



Times-News

Water Quality in the Mountains – An Update

Monday, October 20, 2008

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ECO NOTES

*Water, water, every where,
And all the boards did shrink;
Water, water, everywhere,
Nor any drop to drink.*

-- Samuel Taylor Coleridge



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An ancient Chinese proverb says, “When you drink the water, remember the spring.” And so it is in Henderson County, a mecca of watersheds, waterfalls and waterways, yet lacking in water. This might well be the first year that many of us gave serious thought to the effect overdevelopment has on our waterways. Living in a place surrounded by mountains and rural spaces gives one the feeling that our natural resources can last forever. It is only when our water sources begin to literally dry up do we realize that there is a natural gauge for a community’s sustainability and we’ve come very close to “E” this year.

As many readers know, ECO, the Environmental and Conservation Organization, has been testing and monitoring our watersheds for over 16 years. VWIN volunteers test our streams monthly for many factors affecting overall water quality including sedimentation, nutrient load, and metal content. Additionally, our biomonitors test semi-annually for the level and type of macroinvertebrates in each stream, which shows the stream habitat’s ability to support life. A laboratory at the Environmental Quality Institute at the University of North Carolina in Asheville analyzes the data and under the direction of chemist Marilyn Westphal, produces an annual report. This is Henderson County’s report card. This is not a report we can afford to fail. Once the results come in, the real work begins to monitor problem sites, working with landowners and agencies to take corrective measures, and educating the public on “best management practices” that ensure the integrity of our streams for our children’s children’s children.

So how’d we do? The results are mixed at best.

The Green River and the Mills River watersheds continue to be our stars with excellent water quality rating. The maintenance of this excellent rating can be attributed to the watersheds heavily forested buffer zones. However the Green River trends show an increase of pH, conductivity and nitrogen levels at all of the sites in this watershed. In the Mills River, biomonitoring score for the Hooper Lane site has been increasing over time, whereas the biomonitoring scores on for the rest of the sites in this watershed have been declining. The increase in vegetable farming and the simultaneous increase in pesticide use in the area could be at the root of this decline.

Sites in the Mud Creek Watershed range from excellent to fair. Excellent rated Bat Fork Creek has seen a marked improvement over time, however nitrate levels at this site continue to be a problem. Median nitrate concentrations at this site are higher than any others seen in the county, indicating livestock or urban runoff. The four sites in the Mud Creek Watershed that rated good were the two sites on Clear Creek and the sites on Mud Creek at Berea Church Road. Despite this good rating on both of the Clear Creek sites, trend analysis shows an increase in most parameters affecting water quality over time. Both of the sites on Clear Creek have a fair biomonitoring rating, a decline from its good rating in the last three years.

Both sites on the Cane Creek watershed have average chemical ratings coupled with fair biological ratings. The site on Cane Creek is the only site in Henderson County that has exceeded acceptable levels for all three of the heavy metals tested. This site has the highest turbidity and the second highest suspended solids of all sites. Additionally, conductivity, copper, ammonia-nitrogen and nitrate-nitrogen concentrations are increasing at the Cane Creek site.

In the Etowah Horseshoe watershed all of the streams rate good, with the exception of Gash Creek. The water quality issues on Gash Creek are of utmost environmental concern due in part to the fact that Gash Creek supplies a sensitive bog, which supports a wide array of rare and endangered flora and fauna. The probable cause for the poor water quality in Gash Creek is its location downstream from the Etowah Valley Country Club and Golf resort. Gash Creek runs through the entirety of the golf course. The majority of the stream bank has no riparian buffer, and grass is mowed almost directly up to the stream bank. This has caused extensive stream bank erosion and channelization in this area. Nutrient runoff is also a concern here as it is a common practice for golf courses to use extensive fertilizer in order to maintain green fairways.

Both of the sites on the French Broad River rated below average. As the river flows through Henderson County most of the water quality parameters increase. This trend shows that all of the tributaries to the French Broad with degraded water quality when they empty into the river, effecting river water quality.

Although our watershed report shows both ups and downs, close monitoring of our surface water and ground water supply is essential. ECO is expanding its advocacy efforts on behalf of our waterways and we need your help to do it. Biomonitoring of 28 streams is currently in progress and volunteers are needed now to help. ECO has also teamed up with RiverLink to do Muddy Water Watch training in Henderson County. The training will be held at 7:00 PM on Tuesday November 18, December 2nd and 9th. Participants will be certified in erosion and sedimentation monitoring. Call ECO today to register for this or any other of our water quality programs at (828) 692-0385 or online at www.eco-wnc.org.

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