



Assessment Decision Report

North Fork Hurricane Creek

Assessment Unit ID: AL03160112-0502-300

Metals (Aluminum)

Alabama Department of Environmental Management
Water Quality Branch
Water Division
April 2026

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1.0 Executive Summary

North Fork Hurricane Creek is classified as *Fish and Wildlife (F&W)*. It is located in Tuscaloosa County within the Black Warrior River basin. The entire segment of North Fork Hurricane Creek was placed on Alabama's 303(d) list of impaired waterbodies in 1996 for Metals (Aluminum, Iron) with abandoned surface mines listed as the source. Figure 1.1 shows a map of the North Fork Hurricane Creek watershed and Table 1.1 lists the Creek's assessment information.

Figure 1.1: North Fork Hurricane Creek Watershed Map

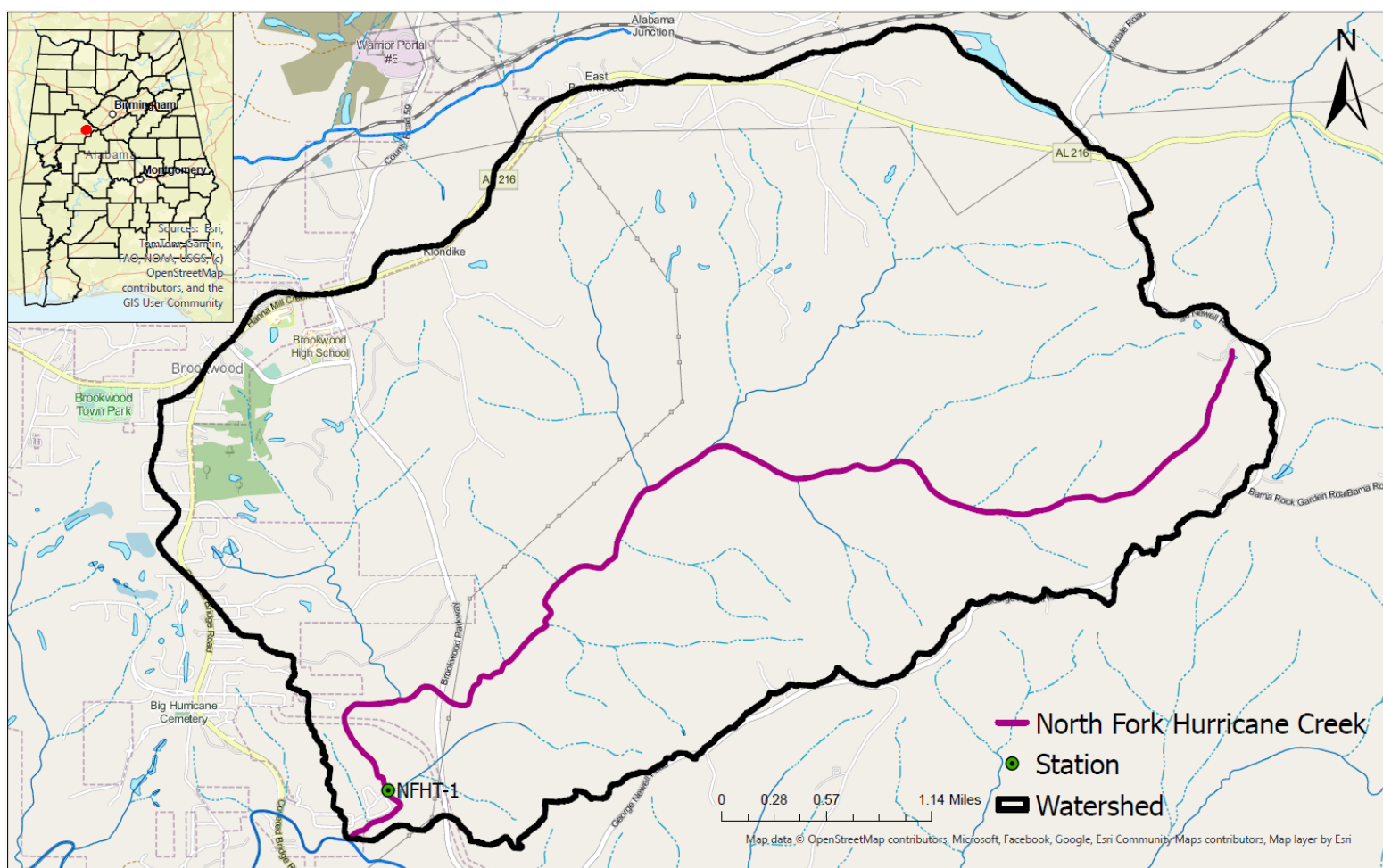


Table 1.1: North Fork Hurricane Creek Assessment Information

Assessment Unit ID	Waterbody Name	Downstream	Upstream	Size
AL03160112-0502-300	North Fork Hurricane Creek	Hurricane Creek	Its Source	6.53 miles

TMDL Listing	NTTS ID	Approval Date	Pollutants
AL/03160112-120_03	11050	11/1/2004	Metals (Aluminum, Iron)

The Alabama Department of Environmental Management (ADEM) conducted sampling at station NFHT-1 located near the Creek's confluence with Hurricane Creek in 2024. Station NFHT-1 is the only location on the Creek's segment that has been sampled historically. Before 2024, ADEM had not sampled this station since 1996, when violations regarding metals (aluminum) were enough to classify North Fork Hurricane Creek as impaired, and a TMDL was needed to improve the conditions.

The North Fork Hurricane Creek TMDL for Metals (Aluminum) was developed and approved by EPA in 2004. With a long history of surface and deep mining activities within the watershed, acid mine drainage (AMD) was noted as the main source of the metals.

This report summarizes the results of the analysis of aluminum contamination for North Fork Hurricane Creek.

2.0 Data Collection & Analysis

The 1996 and 2024 data compiled in this report were collected at one station (NFHT-1) located on North Fork Hurricane Creek. Figure 1.1 shows the location of the station. According to Alabama's Water Quality Assessment and Listing Methodology, the minimum data requirement for assessment of a wadeable fish & wildlife stream is three inorganic samples concerning metals. In 2024, ADEM collected four dissolved aluminum and four total aluminum samples at the station.

When evaluating the aluminum samples collected in 2024, neither total aluminum nor dissolved aluminum had any samples exceeding the ecoregional reference guideline benchmark for sub-ecoregion 68f (shown in Table 4.1). Since aluminum is not considered a toxic pollutant, ADEM does not have aquatic life/human health acute or chronic criteria for aluminum. The EPA's National Recommended Water Quality Criteria does not currently include criteria for aluminum.

3.0 Conclusion

Based on an examination of the 2024 water quality data and information related to North Fork Hurricane Creek, there have been no issues regarding aluminum. Consequently, ADEM has determined that the aluminum impairment does not currently exist. A summary of the aluminum data can be found in Table 4.1.

4.0 Appendix

Table 4.1: Aluminum Data Collected

STATION ID	ACTIVITY DATE	AL, Dissolved (mg/l)	AL, Dissolved Ecoregional Reference Guideline Benchmark (mg/l)	AL, Total (mg/l)	AL, Total Ecoregional Reference Guideline Benchmark (mg/l)
NFHT-1	8/27/1996	-	0.100	1.35	0.946
NFHT-1	8/28/1996	-		1.35	
NFHT-1	3/14/2024	0.045		0.243	
NFHT-1	5/23/2024	0.079		0.108	
NFHT-1	7/18/2024	0.032		0.056	
NFHT-1	9/19/2024	0.041		0.056	