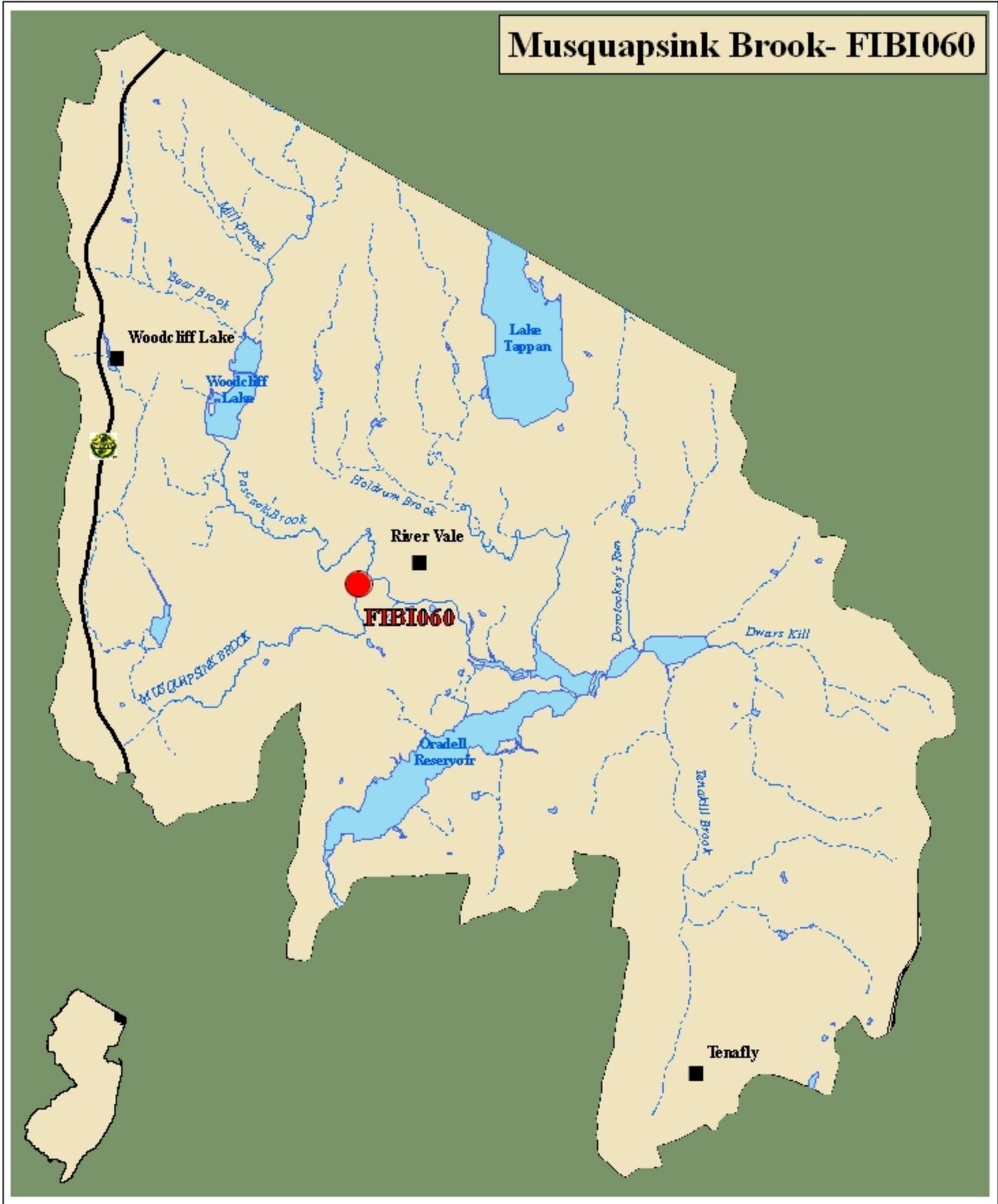


# Musquapsink Brook- FIBI060



Excellent	FIBI Sampling Location
Good	1st & 2nd Order Streams
Fair	3rd Order and Higher Streams
Poor	



## SUMMARY OF RESULTS – FIBI060



1. Stream Name:	Musquapsink Brook
2. Sampling Date:	6/26/2007
3. Sampling Location:	Harrington Avenue
4. Municipality:	Westwood Boro
5. County:	Bergen
6. Watershed Management Area:	5
7. Contributing Drainage Area (Sq. Mi.):	7
8. Electrofishing Gear:	2 Backpacks
9. FIBI Score and Rating:	Round 1* Fair (34); Round 2 Poor (22)
10. Habitat Score and Rating:	Round 1 Sub-Optimal (134); Round 2 Sub-Optimal (110)
11. Fishable Species Present:	Yes
12. Relevant AMNET <sup>1</sup> Station Data:	
Proximity of FIBI station to AMNET station:	AN0206
AMNET Rating:	1993 – Moderate; 1998 – Moderate; 2003 – Moderate
13. Stream Chemistries:	
Dissolved Oxygen (mg/l)	7.12
Temperature °C.	20.13
pH	6.61
Conductivity (µmhos/cm)	657
14. Length of Stream Sampled:	150m
15. Water Clarity:	Slightly Turbid
16. Average Open Forest Canopy:	12.5%
17. Discharge:	9.20 cfs
18. Substrate:	45% Gravel/Sand, 30% Cobble, 10% Mud, 10% Silt, 5% Concrete
19. Habitat:	5% Riffle, 75% Run, 20% Pool
20. Snags:	Yes
21. Periphyton:	None
22. Submerged Aquatic Vegetation:	No
23. Outfalls:	1
24. Number of Fish Species Identified:	7
25. Total Number of Fish Collected:	147
26. Number of Fish With Anomalies:	4
27. Other Observations:	Strong petroleum/chemical smell.

<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.

FIBI060  
MUSQUAPSINK CREEK  
HARRINGTON AVENUE  
WESTWOOD BORO, BERGEN COUNTY



**FIBI060-Musquapsink Creek @ Harrington Ave**  
**Date Sampled - 6/26/2007**

Excellent    Good    Fair    **Poor**

	<b>Score</b>
# of Fish Species	1
# of Benthic Insectivorous Species (BI) (excluding White Suckers and Bullheads)	1
# of Trout and Centrarchid Species (excluding Green Sunfish and Bluegill)	5
# of Intolerant Species (IS)	1
Proportion of Tolerant Individuals	3
Proportion of Individuals as Generalists	1
Proportion of Individuals as Insectivorous Cyprinids	1
Proportion of Individuals as Trout                      *whichever gives better score OR Proportion of Individuals as Piscivores (excluding American Eel)*	3
# of Individuals in Sample (excluding Tolerant Species)	3
Proportion of Individuals w/disease/anomalies (excluding blackspot)	3
<b>Total</b>	<b>22</b>

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

# HABITAT ASSESSMENT FOR HIGH GRADIENT STREAMS Musquapsink Creek (FIBI060) – 6/26/07

	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 9</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 7</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 12</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 19</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 13</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 5</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> Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected. Note: determine left or right side by facing downstream. <b>SCORE 6 (LB)</b> <b>SCORE 7 (RB)</b>	Left 10 9 Right 10 9	8 7 6 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. <b>SCORE 5 (LB)</b> <b>SCORE 6 (RB)</b>	Left 10 9 Right 10 9	8 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. <b>SCORE 3 (LB)</b> <b>SCORE 4 (RB)</b>	Left 10 9 Right 10 9	8 7 6 8 7 6	5 4 3 5 4 3	2 1 0 2 1 0

**HABITAT SCORE**  
  
110

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

# FIBI060-R2

## Musquapsink Brook

06/26/2007

Common Name	Scientific Name	Abundance
Tessellated Darter	<i>Etheostoma olmstedii</i>	67
Green Sunfish	<i>Lepomis cyanellus</i>	42
Redbreast Sunfish	<i>Lepomis auritus</i>	26
Pumpkinseed	<i>Lepomis gibbosus</i>	6
Largemouth Bass	<i>Micropterus salmoides</i>	4
Yellow Bullhead	<i>Ameiurus natalis</i>	1
White Sucker	<i>Catostomus commersoni</i>	1

## Species Identified at Musquapsink Creek (FIBI060)



Tessellated Darter



Green Sunfish



Pumpkinseed



Largemouth Bass



Redbreast Sunfish



Yellow Bullhead

## Species Identified at Musquapsink Creek (FIBI060)



White Sucker