

Field Data Summary Sheet

Stream name: **Black Rock Hollow**

Watershed: **Moodna**

Station: **01**

Location: **Just above BRF lodge**

Municipality: **Cornwall** **Orange Co., NY**

Date sampled: **28-Jun-06**

Arrival time at station: **1:43 PM**

Field personnel involved: **JKN/Workshop Participants**

Physical Characteristics

| | |
|----------------------------|-------------|
| Width (meters) | 4.8 |
| Depth (meters) | 0.35 |
| Current (cm/sec) | 100 |
| Substrate (%) | |
| Rock (>25.4 cm or bedrock) | 35 |
| Rubble (6.35 - 25.4 cm) | 30 |
| Gravel (0.2 - 6.35 cm) | 25 |
| Sand (0.06 - 2.0 cm) | 5 |
| Silt (0.004 - 0.06 cm) | 5 |
| Embeddedness (%) | 25 |

Chemical Measurements

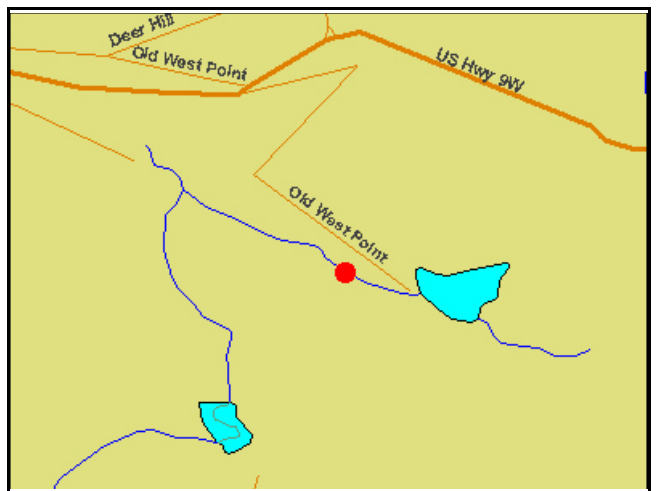
| | |
|------------------------------|--------------|
| Temperature (C) | 21.87 |
| Specific conductance (umhos) | 88 |
| DO (mg/l) | 8.06 |
| DO % saturation | 93.6 |
| Baro pressure (mm) | 741 |
| pH | 6.36 |
| Salinity (PSS) | 0.05 |

Biological Attributes

| | |
|---------------------------------|-----------|
| Canopy (%) | 90 |
| Aquatic vegetation | |
| Algae suspended | |
| Algae filamentous | |
| Diatoms | Y |
| Macrophytes | |
| Occurance of macroinvertebrates | |
| Ephemeroptera | Y |
| Plecoptera | Y |
| Trichoptera | Y |
| Coleoptera | |
| Megaloptera | |
| Odonata | |
| Chironomidae | Y |
| Simuliidae | Y |
| Decapoda | Y |
| Gammaridae | |
| Mollusca | |
| Oligochaeta | Y |
| Other macroinvertebrates | |

Faunal condition **Very good**

Notes/observations:



Scale: 1.6 kilometers

Latitude: 41° 24.758

Longitude: 74° 00.636

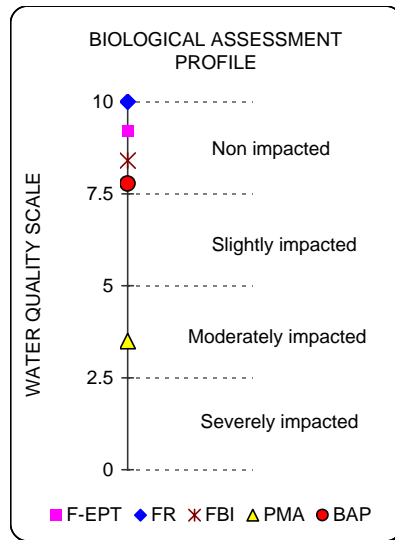


MACROINVERTEBRATE DATA AND RESULTS

STREAM SITE: Black Rock Hollow BRHW 01
 LOCATION: Just above BRF lodge
 DATE: 29 June 2006
 SAMPLE TYPE: Kick sample
 SUBSAMPLE: entire

| | | | |
|---------------|------------------|-------------------------------|----|
| ANNELIDA | | | |
| OLIGOCHAETA | | Undetermined Oligochaeta | 10 |
| ARTHROPODA | | | |
| CRUSTACEA | | | |
| DECAPODA | Cambaridae | Undetermined Cambaridae | 1 |
| INSECTA | | | |
| EPHEMEROPTERA | Heptageniidae | Undetermined Heptageniidae | 3 |
| PLECOPTERA | Leuctridae | Undetermined Leuctridae | 2 |
| | Perlidae | Undetermined Perlidae | 3 |
| | Chloroperlidae | Undetermined Chloroperlidae | 6 |
| | Pteronarcidae | Pteronarcys sp. | 9 |
| TRICHOPTERA | Philopotamidae | Undetermined Philopotamidae | 2 |
| | Hydropsychidae | Undetermined Hydropsychidae | 8 |
| | Brachycentridae | Undetermined Brachycentridae | 5 |
| | Lepidostomatidae | Undetermined Lepidostomatidae | 4 |
| DIPTERA | Tipulidae | Undetermined Tipulidae | 1 |
| | Simuliidae | Simulium sp. | 2 |
| | Athericidae | Atherix sp. | 1 |
| | Empididae | Undetermined Empididae | 1 |
| | Chironomidae | Undetermined Chironomidae | 4 |

| | |
|---------------------|---------------------|
| METRICS | |
| F-EPT RICHNESS | 9 |
| FAMILY RICHNESS | 17 |
| FAMILY BIOTIC INDEX | 3.61 |
| MODEL AFFINITY | 40 |
| BAP | 7.75 (Non impacted) |



DESCRIPTION

This headwater stream was assessed as part of the Hudson Basin River Watch 2006 Stream Biomonitoring Workshop and the site is located just above the Black Rock Forest lodge. Participants received classroom instruction and field and lab experience in the physical, chemical, and biological parameters required to conduct a rapid stream bioassessment following HBRW protocols. Based on the resident benthic macroinvertebrates the stream was assessed as non-impacted however; the model affinity index indicated moderately impacted water quality. The benthic macroinvertebrate community was noticeably lacking in Ephemeroptera (Mayflies) which may be related to atmospheric deposition (acid rain) as the pH of the water was 6.36. Ephemeroptera are known to be sensitive to low pH levels (personal communication, Bode). Overall the benthic macroinvertebrate community was diverse and the BAP score indicated non-impacted water quality.