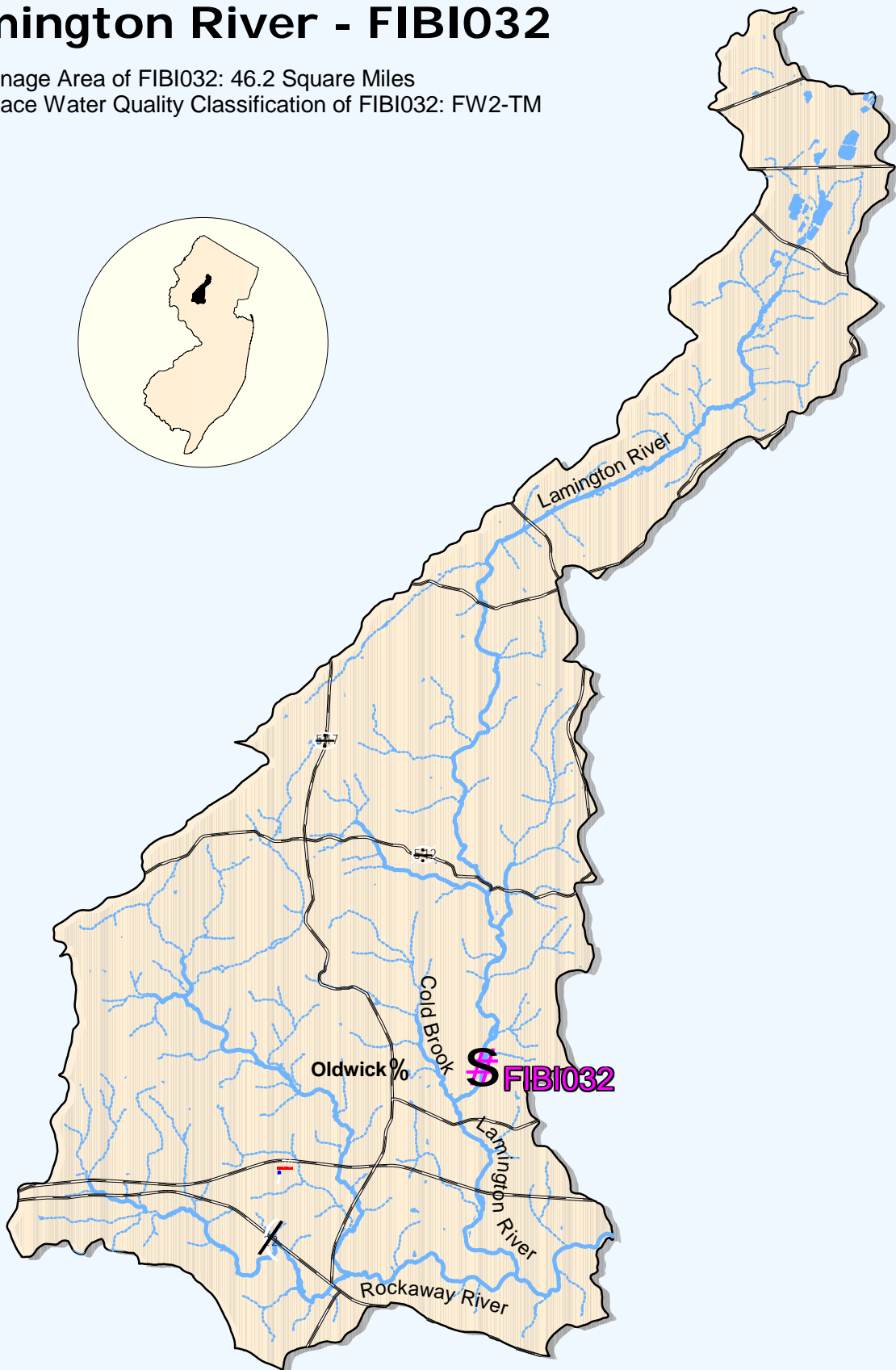
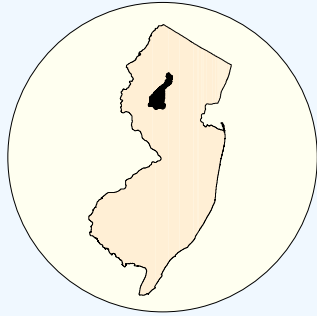





# Lamington River - FIBI032

Drainage Area of FIBI032: 46.2 Square Miles  
Surface Water Quality Classification of FIBI032: FW2-TM



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



## SUMMARY OF RESULTS – FIBI032



1. Stream Name:	Lamington River
2. Sampling Date:	07/03/2001
3. Sampling Location:	off Black River Rd. (40 40 24N; 74 43 20W)
4. Municipality	Bedminster Twp.
5. County:	Somerset
6. Watershed Management Area:	8
7. Contributing Drainage Area (Sq. Mi.):	46.2
8. Stream Water Quality Class:	FW2-TM
9. FIBI Rating:	Good (44) (See Appendix 3)
10. Habitat Assessment Rating:	Optimal (161) (See Appendix 3)
11. Fishable Species Present:	Yes
12. Relevant AMNET <sup>1</sup> Station Data:	
Proximity of FIBI station to AMNET station:	1.14 mi. upstream of AN0363
AMNET Rating:	1994-Non-Impaired; 1999-Non-Impaired
13. Stream Chemistries:	
Dissolved Oxygen (mg/l)	10.2
Temperature °C.	16.4
pH	8.36
Conductivity (µmhos/cm)	252
14. Number of Fish With Anomalies:	0
15. Length of Stream Segment Sampled	150 meters (492 feet)
16. Water Clarity:	Clear
17. Average Forest Open Canopy:	Partly Open
18. Discharge (ft. <sup>3</sup> /sec.):	80.9
19. Substrate: (qualitative)	45% Gravel/Sand, 45% Cobble, 5% Boulder, 5% Silt
20. Habitat Type: (qualitative)	35% Riffle, 60% Run, 5% Pool
21. Other observations:	N/A
22. Number of Fish Species Identified: (see next page)	17
23. Total Number of Fish Collected:	292

<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.



FIBI032  
LAMINGTON RIVER  
Black River Road  
Bedminster Twp., Somerset Co.



**FIBI032 - Lamington River @ Black River Rd**  
**Date Sampled - 7/03/2001**

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)	5
Proportion of Individuals as White Suckers	5
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
<b>Total</b>	<b>44</b>

**Stream Rating**

<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 **Lamington River (FIBI032) – 7/3/01**

	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 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>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 13</b>	20 19 18 17 16	15 14 <b>13</b> 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 19</b>	20 <b>19</b> 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 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>8. Bank Stability (score each bank)</b> Note: determine left or right side by facing downstream. SCORE <u>6</u> (LB) SCORE <u>9</u> (RB)	Left Bank 10 9 Right Bank 10 <b>8</b>	8 7 <b>6</b> 8 7 6	5 4 3 5 4 3	2 1 0 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. SCORE <u>8</u> (LB) SCORE <u>9</u> (RB)	Left Bank 10 9 Right Bank 10 <b>8</b>	<b>8</b> 7 6 8 7 6	5 4 3 5 4 3	2 1 0 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. SCORE <u>6</u> (LB) SCORE <u>9</u> (RB)	Left Bank 10 9 Right Bank 10 <b>8</b>	8 7 <b>6</b> 8 7 6	5 4 3 5 4 3	2 1 0 2 1 0

**HABITAT SCORE**

**161**

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



# FIBI032 07/03/01

LAMINGTON RIVER

## LISTED IN ORDER OF ABUNDANCE FOUND

COMMON NAME	SCIENTIFIC NAME	# FOUND	SIZE RANGE (INCHES)
Longnose Dace	<i>Rhinichthys cataractae</i>	75	
Blacknose Dace	<i>Rhinichthys atratulus</i>	49	
American Brook Lamprey	<i>Lampetra appendix</i>	31	
Margined Madtom	<i>Noturus insignis</i>	23	
Shield Darter	<i>Percina peltata</i>	19	
Tesselated Darter	<i>Etheostoma olmstedii</i>	14	
American Eel*	<i>Anguilla rostrata</i>	13	
Redbreast Sunfish*	<i>Lepomis auritus</i>	11	2.8 - 6.1
Common Shiner	<i>Luxilus cornutus</i>	10	
Fallfish	<i>Semotilus corporalis</i>	9	
Satinfin Shiner	<i>Cyprinella analostana</i>	7	
Largemouth Bass*	<i>Micropterus salmoides</i>	6	1.4 - 1.8
Swallowtail Shiner	<i>Notropis procne</i>	6	
White Sucker*	<i>Catostomus commersoni</i>	6	
Brown Trout*	<i>Salmo trutta</i>	5	2.6 - 3.1
Creek Chub	<i>Semotilus atromaculatus</i>	5	
Banded Killifish	<i>Fundulus diaphanus</i>	3	

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

**FIGURE 1.1 (Not To Scale)**  
**Species Identified at Lamington River (FIBI032)**



AFS

**Largemouth Bass**



John Scarola

**White Sucker**



Shute

**Longnose Dace**



Jenkins & Burkhead

**Swallowtail Shiner**



John Scarola

**Blacknose Dace**



Jenkins & Burkhead

**Shield Darter**

**FIGURE 1.1 (Not To Scale)  
Species Identified at Lamington River (FIBI032)**

Shute



**Margined Madtom**

John Scarola



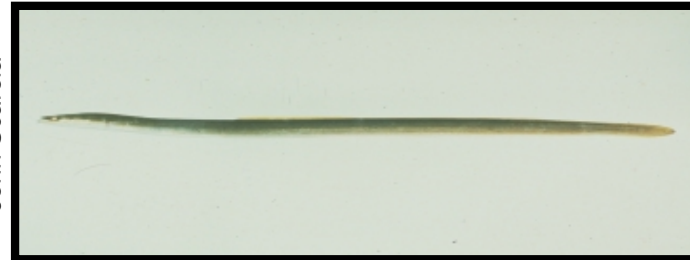
**Redbreast Sunfish**

Konrad Schmidt



**Creek Chub**

John Scarola



**American Eel**

John Scarola



**Tessellated Darter**

John Scarola

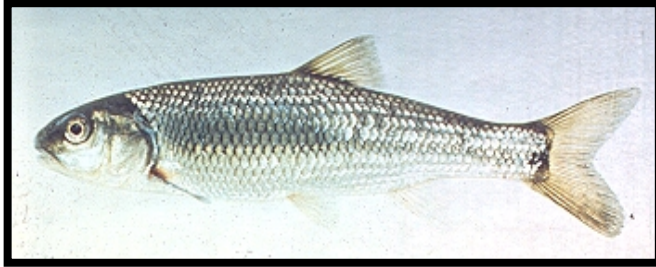


**Brown Trout**



**FIGURE 1.1 (Not To Scale)  
Species Identified at Lamington River (FIBI032)**

John Scarola



**Fallfish**

John Scarola



**Banded Killifish**

Jenkins & Burkhead



**Satinfin Shiner**

Konrad Schmidt



**American Brook Lamprey**

John Scarola



**Common Shiner**