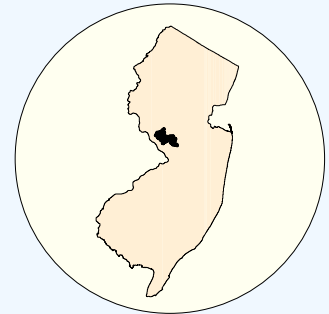
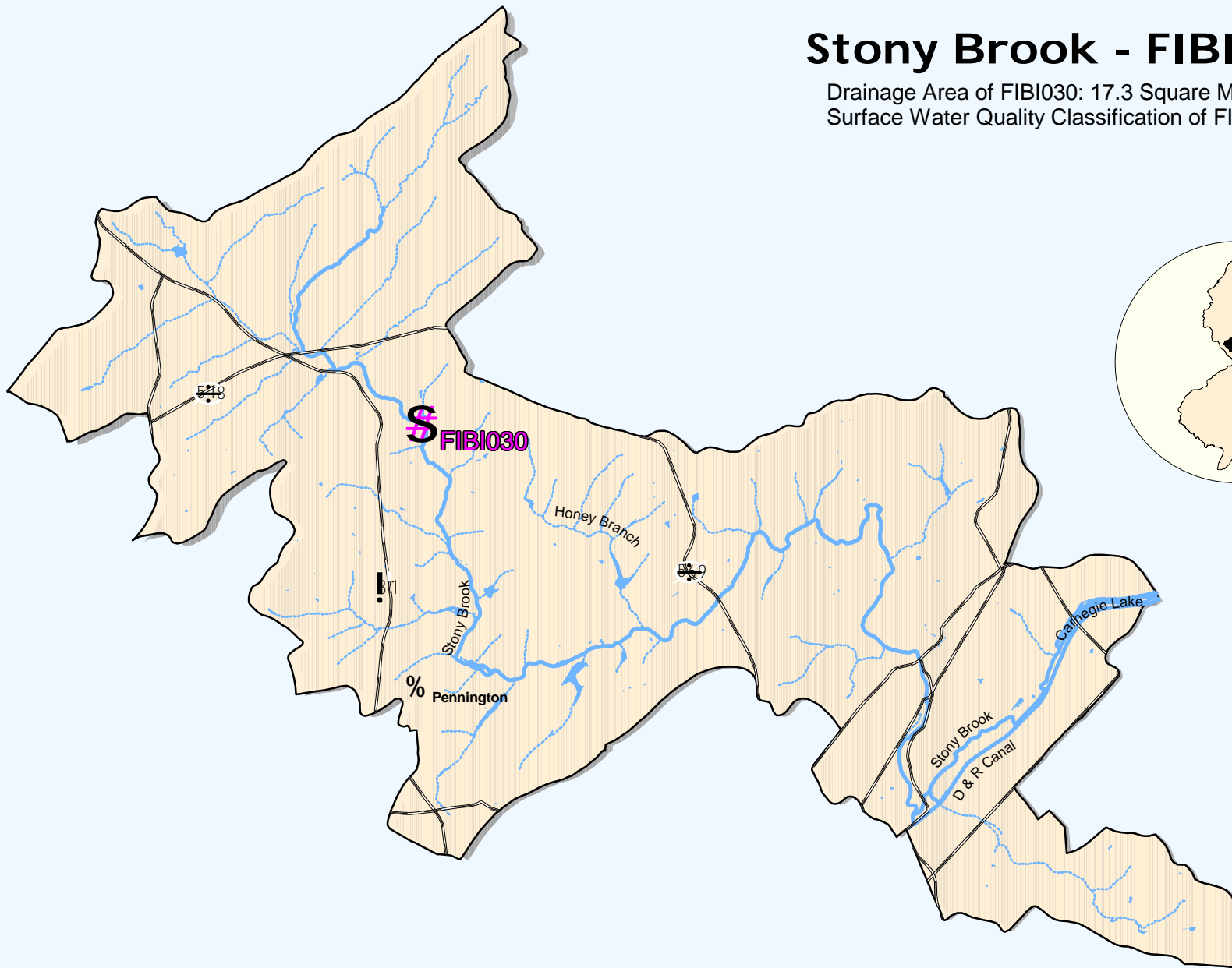


Stony Brook - FIBI030

Drainage Area of FIBI030: 17.3 Square Miles

Surface Water Quality Classification of FIBI030: FW2-NT



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



0 1 2 3 Miles



SUMMARY OF RESULTS – FIBI030



1. Stream Name:	Stony Brook
2. Sampling Date:	07/20/2001
3. Sampling Location:	off Stony Brook Rd. (40 22 19N; 74 47 22W)
4. Municipality:	Hopewell Twp.
5. County:	Mercer
6. Watershed Management Area:	10
7. Contributing Drainage Area (Sq. Mi.):	17.3
8. Stream Water Quality Class:	FW2-NT
9. FIBI Rating:	Good (40) (See Appendix 3)
10. Habitat Assessment Rating:	Suboptimal (148) (See Appendix 3)
11. Fishable Species Present:	Yes
12. Relevant AMNET ¹ Station Data:	
Proximity of FIBI station to AMNET station:	0.24 mi. downstream of AN0391
AMNET Rating:	1994-Moderately Impaired; 1999-Moderately Impaired
13. Stream Chemistries:	
Dissolved Oxygen (mg/l)	9
Temperature °C.	20.4
pH	8.18
Conductivity (µmhos/cm)	195
14. Number of Fish With Anomalies:	4
15. Length of Stream Segment Sampled	150 meters (492 feet)
16. Water Clarity:	Clear
17. Average Forest Open Canopy:	Partly Open
18. Discharge (ft. ³ /sec.):	5.4
19. Substrate: (qualitative)	70% Cobble, 15% Boulder, 15% Silt
20. Habitat Type: (qualitative)	20% Riffle, 70% Run, 10% Pool
21. Other observations:	N/A
22. Number of Fish Species Identified: (see next page)	18
23. Total Number of Fish Collected:	901

¹ 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.

FIBI030
STONY BROOK
Stony Brook Road
Hopewel I Twp., Mercer Co.



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

FIBI030 - Stony Bk off Stony Brook Rd
Date Sampled - 7/20/2001

Excellent **Good** Fair Poor

	Score
# of Fish Species	5
# of Benthic Insectivorous Species (BI)	5
# of Trout and Centrarchid Species (trout, bass, sunfish, crappie)	5
# of Intolerant Species (IS)	1
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 Cyprinids (I and BI)	3
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	40

Stream Rating

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

HABITAT ASSESSMENT FOR HIGH GRADIENT STREAMS **Stony Brook (FIBI030) – 7/20/01**

	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate /Available Cover 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). SCORE 14	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Embeddedness Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space SCORE 11	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Velocity/Depth Regimes 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) SCORE 13	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Sediment Deposition 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. SCORE 14	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Flow Status Water reaches base of both lower banks, and minimal amount of channel substrate is exposed. SCORE 19	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
6. Channel Alteration Channelization or dredging absent or minimal; stream with normal pattern. SCORE 17	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Frequency of Riffles (or bends) 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. SCORE 14	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Bank Stability (score each bank) Note: determine left or right side by facing downstream. SCORE <u>6</u> (LB) SCORE <u>6</u> (RB)	Left Bank 10 9 Right Bank 10 9	8 7 6 8 7 6	5 4 3 5 4 3	2 1 0 2 1 0
9. Bank Vegetative Protection (score each bank) SCORE <u>10</u> (LB) SCORE <u>10</u> (RB)	Left Bank 10 9 Right Bank 10 9	8 7 6 8 7 6	5 4 3 5 4 3	2 1 0 2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone) SCORE <u>4</u> (LB) SCORE <u>10</u> (RB)	Left Bank 10 9 Right Bank 10 9	8 7 6 8 7 6	5 4 3 5 4 3	2 1 0 2 1 0

HABITAT SCORE

148

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

FIBI030 07/20/01

STONY BROOK

LISTED IN ORDER OF ABUNDANCE FOUND

COMMON NAME	SCIENTIFIC NAME	# FOUND	SIZE RANGE (INCHES)
Blacknose Dace	<i>Rhinichthys atratulus</i>	168	
Common Shiner	<i>Luxilus cornutus</i>	105	
Redbreast Sunfish*	<i>Lepomis auritus</i>	81	1.4 - 7.3
White Sucker*	<i>Catostomus commersoni</i>	80	
Creek Chub	<i>Semotilus atromaculatus</i>	74	
American Eel*	<i>Anguilla rostrata</i>	74	
Tesselated Darter	<i>Etheostoma olmstedii</i>	74	
Bluegill*	<i>Lepomis macrochirus</i>	62	1.6 - 4.7
Pumpkinseed*	<i>Lepomis gibbosus</i>	54	1.6 - 5.5
Largemouth Bass*	<i>Micropterus salmoides</i>	35	1.2 - 6.7
Spottail Shiner	<i>Notropis hudsonius</i>	28	
Rock Bass*	<i>Ambloplites rupestris</i>	27	2.6 - 8.3
Comely Shiner	<i>Notropis amoenus</i>	21	
Redfin Pickerel*	<i>Esox americanus americanus</i>	5	3.5 - 8.7
Brown Bullhead*	<i>Ameiurus nebulosus</i>	5	3.9 - 10.6
Smallmouth Bass*	<i>Micropterus dolomieu</i>	3	4.3 - 13.4
Green Sunfish*	<i>Lepomis cyanellus</i>	3	3.0 - 4.6
Golden Shiner	<i>Notemigonus crysoleucas</i>	2	

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

**FIGURE 1.1 (Not To Scale)
Species Identified at Stony Brook (FIBI030)**

Konrad Schmidt



Creek Chub

John Scarola



Common Shiner

AFS



Largemouth Bass

Konrad Schmidt



Spottail Shiner

John Scarola



Smallmouth Bass

John Scarola



Blacknose Dace

**FIGURE 1.1 (Not To Scale)
Species Identified at Stony Brook (FIBI030)**

John Scarola



Tesselated Darter

Jenkins & Burkhead



Redfin Pickerel

John Scarola



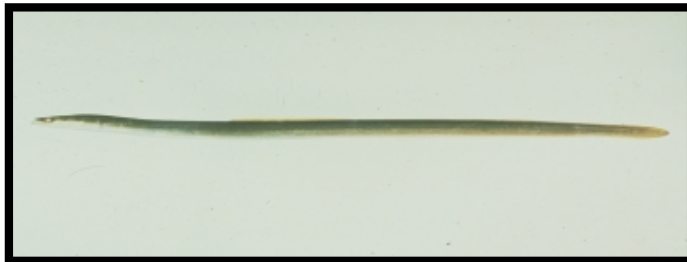
White Sucker

John Scarola



Pumpkinseed

John Scarola



American Eel

John Scarola



Redbreast Sunfish

**FIGURE 1.1 (Not To Scale)
Species Identified at Stony Brook (FIBI030)**

John Scarola



Rock Bass

John Scarola



Golden Shiner

John Scarola



Bluegill

John Scarola



Brown Bullhead

Noel Burkhead



Comely Shiner

Konrad Schmidt



Green Sunfish