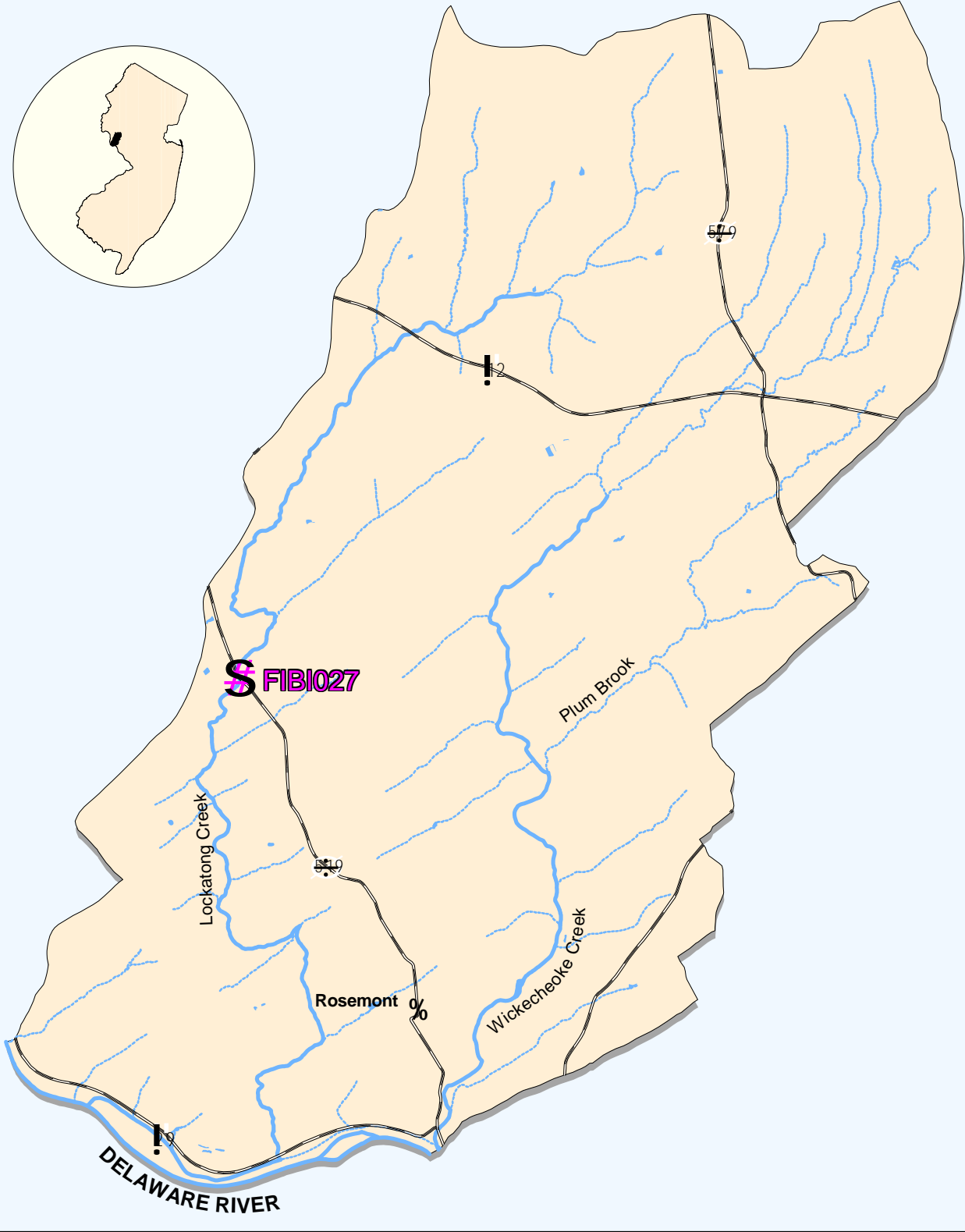
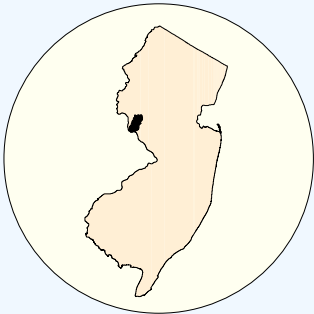
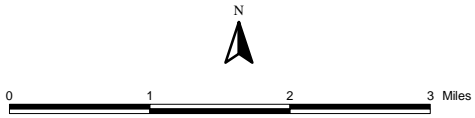


# Lockatong Creek - FIBI027

Drainage Area of FIBI027: 15.2 Square Miles  
Surface Water Quality Classification of FIBI027: FW2-NT



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



## SUMMARY OF RESULTS – FIBI027



1. Stream Name:	Lockatong Creek
2. Sampling Date:	07/25/2001
3. Sampling Location:	CR 519 (40 28 16N; 75 01 16W)
4. Municipality:	Kingwood Twp.
5. County:	Hunterdon
6. Watershed Management Area:	11
7. Contributing Drainage Area (Sq. Mi.):	15.2
8. Stream Water Quality Class:	FW2-NT
9. FIBI Rating:	Good (38) (See Appendix 3)
10. Habitat Assessment Rating:	Suboptimal (134) (See Appendix 3)
11. Fishable Species Present:	Yes
12. Relevant AMNET <sup>1</sup> Station Data:	
Proximity of FIBI station to AMNET station:	AN0088
AMNET Rating:	1992-Non-Impaired; 1997-Non-Impaired
13. Stream Chemistries:	
Dissolved Oxygen (mg/l)	6.7
Temperature °C.	26
pH	7.8
Conductivity (µmhos/cm)	194
14. Number of Fish With Anomalies:	2
15. Length of Stream Segment Sampled	150 meters (492 feet)
16. Water Clarity:	Slightly Turbid
17. Average Forest Open Canopy:	Partly Open
18. Discharge (ft. <sup>3</sup> /sec.):	7.5
19. Substrate: (qualitative)	20% Gravel/Sand, 40% Cobble, 30% Boulder, 10% Silt
20. Habitat Type: (qualitative)	20% Riffle, 60% Run, 20% Pool
21. Other observations:	N/A
22. Number of Fish Species Identified: (see next page)	15
23. Total Number of Fish Collected:	1103

<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.

FIBI027  
LOCKATONG CREEK  
CR 519  
Kingwood Twp., Hunterdon Co.



LEGEND	
#	Start
#	Finish
—	Segment Sampled
Ⓜ	Direction of Flow

**FIBI027 - Lockatong Ck @ Rt. 519**  
**Date Sampled - 7/25/2001**

Excellent **Good** Fair Poor

	<b>Score</b>
# of Fish Species	5
# of Benthic Insectivorous Species (BI)	5
# of Trout and Centrarchid Species (trout, bass, sunfish, crappie)	3
# of Intolerant Species (IS)	1
Proportion of Individuals as White Suckers	3
Proportion of Individuals as Generalists (carp, creek chub, banded killifish, goldfish, fathead minnow, green sunfish)	5
Proportion of Individuals as Insectivorous <b>Cyprinids</b> (I and BI)	5
Proportion of Individuals as Trout	
OR	
Proportion of Individuals as Piscivores (Excluding American Eel)*	1
Number of Individuals in Sample	5
Proportion of Individuals w/disease/anomalies (excluding blackspot)	5
Total	<b>38</b>

**Stream Rating**

**45-50      Excellent**  
**37-44      Good**  
**29-36      Fair**  
**10-28      Poor**

# HABITAT ASSESSMENT FOR HIGH GRADIENT STREAMS **Lockatong Creek (FIBI027) – 7/25/01**

	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 17</b>	20 19 18 <b>16</b> 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 12</b>	20 19 18 17 16	15 14 13 <b>12</b> 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 14</b>	20 19 18 17 16	15 <b>14</b> 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 16</b>	20 19 18 17 <b>16</b>	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 18</b>	20 19 <b>18</b> 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 15</b>	20 19 18 17 16	<b>15</b> 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 11</b>	20 19 18 17 16	15 14 13 12 <b>11</b>	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. SCORE <u>4</u> (LB) SCORE <u>4</u> (RB)	Left Bank 10 9 Right Bank 10 9	8 7 6 8 7 6	5 <b>4</b> 3 5 <b>4</b> 3	2 1 0 2 1 0
<b>9. Bank Vegetative Protection (score each bank)</b> SCORE <u>7</u> (LB) SCORE <u>4</u> (RB)	Left Bank 10 9 Right Bank 10 9	8 <b>7</b> 6 8 7 6	5 4 3 5 <b>4</b> 3	2 1 0 2 1 0
<b>10. Riparian Vegetative Zone Width (score each bank riparian zone)</b> SCORE <u>10</u> (LB) SCORE <u>2</u> (RB)	Left Bank <b>10</b> 9 Right Bank 10 9	8 7 6 8 7 6	5 4 3 5 4 3	2 1 0 <b>2</b> 1 0

**HABITAT SCORE**

**134**

HABITAT SCORES	VALUE
OPTIMAL	160 C 200
<b>SUB-OPTIMAL</b>	110 C 159
MARGINAL	60 C 109
POOR	< 60

# FIBI027 07/25/01

LOCKATONG CREEK

## LISTED IN ORDER OF ABUNDANCE FOUND

COMMON NAME	SCIENTIFIC NAME	# FOUND	SIZE RANGE (INCHES)
Blacknose Dace	<i>Rhinichthys atratulus</i>	503	
White Sucker*	<i>Catostomus commersoni</i>	130	
Tesselated Darter	<i>Etheostoma olmstedii</i>	95	
Common Shiner	<i>Luxilus cornutus</i>	65	
Creek Chub	<i>Semotilus atromaculatus</i>	60	
Banded Killifish	<i>Fundulus diaphanus</i>	56	
Satinfin Shiner	<i>Cyprinella analostana</i>	53	
Green Sunfish*	<i>Lepomis cyanellus</i>	53	1.9 - 4.5
Swallowtail Shiner	<i>Notropis procne</i>	48	
American Eel*	<i>Anguilla rostrata</i>	15	
Redbreast Sunfish*	<i>Lepomis auritus</i>	12	2.2 - 4.3
Spottail Shiner	<i>Notropis hudsonius</i>	6	
Fathead Minnow	<i>Pimephales promelas</i>	4	
Brown Bullhead*	<i>Ameiurus nebulosus</i>	2	7.1 - 8.7
Largemouth Bass*	<i>Micropterus salmoides</i>	1	2.0

\* Regulated as a fishable species under current New Jersey Fish and Wildlife codes

**FIGURE 1.1 (Not To Scale)  
Species Identified at Lockatong Creek (FIBI027)**

John Scarola



**White Sucker**

Konrad Schmidt



**Creek Chub**

John Scarola



**Blacknose Dace**

John Scarola



**Common Shiner**

Konrad Schmidt



**Green Sunfish**

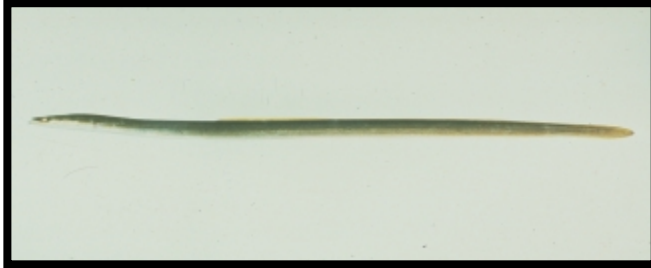
Konrad Schmidt



**Spottail Shiner**

**FIGURE 1.1 (Not To Scale)  
Species Identified at Lockatong Creek (FIBI027)**

John Scarola



**American Eel**

John Scarola



**Redbreast Sunfish**

Jenkins & Burkhead



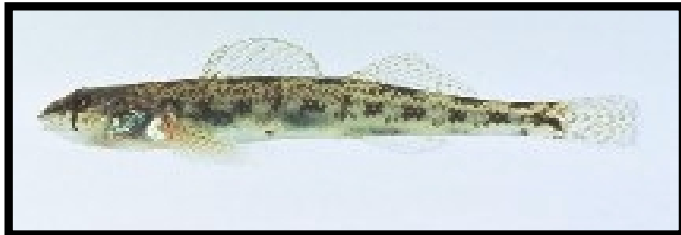
**Swallowtail Shiner**

John Scarola



**Brown Bullhead**

John Scarola



**Tessellated Darter**

William Roston



**Fathead Minnow**



**FIGURE 1.1 (Not To Scale)  
Species Identified at Lockatong Creek (FIBI027)**

AFS



**Largemouth Bass**

John Scarola



**Banded Killifish**

Jenkins & Burkhead



**Satinfin Shiner**