

Stream Monitoring

Hudson Basin River Watch Guidance Document *helping to coordinate monitoring efforts throughout the watershed*

June 2000
(Revised November 2000)

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*The development of this document was made possible with funds from
the Hudson River Improvement Fund and
the New York State Department of Environmental Conservation*

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- Physical
- Chemical
- Biological

Tier 1 : Introductory Investigation
*Primarily for educational purposes, providing
a general awareness of river water quality.*

Tier 2 : Preliminary Assessment
*Water quality problems require verification for
inclusion in DEC's Priority Waterbody List.*

Tier 3 : In Depth Assessment
*Water quality problems incorporated into
DEC's Priority Waterbody List depending on
the level of QA/QC employed.*

Physical and Chemical Monitoring

Physical Survey

Weather conditions

Water temperature

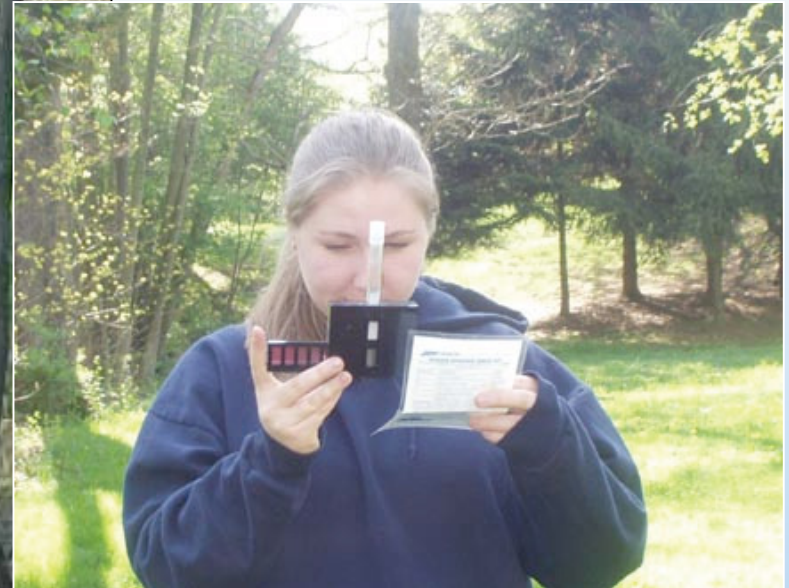
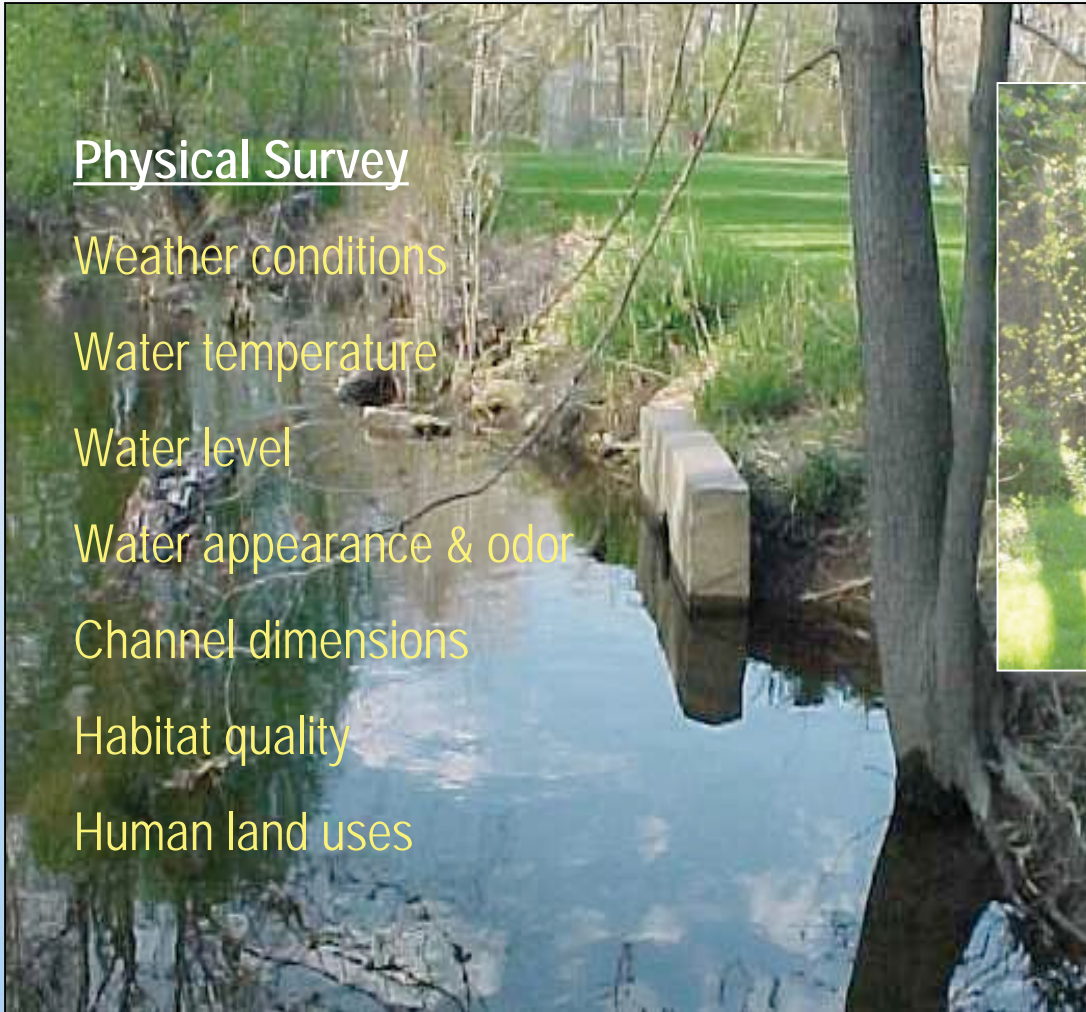
Water level

Water appearance & odor

Channel dimensions

Habitat quality

Human land uses



Chemical Survey

- Nitrate-Nitrogen levels
- Orthophosphate levels
- Dissolved Oxygen
- E.coli levels



















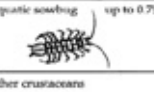
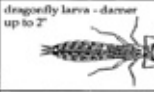

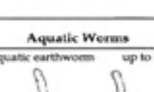
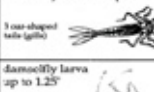
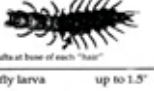
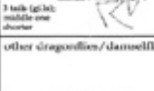


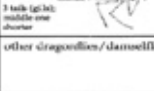
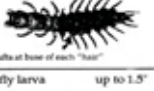

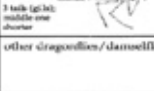
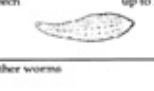
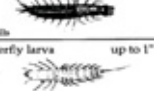

Benthic Macro Invertebrates

provide information on stream health over time



BMI Order	Criteria	put a 1/2 if criteria is met	Description
EPHEMEROPTERA (mayflies)	must be numerous at least 3 species present		
PLECOPTERA (stoneflies)	must be present		
TRICHOPTERA (caddisflies)	must be present, but sample not dominated by net-spinners (hydropsychids)		
COLEOPTERA (beetles)	must be present (no Diptera flies or fishflies must be present)		
OLIGOCHAETA (worms)	must be absent or sparse		

The stream site is: Non-Impacted - all 5 boxes are checked
 Possible Impact - at least one of the 5 boxes is not checked

MAYFLY LARVAE	CADDISFLY LARVAE	STONEFLY LARVAE
mayfly larva - flat-headed up to 1"  2 or 3 tails  gills along abdomen	caddisfly larva - net-spinner up to 1"  2 dorsal plies	stonefly larva - predator up to 1.5"  gills under legs
mayfly larva - brush-legged up to 1"  gills along abdomen	caddisfly larva - stone case up to 1" 	stonefly larva - small shredder up to 0.5" 
mayfly larva - spiny crawler up to 0.75"  gills along abdomen	caddisfly larva - up to 0.75" square wooden case 	stonefly larva - other 
mayfly larva - small minnow up to 0.5"  gills along abdomen	caddisfly larva - frognet up to 0.5"  yellow back with darker head	
mayfly larva - other 	caddisfly larva - other 	
snail - flat spiral 	scud up to 0.5" 	dragonfly larva - chubtail up to 1.25" 
snail - left opening 	crayfish up to 6" 	dragonfly larva - skimmer up to 1.5" 
snail - right opening 	aquatic sowbug up to 0.75" 	dragonfly larva - damer up to 2" 
finger nail clam up to 0.5" 	other crustaceans	damselfly larva up to 1.25" 
other mollusks	Aquatic Worms	3 on shaped tails (gills) 
Dobsonflies, Fishflies, & Alderflies	aquatic earthworm up to 2" 	damselfly larva up to 1.25" 
dobsonfly larva up to 4" 	flatworm (planarian) up to 0.75" 	3 tail (gills) middle one shorter 
gill tufts at base of each "hair"	leech up to 2" 	other dragonflies/damselflies
fishfly larva up to 1.5" 	other worms	
no gills		
alderfly larva up to 1" 		

EFT RICHNESS SCORE:

 Level of Impact:

TAXA RICHNESS:
 (the total number of different kinds of macroinvertebrates)

Note: Size does not include tails