

TOTAL MAXIMUM DAILY LOAD (TMDL)

For

Metals, Pathogens and Turbidity

In the Hurricane Creek Watershed

Tuscaloosa County, Alabama

Prepared by:

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assessment. The results of the EPA study are summarized in the Hurricane Creek Watershed Water Quality Sampling Report (U.S. EPA. 2003).

TMDL SUMMARY TABLES

TMDL Allocations for Metals

| Waterbody | Waste Load Allocation ¹ | | | Load Allocation | | | Margin of Safety | TMDL | |
|----------------------------|------------------------------------|----------------------|----------------------|-----------------|------------|---------|------------------|------------|---------|
| | pH s.u. | Fe ² mg/l | Cu ³ mg/l | pH s.u. | Fe/Al P.R. | Cu P.R. | | Fe/Al P.R. | Cu P.R. |
| Hurricane Creek | 6-8.5 | 3.45 | NA | 6-8.5 | 75% | NA | implicit | 75% | NA |
| Little Hurricane Creek | 6-8.5 | 3.45 | 0.004 | 6-8.5 | 86% | 33% | implicit | 86% | 33% |
| North Fork Hurricane Creek | 6-8.5 | 3.45 | NA | 6-8.5 | 98% | NA | implicit | 98% | NA |

1. The Waste Load Allocation (WLA) shall apply to a four-day average concentration.
2. The WLA for aluminum is a narrative that assumes meeting the WLA for iron and pH will inherently protect for aluminum.
3. The WLA for copper is equivalent to the hardness-based chronic criterion. The number in the table is calculated from the lowest measured hardness for any station on Little Hurricane Creek (27 mg/L CaCO₃).
4. Abbreviations: Fe = total iron; Al = total aluminum; Cu = total copper; s.u.= standard units; P.R. = percent reduction.

TMDL Allocation for Turbidity

| Waterbody | Waste Load Allocation ¹ | | Load Allocation ² P.R. | Margin of Safety | TMDL P.R. |
|-----------------|------------------------------------|----------------|-----------------------------------|------------------|-----------|
| | Stormwater P.R. | Continuous NTU | | | |
| Hurricane Creek | 32% | 51 | 32% | implicit | 32% |

1. The Continuous Waste Load Allocation (WLA) applies to non-wet weather individual NPDES permitted facilities. The Stormwater WLA includes MS4 and non-MS4 regulated stormwater dischargers. The identified percent reduction for stormwater is based on a target turbidity of 60.8 NTU.
2. The turbidity levels of all waters originating from non-point sources shall not exceed 60.8 NTU.
3. Abbreviations: P.R. = percent reduction; NTU = Nephelometric Turbidity Units.

TMDL Allocations for Pathogens

| Waterbody | Waste Load Allocation ¹ | | | Load Allocation P.R. | Margin of Safety | TMDL P.R. |
|------------------------|------------------------------------|-----------------------------|------------|----------------------|------------------|-----------|
| | Stormwater P.R. | Continuous (colonies/100ml) | | | | |
| | | Jun. - Sept. | Oct. - May | | | |
| Hurricane Creek | 67% | 200 | 1000 | 67% | implicit | 67% |
| Little Hurricane Creek | NA | 200 | 1000 | 25% | implicit | 25% |

1. The Continuous Waste Load Allocation (WLA) applies to individual NPDES permitted facilities and is an "end of pipe" limit of the monthly geometric mean concentration of fecal coliform bacteria. These values are equivalent to the State's Water Quality Standards for fecal coliform bacteria. Future facilities that discharge fecal coliform at or below Water Quality Standards should not cause or contribute to impairment. It is assumed that by meeting the geometric mean 30-day concentration, the instantaneous standard of 2000 colonies/100 ml will not be violated. The Stormwater WLA includes MS4 and non-MS4 regulated stormwater dischargers.
2. Abbreviations: P.R. = percent reduction.

