



Assessment Decision Report

Flint Creek

Assessment Unit ID: AL06030002-1014-103

Pathogens

Alabama Department of Environmental Management
Water Quality Branch
Water Division
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1.0 Executive Summary

Located in the Tennessee River Basin in Morgan County, Alabama, this segment of Flint Creek from L&N Railroad to Alabama Highway 36, is classified as *Public Water Supply (PWS)/Fish and Wildlife (F&W)*. Flint Creek was originally placed on the State of Alabama's §303(d) use impairment list in 1998 as impaired by pathogen pollution (fecal coliform bacteria) due to municipal, non-irrigated crop production, pasture grazing, intensive animal feeding operations, and urban runoff/storm sewers. In order to address the pathogen impairment, a TMDL was developed and approved by EPA in 2003.

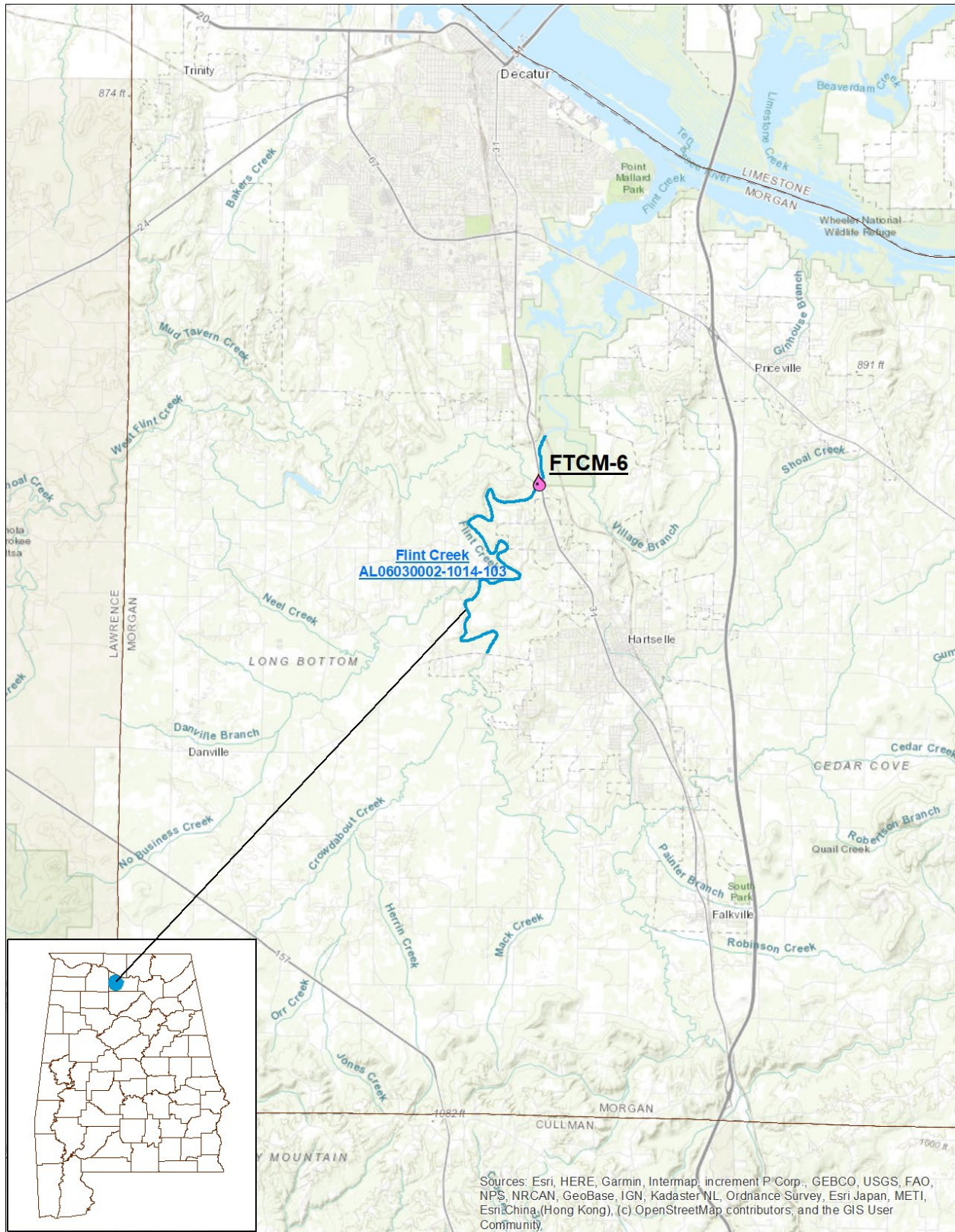
Water quality sampling was conducted on Flint Creek at ADEM Station FTCM-1 (Figure 1.1) in 2019, 2020, 2021 and 2024 (see Table 5.1 in the Appendix for the pathogen data collected during those years). This Assessment Decision Report (ADR) summarizes the recent water quality data collected on Flint Creek. Based on recent data, ADEM has determined that this segment of Flint Creek is no longer impaired for pathogens.

Table 1.1 Flint Creek Assessment Unit Information

Assessment Unit ID	Waterbody Name	Downstream	Upstream	Size
AL06030002-1014-103	Flint Creek	L&N Railroad	Alabama Highway 36	9.1 miles

TMDL Listing	NTTS ID	Approval Date	Pollutants
AL/03160205 020-02	10789	09/30/2003	Pathogens

Figure 1.1: Flint Creek Impairment



2.0 Water Quality Criteria

2.1. Bacteria (*E. coli*)

According to ADEM's Water Quality Assessment and Listing Methodology (WQALM), the bacteria criteria for non-coastal waterbodies that are classified as *Public Water Supply (PWS)* or *Fish and Wildlife (F&W)* are as follows:

E. coli (colonies/100 ml)

May through October

- Geometric Mean ≤ 126
- Single Sample Max ≤ 298

November through April

- Geometric Mean ≤ 548
- Single Sample Max ≤ 2507

3.0 Data Availability & Analysis

For the current six-year assessment period (2019-2024), ADEM collected water quality data at station FTCM-6 in 2019, 2020, 2021, and 2024. A total of 26 *E. coli* samples were collected throughout the current six-year assessment period. This data is included in Table 5.1.

An evaluation of the data showed that there were no exceedances in pathogens based on the pathogen criteria. *E. coli* ranged from 4.1 MPN to 2419.6 MPN. The assessment of the water quality data in the appendix shows that this segment of Flint Creek is currently meeting the criteria for bacteria.

4.0 Conclusion

Based on the analysis of the water quality data collected on the 9.1-mile segment of Flint Creek from L&N Railroad to Alabama Highway 36 from 2019-2024, it is evident that all data are currently meeting criteria for the *PWS/F&W* use classification. Consequently, ADEM has determined that this segment of Flint Creek is no longer impaired for pathogens.

5.0 Appendix: Water Quality Data

Table 5.1: Flint Creek E. Coli Data: FTCM-6

Date	E. Coli (col/100 ml)
01-10-19	93.2
02-07-19	104.6
03-21-19	80.1
04-11-19	365.4
05-08-19	151.5
06-13-19	34.5
07-25-19	34.5
08-22-19	24.3
09-12-19	17.1
11-06-19	129.1
12-05-19	193.5
01-09-20	88.4
02-19-20	1299.7
03-12-20	2419.6
12-08-20	228.2
01-06-21	65
02-03-21	45.7
11-16-21	23.1
12-14-21	1986.3
04-03-24	81.3
05-08-24	54.6
06-20-24	7.5
07-18-24	4.1
08-08-24	5.2
09-12-24	18.9
10-09-24	60.2