

FAUNTLEROY CREEK BENTHIC STUDY

ARBOR HEIGHTS ELEMENTARY SCHOOL, OCT. 15, 2010 Sandy Kennewick, teacher

OBJECTIVES

For the tenth October, intermediate students from Arbor Heights Elementary School performed a data-collection survey in upper Fauntleroy Creek at Fenton Glen. The objectives of this project are to teach students the elements of a healthy watershed, to enhance observation skills, to demonstrate how to be stewards of the local watershed, and to help evaluate the general health of the creek.

METHODOLOGY

With their teacher and a watershed volunteer, some 25 students participated in data collection, as well as plant identification, photo documentation, and illustration of the site. They followed informal scientific protocol to gather and identify macroinvertebrates. Students also measured water temperature and depth and estimated channel width at the collection site. Students also observed plant species and many other features of the area.

STUDY OBSERVATIONS

Lack of follow-through by the teacher resulted in the loss of data about water and channel conditions. The students found only one macroinvertebrate, a stonefly larvae under 1 cm in length.

HABITAT OBSERVATIONS

Lack of follow-through by the teacher resulted in the loss of most habitat observations. Observations by the watershed volunteer: The creek was crystal clear. The stream bottom was a combination of gravel, mud, sand, and clay-like material. A metal grate (trash rack) was at the culvert intake. Creek banks had recently been revegetated as part of in-stream restoration, during which this section was de-watered for up to two days in order to work in the channel. Students used new stone steps to access the channel.

STUDY CONCLUSION

Fauntleroy Creek is clean enough to support stonefly larva, which cannot live in polluted water. The drop in abundance and diversity may be attributed to channel disturbance during construction.

HABITAT CONDITIONS

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Dissolved oxygen	8 ppm	8 ppm	-----	8-10 ppm	-----	4 ppm	8 ppm		Data not provided by school
Nitrite	0 ppm	0 ppm	-----	-----	-----	5 ppm	5 ppm		
pH	-----	-----	-----	-----	7.8	8	8		
Phosphates						>1 ppm	0		
Water temp.	52F/11C	50F/10C	55F/18C	59F/15C	57F/14C	55F/13C	50F/10C	56F/24C	
Water depth	6 cm	4-7 cm	8 cm	5-1/4 cm	?	17 cm	11 cm	15.2 cm	
Channel width	.76 m	1 m	1.25 m	1.12 m	?	.72 m	1.5 m	.9 m*	

MACROINVERTEBRATES

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Stonefly larvae	4 (>1.5 cm)	3 (>.5 cm)	3 (>1.5 cm)	2	3	1	6	3	1 (>1 cm)
Mayfly larvae	6 (>1 cm)	2 (>.5 cm)	2 (>1 cm)	0	0	5 (>.25 cm)	0	7	0
Caddis fly larvae	1	1	1	3	0	2	2	0	0
Worms	1	1	1	4	4	1	3	2	0
Black fly larvae	0	2 (>.5 cm)	0	0	0	0	0	1	0
Midge fly larvae	0	2 (>.5 cm)	0	0	0	0	0	0	0
Too small to ID or unable to ID					4	0	1	0	0
Total count	12	11	7	9	11	9	12	13	1

*Estimate