

Milam Creek Site Assessments for Group #1

Site 1 consisted of a wetland and, of our sites, this area was the furthest upstream in the watershed. This site was visited about 3:00pm. This wetland was created by the local beavers damming up the stream. A local resident presented information regarding the past uses of the area. Before the damming of the stream, the area was a hayfield. Impacts within this area of the watershed include:

- Active Construction within the watershed and within ½ mile of the wetland
- Oil and Gas wells within the watershed
- Recreation impacts seen streamside (Four-Wheeler trail)
- Unpaved Roads within a mile
- Single Family Residences within a ¼ mile and within the watershed
- Paved Roads seen streamside
- Bridges crossing the stream
- Several types of mining are conducted within the watershed

In addition, observations concerning the flora and fauna were made. Typical wetland plants were present, such as Black Willow, Rushes, and Sedges. Also present were bird, reptile and amphibian species, indicative of wetland habitats.

Site 3 was a rocky bottom stream reach on the main stem of Milam Creek. This site was visited at 10:00 am. Possible impacts within the watershed include:

- Active Construction within the watershed
- Oil and Gas Wells within the watershed
- Recreation is evident within a ¼ mile.
- Unpaved Roads were seen streamside
- Single-Family Residences were streamside
- Paved Roads were running streamside
- Many types of mining are conducted in this watershed

The flora and fauna for Site 3 consisted of: Hemlock, Rhododendron, Crayfish, Red Squirrels and Butterflies.

Observations below are based on the WV Save Our Streams, Level One Survey Data Sheet.

Water Chemistry Information:

	Site 1 Milam Creek Wetland	Site 3 Milam Creek Rocky Bottom
Temperature (Degrees C)	24.9	18.0
Dissolved Oxygen (ppm)	8.2	7.8
Conductivity (µS)	110	290
Nitrates/Nitrites (ppm)	0	2
Alkalinity (ppm)	50	120
pH	7.0	7.5

The temperature readings were consistent with our expectations. Site 3 had a lower temperature because we visited the site earlier in the morning and the site is mostly shaded. The higher temperature at Site 1 is due to the stagnant water, no riparian areas and it was later in the afternoon. The dissolved oxygen was higher at Site 1 due to the afternoon spike in dissolved oxygen from vegetation. Conductivity was higher at Site 3, most likely due to the mining in the area. We found manganese on the rocks, which also leads us to believe mining is having an impact on this stream. The nitrates on both sites were negligible. The alkalinity on Site 3 leads us to believe mining discharge in the area is alkaline. The pH was normal for both sites.

Physical Site Components:

	Site 1 Milam Creek Wetland	Site 3 Milam Creek Rocky Bottom
Water Clarity	Slightly Turbid	Clear
Water Color	Brown	None
Water Odor	None	None
Foam	None	Slight
Algae Color	Dark Green and Brown	N/A
Algae Abundance	Moderate	N/A
Algae Growth	Even Coated, Hairy, Matted, Floating	N/A
Streambed Color	Brown	Brown
% Shaded	<40% (Close to 0%)	60-80%
Embeddedness	Poor	Optimal
Channel Bottom Substrate (Low Gradient only)	Suboptimal	N/A
Sediment Deposition (High Gradient)	N/A	Optimal
Bank Stability	Optimal on both banks	Suboptimal on both banks
Riparian Buffer	Marginal on both banks	Suboptimal on left, Suboptimal-Marginal on Right
Streambed Composition	100% Silt/Clay	Mostly Gravel/Cobble

The above table displays habitat and site characteristics of both sites.

Macroinvertebrate Findings

We found the macroinvertebrate life at Site 1 to be Marginal and Site 3 to be Sub-Optimal.

Reasons for variance in macro findings:

- We changed the number of kicks and jabs for each sampling
- Site 1, the wetland, does not have protocols for macro sampling
- Site 1 was inaccessible to sample in areas
- The chemistry at Site 3 may be affecting macro life in that reach
- The substrate at Site 3 lends itself to higher macro habitat and therefore higher macro counts