80	43.92	22.68
6	139.8	D	41.80	42.50	20.89
7	142.6	D	41.80	48.85	28.90
8	142.9	D	41.80	48.72	28.74
9	143.0	B	46.71	52.41	26.83
10	143.8	C	44.55	32.73	11.80
11	144.1	D	41.80	44.04	22.83
12	148.7	D	41.80	54.95	36.40
13	150.9	C	44.55	45.99	21.87
14	153.8	D	41.80	48.22	28.11
15	160.8	B	46.71	45.88	19.06

Average Pool mORFIn Score 27.7

Willow Island Pool - Results Overview

Sampling Results

Environmental Measures

Dominant Habitat Class: D - shallow sand/fines

Notable Measures: abundant inshore structure and vegetation

Biological Measures

Total No. of Fish Species: 48

Average No. of Individuals: 182

Dominant Family (minus herring/shad): Minnows/Carp

Dominant Species (minus shad/shiners): bluegill

Endangered Species: banded killifish (OH)

Rare Ohio River Mainstem Species: yellow bullhead

Notable Catch: abundant game fishes (bass and bluegill)

Assessment Results

Highest scoring ORFIn metric (minus DELTs): Centrarchid score

Lowest scoring ORFIn metric: % Lithophils

Sites Above 25th percentile (i.e. mORFIn Score = 20): 13

Sites Below 25th percentile (i.e. mORFIn Score = 20): 2

Aquatic Life-Use Designation: Met

Overall Biological Condition Rating: Fair