

Executive Summary- Henderson County 2013-2014 VWIN Report

This is a summary of data collected by MountainTrue’s Volunteer Water Information Network (VWIN), analyzed and compiled by EQI between 2013-2015. Below you’ll see a snapshot of each of the six watersheds in Henderson County we cover. Overall, the Green River continued to hold the highest overall chemical rating in Henderson County, with few sediment issues. The Mills River watershed had the best nutrient scores in Henderson County. Sites in the Mud Creek and Cane Creek watersheds, as well as the Etowah/Horseshoe communities show much worse water quality.

The state of our water source- Mills River:

Mills River Watershed					
7	North Fork Mills River	83	100	92	Excellent
8	South Fork Mills River	75	100	88	Good
9	Mills River at Davenport Bridge	75	100	88	Good
29	Brandy Branch	67	75	71	Average
10	Mills River at Hooper Lane	75	100	88	Good

- The fact that the Mills River watershed continues to receive very high chemical scores is encouraging as it supplies drinking water to Henderson County and parts of Buncombe County. Interestingly, Brandy Branch, a small stream in the Mills River Watershed is on the 303(d) list of impaired waters for a Fair benthos (macroinvertebrate) DEQ rating. However, it has improved in recent years, earning an Average VWIN score in 2014 after rating as Poor in 2012 and 2013. Moreover, Brandy Branch earned a Good SMIE (see full annual report for more details on SMIE, a separate water quality monitoring program) rating in fall 2014.
- Water quality tends to degrade as you move downstream, largely due to agriculture throughout the watershed. The Mills River Partnership (MRP) utilizes VWIN data to monitor the overall water quality in the watershed, and is working with farmers on a purely voluntary basis to promote agricultural best management practices (BMPs) that reduce topsoil erosion and protect water quality.
- Kirby Johnson, a farmer in the Mills River community working with the MRP to implement multiple BMPs including a spray shed, grassed waterway, stabilized entrance with filter cloth, tree plantings along the stream and a riprap filtered outfall to the stream from the grassed waterway. He said he is “elated working with the Mills River Partnership” and that “they have been instrumental in helping me preserve topsoil”.

Green River:

Green River/Broad River Watershed					
12	Green River at Terry's Creek Road	100	92	96	Excellent
19	Green River upstream from Lake Summit	83	92	88	Good
11	Green River downstream from Lake Summit	100	100	100	Excellent
13	Big Hungry River downstream	92	83	88	Good

- The Green River, situated in the Broad River Watershed (all other streams in Henderson County are situated in the French Broad River Watershed), is the most pristine river in Henderson County. If you're looking for the cleanest water for swimming, tubing, kayaking, or fishing in Henderson County, the Green River is your best bet.
- This is encouraging as the Green River is a major destination for kayakers, tubers, fishers, and other recreationalists. MountainTrue will share this information with recreation outfitters on the Green.

Mud Creek:

Mud Creek Watershed					
21	Mud Creek at Berea Church Road	67	92	79	Average
3	Mud Creek at Erkwood Road	67	92	79	Average
31	Wash Creek/West Allen St	75	75	75	Average
32	King Creek/Airport Rd	75	92	83	Good
15	Bat Fork Creek	75	75	75	Average
18	Mud Creek at 7th Avenue	67	92	79	Average
33	Devil's Fork at Howard Gap	75	67	71	Average
30	Devil's Fork at Dana Rd	58	58	58	Poor
20	Clear Creek at Bearallow	67	83	75	Average
5	Clear Creek at Nix Road	58	75	67	Below Average
26	Brittain Creek	83	67	75	Average
35	Featherstone Creek at Howard Gap	75	92	83	Good
34	Byers Creek at Howard Gap	58	75	67	Below Average
4	Mud Creek at N Rugby Rd	50	67	58	Poor

- Mud Creek is the largest watershed in Henderson County, resides entirely in Henderson County, and runs through the middle of downtown Hendersonville. Mud Creek is well monitored with 4 sites on Mud Creek and 10 sites on 8 tributaries of Mud Creek.
- Of the 14 sites, only King Creek at Airport Rd and Featherstone Creek at Howard Gap Rd received Good ratings. Three of the Mud Creek sites received Average ratings while the furthest Mud Creek site downstream is rated Poor. Devil's Fork at Dana Rd received a Poor rating. The remaining 7 sites in the Mud Creek watershed received Average or Below Average ratings.
- The Mud Creek Watershed is one of the most degraded watersheds in Henderson County., which is why MountainTrue is targeting efforts to improve Mud Creek's water quality. MountainTrue's VWIN data was instrumental in providing justification for the Mud Creek Restoration Project, a no longer active program that worked to improve water quality throughout the Mud Creek Watershed. MountainTrue is currently developing a watershed management plan for Mud Creek that will expand our current monitoring, and include log jam removals, trash cleanups, tree planting and more.

French Broad River:

French Broad River					
1	French Broad River/Horseshoe	58	92	75	Average
2	French Broad River/Mt Home	58	83	71	Average

- Both French Broad River sites in Henderson County received Average ratings in 2013 and 2014.
- Sediment continues to be the primary pollutant impacting the French Broad in Henderson County.
- Interestingly, all but one of the six sites downstream of Henderson County received Below Average or Poor scores as nutrient and conductivity levels increase. This tells us that the French Broad is cleaner in Henderson County when compared to Buncombe County.
- MountainTrue works diligently to reduce sedimentation on the French Broad through water quality education, tree planting volunteer outings, and programs such as Muddy Water Watch. We promote recreation on the river through our French Broad River Guide and guided floats on the river, and our French Broad Paddle Trail was recently highlighted in Outside Magazine's list of the best trips to take in the world: <http://www.outsideonline.com/2058136/28-places-go-2016>

Cane Creek:

	Cane Creek watershed				
22	Hoopers Creek	50	83	67	Below Average
16	Cane Creek at Howard Gap Rd	50	83	67	Below Average

- Both sites in the Cane Creek watershed received Below Average ratings in 2014. Furthermore, Cane Creek is listed as impaired by DEQ for a Poor benthos rating.
- MountainTrue conducted multiple tree planting workdays on Cane Creek during the winter of 2015-2016 to reduce erosion. Please see this Hendersonville Times-News article for more details:
<http://www.blueridgenow.com/article/20160219/news/160219808>

Etowah/Horseshoe Area:

	Etowah/Horseshoe				
23	Big Willow Creek	67	83	75	Average
24	Little Willow Creek	67	92	79	Average
25	Gash Creek	58	75	67	Below Average
28	Shaw Creek	58	83	71	Average
27	Mill Pond Creek	33	75	54	Poor
14	Boylston Creek	42	83	63	Below Average

- The Etowah/Horseshoe area contains multiple tributaries to the French Broad River. The monitored streams in this area reveal degraded water quality. Mill Pond Creek received a Poor rating while Boylston Creek and Gash Creek both received Below Average ratings.