

Sinking Creek 2014 Stream Assessment and Sampling Data

April 2014



- Visual stream assessment
- Potential corrective actions
- Bacteria sampling
- Cursory biological sampling
- Impervious analysis

Top Problems

1. Erosion (est. 27%)
2. Trash
3. Inadequate Buffers (residential mowing)
4. Bacteria (TMDL – extensive sampling indicates surface loading as opposed to base flow or groundwater loading)

Byrd Ave



Corrective Action Possibilities

1. Harrison Branch stream restoration (erosion, bacteria, no buffer)
2. Large unutilized parking lot retrofits (parking lot – 22% of watershed)
3. Clean – up events



Highlights

- Some healthy riparian areas
- Good flow regime
- Good community awareness potential stakeholder groups

Macro invertebrate sampling indicates fair to poor water quality (correlates well with professional sampling conducted in March 2014)





Legend

- Bacteria sampling
- Channel Alteration
- Inadequate Buffer
- Erosion Site
- Macro Sites
- Springs
- Debris and Trash Blockages
- Erosion areas

Byrd Ave Corrective Site
Bank restoration needed



Harrison Branch
Stream restoration needed



Possible bacteria loading area

Biology – MMI < 8 = Poor, > 12 = Good

Site Id	MMI	EPT's	Quality
1	3	0	Poor
2	3.5	0	Poor
3	12.5	1	Good
4	8	1	Fair
5	9	mayflies	Fair

- The Murfreesboro Macro Index is an in house/ non-analytical method of scoring biology based on diversity and pollution tolerance. EPT are generally clean water indicators. Sample sheets and scoring key kept on file.

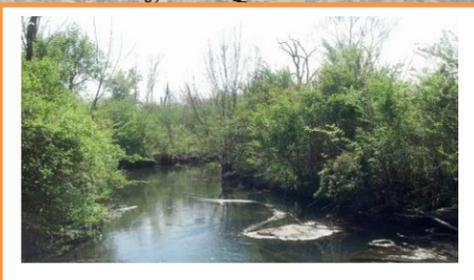
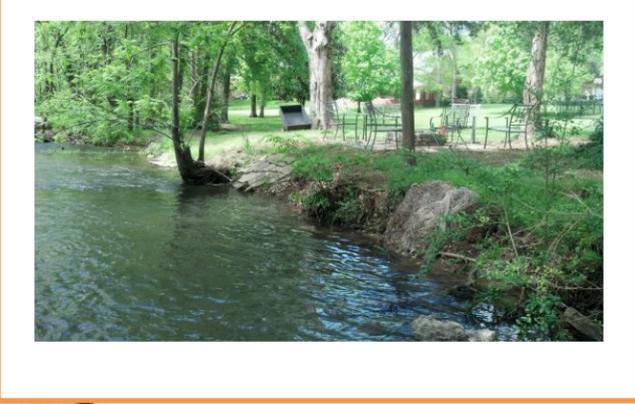
Bacteria Sampling

Site ID	Average CFU – March/ April 2014
B-01 – Maney Spring	214 (high – 664)
B-02 – Harrison Branch	2,264 (only two samples)
B-03 – Byrd Ave	626 (high -1266)
B-04 – Sulphur Spring Rd	901 (high – 2134)
B-05 – Haynes Dr	659 (high – 1764)
B-06 – Thompson Ln	480 (high – 1248)

- Sampling occurred during rain events and low flow – spikes occur immediately following rain event. Outfall sampling not included.

Legend

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Tornado crossing/
privet inundation

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