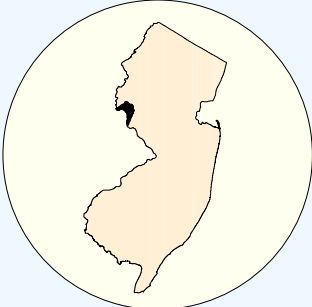
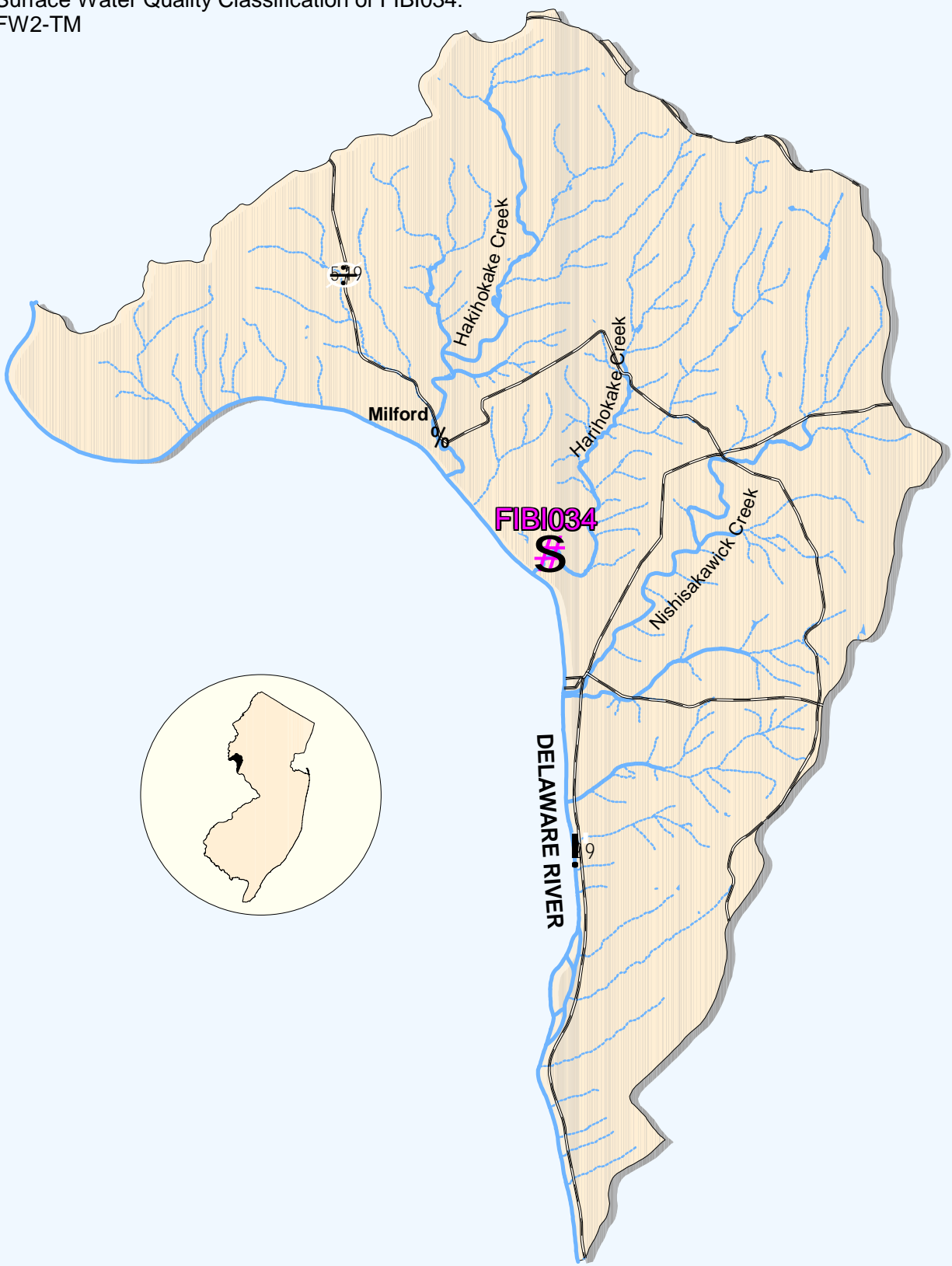
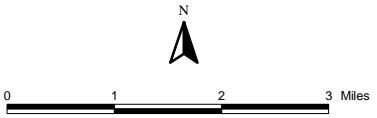


Harihokake Creek - FIBI034

Drainage Area of FIBI034: 9.7 Square Miles
Surface Water Quality Classification of FIBI034:
FW2-TM



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



SUMMARY OF RESULTS – FIBI034



1. Stream Name:	Harihokake Creek
2. Sampling Date:	08/07/2001
3. Sampling Location:	Milford-Frenchtown Rd. (CR 619) (40 32 53N; 75 04 08W)
4. Municipality:	Alexandria Twp.
5. County:	Hunterdon
6. Watershed Management Area:	11
7. Contributing Drainage Area (Sq. Mi.):	9.7
8. Stream Water Quality Class:	FW2-TM
9. FIBI Rating:	Good (40) (See Appendix 3)
10. Habitat Assessment Rating:	Optimal (163) (See Appendix 3)
11. Fishable Species Present:	Yes
12. Relevant AMNET ¹ Station Data:	
Proximity of FIBI station to AMNET station:	AN0079
AMNET Rating:	1992-Moderately Impaired; 1997-Non-Impaired
13. Stream Chemistries:	
Dissolved Oxygen (mg/l)	7.9
Temperature °C.	23.3
pH	8.3
Conductivity (µmhos/cm)	140
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:	38%
18. Discharge (ft. ³ /sec.):	9.5
19. Substrate: (qualitative)	10% Gravel/Sand, 50% Cobble, 15% Boulder, 25% Bedrock
20. Habitat Type: (qualitative)	40% Riffle, 40% Run, 20% Pool
21. Other observations:	N/A
22. Number of Fish Species Identified: (see next page)	13
23. Total Number of Fish Collected:	310

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.

FIBI034
HARIHOKAKE CREEK
Milford - Frenchtown Road (CR 619)
Alexandria Twp., Hunterdon Co.

Milford - Frenchtown Rd. (CR 619)

0 0.1 Miles



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



FIBI034 - Harihokake Creek @ CR 619
Date Sampled - 8/07/2001

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)	3
Proportion of Individuals as White Suckers	1
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)*	3
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 **Harihokake Creek (FIBI034) – 8/7/01**

	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 17	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 18	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 14	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 17	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 12	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 19	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 15	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>7</u> (LB) SCORE <u>9</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) 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>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) Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone. SCORE <u>9</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

HABITAT SCORE

163

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

FIBI034 08/07/01

HARIHOKAKE CREEK

LISTED IN ORDER OF ABUNDANCE FOUND

COMMON NAME	SCIENTIFIC NAME	# FOUND	SIZE RANGE (INCHES)
White Sucker*	<i>Catostomus commersoni</i>	105	
Tessellated Darter	<i>Etheostoma olmstedii</i>	47	
Blacknose Dace	<i>Rhinichthys atratulus</i>	45	
American Eel*	<i>Anguilla rostrata</i>	43	
Creek Chub	<i>Semotilus atromaculatus</i>	17	
Longnose Dace	<i>Rhinichthys cataractae</i>	17	
Redbreast Sunfish*	<i>Lepomis auritus</i>	12	3.7 - 5.5
Common Shiner	<i>Luxilus cornutus</i>	8	
Smallmouth Bass*	<i>Micropterus dolomieu</i>	5	2.8 - 11.0
Margined Madtom	<i>Noturus insignis</i>	4	
Green Sunfish*	<i>Lepomis cyanellus</i>	3	1.2
Rock Bass*	<i>Ambloplites rupestris</i>	3	3.1 - 6.3
Pumpkinseed*	<i>Lepomis gibbosus</i>	1	4.3

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

**FIGURE 1.1 (Not To Scale)
Species Identified at Harihokake Creek (FIBI034)**

John Scarola



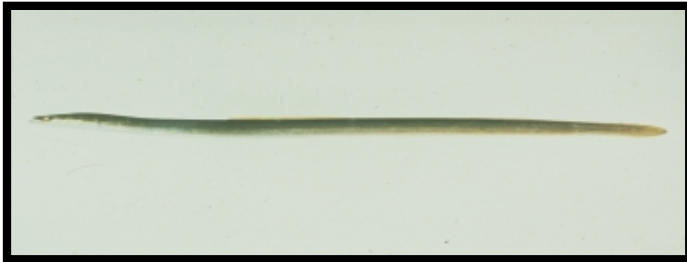
Smallmouth Bass

John Scarola



Common Shiner

John Scarola



American Eel

John Scarola



Tessellated Darter

John Scarola



Redbreast Sunfish

Shute



Margined Madtom

**FIGURE 1.1 (Not To Scale)
Species Identified at Harihokake Creek (FIBI034)**

Konrad Schmidt



Creek Chub

John Scarola



Rock Bass

John Scarola



Blacknose Dace

Shute



Longnose Dace

John Scarola



White Sucker

John Scarola



Pumpkinseed

FIGURE 1.1 (Not To Scale)
Species Identified at Harihokake Creek (FIBI034)



Green Sunfish