






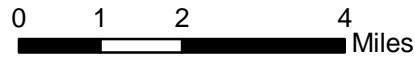


# Alexauken Creek - FIBI029



-  FIBI Sampling Location
-  Small Streams (1st and 2nd Order)
-  Large Streams (3rd Order and Larger)

- IBI Ratings**
-  Excellent
  -  Good
  -  Fair
  -  Poor



## SUMMARY OF RESULTS – FIBI029

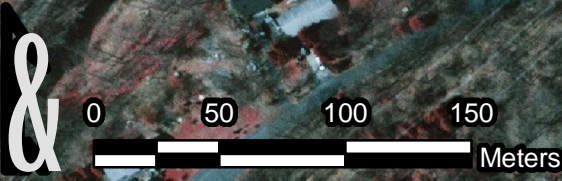
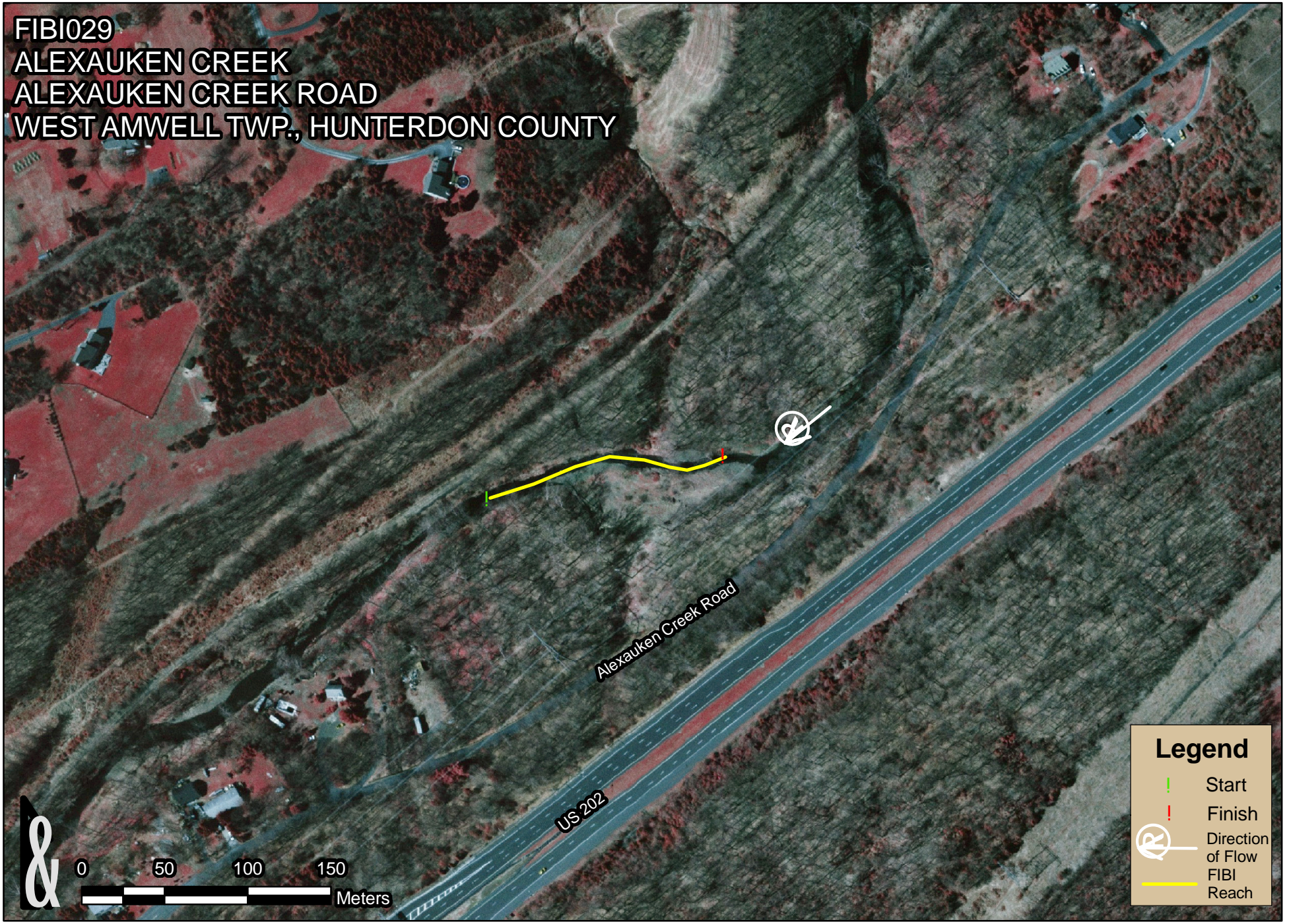


1. Stream Name:	Alexauken Creek
2. Sampling Date:	6/12/2006
3. Sampling Location:	off Alexauken Creek Road
4. Municipality:	West Amwell Twp.
5. County:	Hunterdon
6. Watershed Management Area:	11
7. Contributing Drainage Area (Sq. Mi.):	14.3
8. Electrofishing Gear:	2 Backpacks
9. FIBI Score and Rating:	Round 1* Good (38); Round 2 Good (40)
10. Habitat Score and Rating:	Round 1 Sub-Optimal (158); Round 2 Optimal (169)
11. Fishable Species Present:	Yes
12. Relevant AMNET <sup>1</sup> Station Data:	
Proximity of FIBI station to AMNET station:	0.6mi upstream AN0098
AMNET Rating:	1992 – Non-impaired; 1997 – Non-impaired; 2003 – Moderate
13. Stream Chemistries:	
Dissolved Oxygen (mg/l)	9.65
Temperature °C.	14.91
pH	6.72
Conductivity (µmhos/cm)	244
14. Length of Stream Sampled:	150m
15. Water Clarity:	Clear
16. Average Open Forest Canopy:	35%
17. Discharge:	34.2 cfs
18. Substrate:	20% Gravel/Sand, 50% Cobble, 2% Mud, 8% Silt, 20% Bedrock
19. Habitat:	50% Riffle, 40% Run, 10% Pool
20. Snags:	Yes
21. Periphyton:	Slight
22. Submerged Aquatic Vegetation:	Yes
23. Outfalls:	0
24. Number of Fish Species Identified:	18
25. Total Number of Fish Collected:	287
26. Number of Fish With Anomalies:	7
27. Other Observations:	Good flow, sinuosity, and riparian buffer

<sup>1</sup> AMNET is the acronym for the DEP's ambient benthic macroinvertebrate monitoring network – a series of 820 monitoring stations located throughout the state's waterways that collects data on the health of bottom dwelling stream fauna which in turn is used to assess general water quality

\* Round 1 data was scored prior to the FIBI metric recalibration.

FIBI029  
ALEXAUKEN CREEK  
ALEXAUKEN CREEK ROAD  
WEST AMWELL TWP., HUNTERDON COUNTY



**Legend**

- ! Start
- ! Finish
- Direction of Flow
- FIBI
- Reach

**FIBI029-Alexauken Creek @ Alexauken Creek Rd**  
**Date Sampled - 6/12/2006**

Excellent **Good** Fair Poor

	<b>Score</b>
# of Fish Species	5
# of Benthic Insectivorous Species (BI) (excluding White Suckers and Bullheads)	5
# of Trout and Centrarchid Species (excluding Green Sunfish and Bluegill)	5
# of Intolerant Species (IS)	5
Proportion of Tolerant Individuals	3
Proportion of Individuals as Generalists	3
Proportion of Individuals as Insectivorous Cyprinids	5
Proportion of Individuals as Trout OR Proportion of Individuals as Piscivores (excluding American Eel)*	*whichever gives better score 3
# of Individuals in Sample (excluding Tolerant Species)	3
Proportion of Individuals w/disease/anomalies (excluding blackspot)	3
<b>Total</b>	<b>40</b>

<b>Stream Rating</b>	
<b>45-50</b>	<b>Excellent</b>
<b>37-44</b>	<b>Good</b>
<b>29-36</b>	<b>Fair</b>
<b>10-28</b>	<b>Poor</b>

# HABITAT ASSESSMENT FOR *HIGH GRADIENT STREAMS* Alexauken Creek (FIBI029) – 6/12/06

	Condition Category																							
	Optimal					Suboptimal					Marginal					Poor								
<b>1. Epifaunal Substrate /Available Cover</b>  Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient).  <b>SCORE 16</b>	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0			
<b>2. Embeddedness</b>  Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space  <b>SCORE 18</b>	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0			
<b>3. Velocity/Depth Regimes</b>  All 4 velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (slow is <0.3 m/s, deep is >0.5 m)  <b>SCORE 19</b>	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0			
<b>4. Sediment Deposition</b>  Little or no enlargement of islands or point bars and less than 5% (<20% for low-gradient streams) of the bottom affected by sediment deposition.  <b>SCORE 14</b>	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0			
<b>5. Channel Flow Status</b>  Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.  <b>SCORE 17</b>	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0			
<b>6. Channel Alteration</b>  Channelization or dredging absent or minimal; stream with normal pattern.  <b>SCORE 18</b>	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0			
<b>7. Frequency of Riffles (or bends)</b>  Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.  <b>SCORE 19</b>	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0			
<b>8. Bank Stability (score each bank)</b> Note: determine left or right side by facing downstream. <b>SCORE 8 (LB)</b> <b>SCORE 7 (RB)</b>	Left	10	9	8	7	6	Right	10	9	8	7	6	5	4	3	2	1	0	5	4	3	2	1	0
<b>9. Bank Vegetative Protection (score each bank)</b>  More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, under story shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.  <b>SCORE 6 (LB)</b> <b>SCORE 8 (RB)</b>	Left	10	9	8	7	6	Right	10	9	8	7	6	5	4	3	2	1	0	5	4	3	2	1	0
<b>10. Riparian Vegetative Zone Width (score each bank riparian zone)</b>  Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.  <b>SCORE 9 (LB)</b> <b>SCORE 10 (RB)</b>	Left	10	9	8	7	6	Right	10	9	8	7	6	5	4	3	2	1	0	5	4	3	2	1	0

**HABITAT SCORE**

169

HABITAT SCORES	VALUE
OPTIMAL	160 – 200
SUB-OPTIMAL	110 – 159
MARGINAL	60 – 109
POOR	< 60

# FIBI029-R2

## Alexauken Creek

06/12/2006

<b>Common Name</b>	<b>Scientific Name</b>	<b>Abundance</b>	<b>Size Range (inches)</b>
Blacknose Dace	<i>Rhinichthys atratulus</i>	121	-
American Eel	<i>Anguilla rostrata</i>	60	-
Redbreast Sunfish	<i>Lepomis auritus</i>	25	2.0 - 5.7
Banded Killifish	<i>Fundulus diaphanus</i>	14	-
Tessellated Darter	<i>Etheostoma olmstedii</i>	13	-
Longnose Dace	<i>Rhinichthys cataractae</i>	11	-
White Sucker	<i>Catostomus commersoni</i>	7	-
Green Sunfish	<i>Lepomis cyanellus</i>	6	2.1 - 4.1
Rock Bass	<i>Ambloplites rupestris</i>	5	2.4 - 5.0
Bluegill	<i>Lepomis macrochirus</i>	5	1.9 - 2.4
Smallmouth Bass	<i>Micropterus dolomieu</i>	4	4.3 - 5.5
Creek Chub	<i>Semotilus atromaculatus</i>	4	-
Satinfin Shiner	<i>Cyprinella analostana</i>	3	-
Yellow Bullhead	<i>Ameiurus natalis</i>	2	3.8 - 4.6
Largemouth Bass	<i>Micropterus salmoides</i>	2	3.9 - 6.1
Margined Madtom	<i>Noturus insignis</i>	2	-
Pumpkinseed	<i>Lepomis gibbosus</i>	2	2.8 - 2.8
Rainbow Trout	<i>Oncorhynchus mykiss</i>	1	11.1 - 11.1

**Species Identified at Alexauken Creek (FIBI029)**  
(Not to Scale)



**Blacknose Dace**



**White Sucker**



**Rainbow Trout**



**Tessellated Darter**



**Smallmouth Bass**



**Largemouth Bass**

**Species Identified at Alexauken Creek (FIBI029)**  
(Not to Scale)



**Rockbass**



**Redbreast Sunfish**



**Banded Killifish**



**Bluegill**



**Longnose Dace**



**Pumpkinseed**



**Species Identified at Alexauken Creek (FIBI029)**  
(Not to Scale)



**Green Sunfish**



**Yellow Bullhead**



**American Eel**



**Creek Chub**



**Margined Madtom**



**Satinfin Shiner**