

Site 4 – Shoal Creek - Chemical Monitoring and Macro Invertebrate Monitoring

Date	3/17/2010	
Air Temp C	11.5	
Water Temp C	10	
Dissolved O2 mg/L	10	
O2 % Sat	89	
pH	7.1	
Nitrate mg/L	4.0	
Conductivity uS/cm	320	
Turbidity	10	
Stream Discharge		

Invertebrate Type	Substrate Basket	US Leaf Mat/Root Wad	DS Leaf Mat/Root Wad
caddisfly larv			
hellgrammites			
mayfly nym			
gilled snails			
Riffle Beetles			
Stonefly nym			
Water Penny			
Other Beetle			
clams/mussel			
crane fly larv			
crayfish			
dragonfly nym			
damselfly nym			
scuds			
sowbugs			
fishfly larv			
watersnipe fly			
aquatic worms			
black fly larv			
leeches			
midge larv			
pouch snail			
other snails			

Water Quality Rating =

Site 4 – Shoal Creek - Chemical Monitoring and Macro Invertebrate Monitoring 11/10/09

Date	11/2/09	11/10/09
Air Temp C	21	21
Water Temp C	15	15
Dissolved O2 mg/L	11	
O2 % Sat	109	
pH		7.3
Nitrate mg/L		6.0
Conductivity uS/cm	270	
Turbidity	10	
Stream Discharge	See Comments	See Comments

Invertebrate Type	Substrate Basket	US Leaf Mat/Root Wad	DS Leaf Mat/Root Wad
caddisfly larv			
hellgrammites			
mayfly nym			2
gilled snails	6	2	1
Riffle Beetles			
Stonefly nym			
Water Penny			
Other Beetle	1		
clams/mussel			6
crane fly larv			
crayfish		4	1
dragonfly nym			
damselfly nym			
scuds	1		
sowbugs			
fishfly larv			
watersnipe fly			
aquatic worms			3
black fly larv			
leeches			
midge larv			
pouch snail			
other snails			

Water Quality Rating = 15 Fair

Comments submitted:

This was our initial experience with the substrate basket. We felt that this sampling was more of an experiment for the equipment and to gain some knowledge of the site.

The basket was put into the water on the 11/2/09. I checked that everything was ok on 11/6. When we returned on 11/10 to harvest the basket, the rope had been cut and the basket had been dragged must closer to the bank. However, the rock habitat in the basket kept it from being lost and it was still submerged 2.4 feet in the water. Obviously, we will have to be more clandestine about the operation. This part of the park (Wildcat Glades Conservation and Audubon Center) is restricted for fishing but there are many people who do not abide by the rules. We suspect that they “needed” the rope.

The water in the creek has been high since the fall flooding. The USGS sampling station nearby indicated that on 11/2/09 at 10:00 the gage height was 4.16 feet and the stream discharge was 1170 cu ft/sec and on 11/10/09 at 10:00 the gage height was 3.47 and the stream discharge was 733 cu ft/sec.

As additional net sets, we used two nearby leaf mats/ root mats. It is unlikely that we will be able to consistently sample the same habitats each time. If the water is lower, there is potential to have a riffle within our 300 feet boundary at another time.