



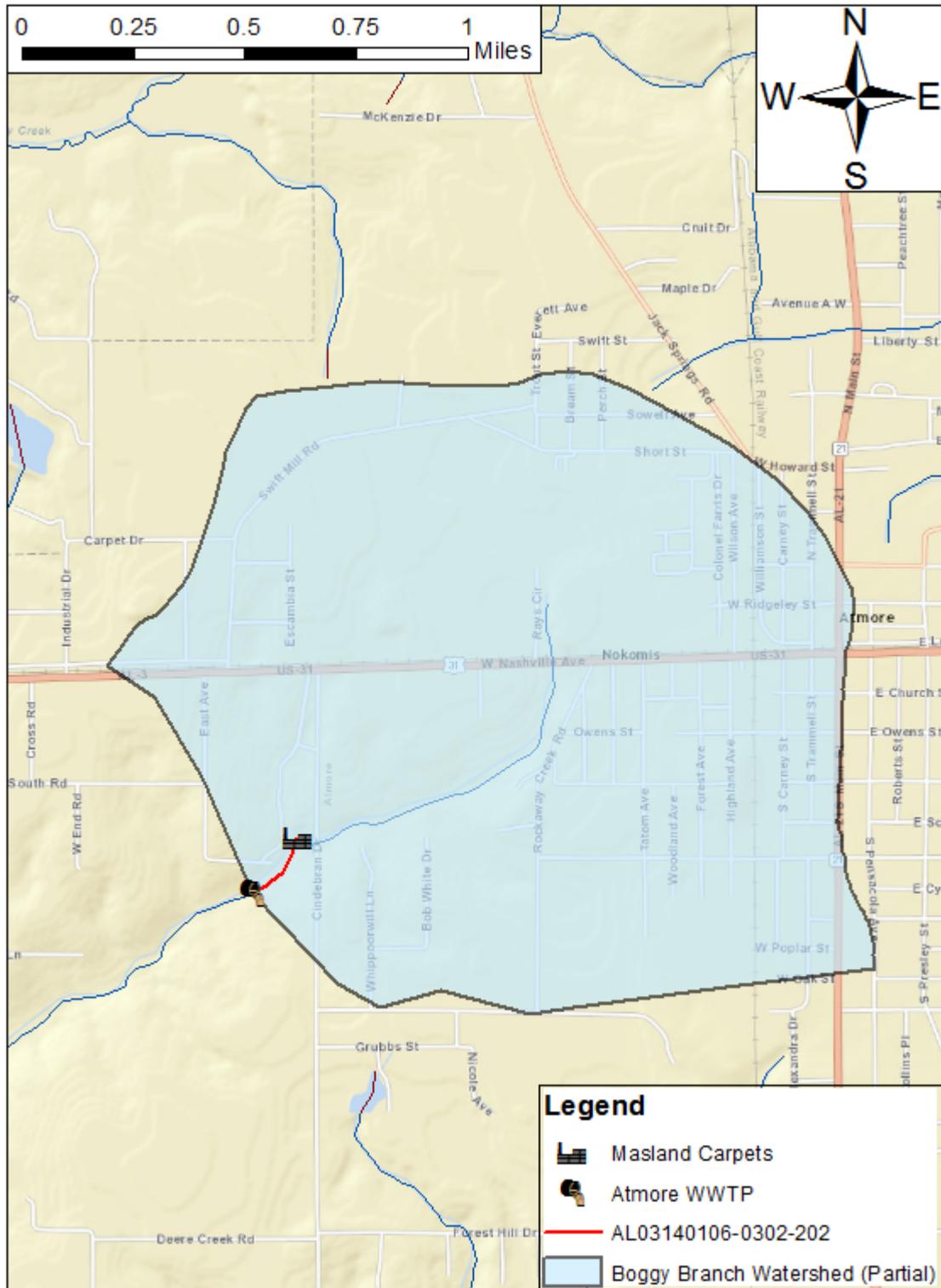
**Draft
Delisting Decision
for
Boggy Branch**

Waterbody ID # AL03140106-0302-202

Chlorides

Alabama Department of Environmental Management
Water Quality Branch
Water Division
February 2016

Figure 1: Boggy Branch Watershed



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1.0 Executive Summary

Boggy Branch is located in Escambia County and is a part of the Perdido-Escambia River Basin. Boggy Branch flows into Brushy Creek, which is a tributary to the Perdido River. The entire length of Boggy Branch is approximately 2.7 miles with a 2.77 mi² drainage area. The segment impaired for chlorides is smaller, with a length of only 0.22 miles between Masland Carpets (AL0021997) and Atmore WWTP (AL0049557). Boggy Branch is classified as Fish and Wildlife (F&W).

Boggy Branch was first placed on the State of Alabama’s §303(d) List for chlorides in 1998 as a result of water quality data collected by ADEM in 1996 and 1997. The source of impairment is currently attributed to industrial facilities. Subsequent data from ADEM’s surface water quality monitoring program have shown no impairment with respect to chlorides.

The most recent water quality data relevant to the impaired segment of Boggy Branch was collected in 2014. ADEM collected samples at station BOB-2. There is also data present at this station from 2005, but only the data that is approximately six years in age or less will be used in this analysis, which is consistent with Alabama’s Water Quality Assessment and Listing Methodology (ADEM, 2014). The State of Alabama does not have numeric criteria for chlorides; however, the Environmental Protection Agency (EPA) has recommended values of 860 mg/L for acute toxicity and 230 mg/L for chronic toxicity in relation to the protection of aquatic life. The 2014 data shows that Boggy Branch has been consistently below these recommended values.

This report addresses the results of the delisting analysis for Boggy Branch for chlorides. Based on the assessment of chlorides levels in water quality data, ADEM has determined that Boggy Branch is not impaired due to chlorides and that water quality standards are being met. Therefore, a Total Maximum Daily Load (TMDL) will not be developed due to “more recent data,” which is just cause for delisting a waterbody according to Title 40 of the Code of Federal Regulations (CFR), Part 130.7(b)(6)(iv).

Table 1-1 – Boggy Branch Segment from the 2014 §303(d) List

ID	Use	Cause	Date of Data	Size	Downstream/Upstream Locations
AL03140106-0302-202	F&W	Chlorides	1996-1997	0.22 miles	Atmore WWTP/Masland Carpets

2.0 Basis for §303(d) Listing

Section 303(d) of the Clean Water Act (CWA), as amended by the Water Quality Act of 1987 and EPA's Water Quality Planning and Management Regulations [Title 40 of the Code of Federal Regulations (CFR), Part 130], requires states to identify waterbodies which are not meeting water quality criteria applicable to their designated use classifications. The identified waters are prioritized based on severity of pollution with respect to designated use classifications. Total maximum daily loads (TMDLs) for all pollutants causing violation of applicable water quality criteria are established for each identified waterbody. Such loads are established at levels necessary to implement the applicable water quality criteria with seasonal variations and margins of safety. The TMDL process establishes the allowable loading of pollutants, or other quantifiable parameters for a waterbody, based on the relationship between pollution sources and in-stream water quality conditions, so that states can establish water-quality based controls to reduce pollution from both point and non-point sources and restore and maintain the quality of their water resources (USEPA, 1991).

As mentioned in the executive summary, Boggy Branch was originally listed in 1998 as being impaired for chlorides in the segment between Masland Carpets and Atmore WWTP. The §303(d) list cites studies from 1996-1997 as the supporting data sources for impairment. The data from ADEM trend stations revealed elevated chlorides values from this time frame.

3.0 Technical Basis for Delisting Decision

3.1 Water Quality Target Identification

The State of Alabama currently has no numeric criteria for chlorides. However, the narrative criteria of "Minimum Conditions Applicable to All State Waters" found in ADEM 335-6-10-.06 applies to Boggy Branch and states the following:

(a) State waters shall be free from substances attributable to sewage, industrial wastes or other wastes that will settle to form bottom deposits which are unsightly, putrescent or interfere directly or indirectly with any classified water use.

(b) State waters shall be free from floating debris, oil, scum, and other floating materials attributable to sewage, industrial wastes or other wastes in amounts sufficient to be unsightly or interfere directly or indirectly with any classified water use.

(c) State waters shall be free from substances attributable to sewage, industrial wastes or other wastes in concentrations or combinations, which are toxic or harmful to human, animal or aquatic life to the extent commensurate with the designated usage of such waters.

For purposes of establishing a numeric chlorides target for this delisting decision, the Department will use EPA's National Recommended Water Quality Criteria (EPA OST, 2016), which recommends a chronic value of 230 mg/l and an acute value of 860 mg/l.

3.2 Source Assessment

3.2.1 Point Sources

Continuous Point Sources

As shown in Table 3-1 below, Masland Carpets (AL0021997) and Atmore WWTP (AL0049557) are the only two NPDES facilities with a permitted discharge to Boggy Branch. Masland Carpets has a current NPDES permit; however, the facility recently ceased discharging process wastewater to Boggy Branch. The facility was discharging at the time of the data collection in 2014.

Table 3-1 – Point Sources within the Boggy Branch Watershed

Point Sources	NPDES Permit	Chloride Limits	Receiving Waterbody
Masland Carpets	AL0021997	Yes	Boggy Branch
Atmore WWTP	AL0049557	Yes	Boggy Branch

Non-Continuous Point Sources

There are no CAFOs in the Boggy Branch watershed. Currently none of the Boggy Branch watershed qualifies as a Municipal Separate Storm water Sewer System (MS4) area.

3.2.2 Nonpoint Sources

Nonpoint impacts in the Boggy Branch watershed are considered to come from its land uses. Land use for the Boggy Branch watershed was determined using ArcMap with land use datasets derived from the 2011 National Land Cover Dataset (NLCD). Figure 3-1 and Table 3-2 display the land use areas for the Boggy Branch watershed. Figure 3-2 is a graph depicting the primary land uses in the Boggy Branch watershed.

The majority of the Boggy Branch watershed is 48% developed land (grouped) and 39% forested/natural. Other major land uses within the watershed account for approximately 14% agriculture land and no open water. Developed land includes both commercial and residential land uses.

Figure 3-1 – Land use within the Boggy Branch Watershed

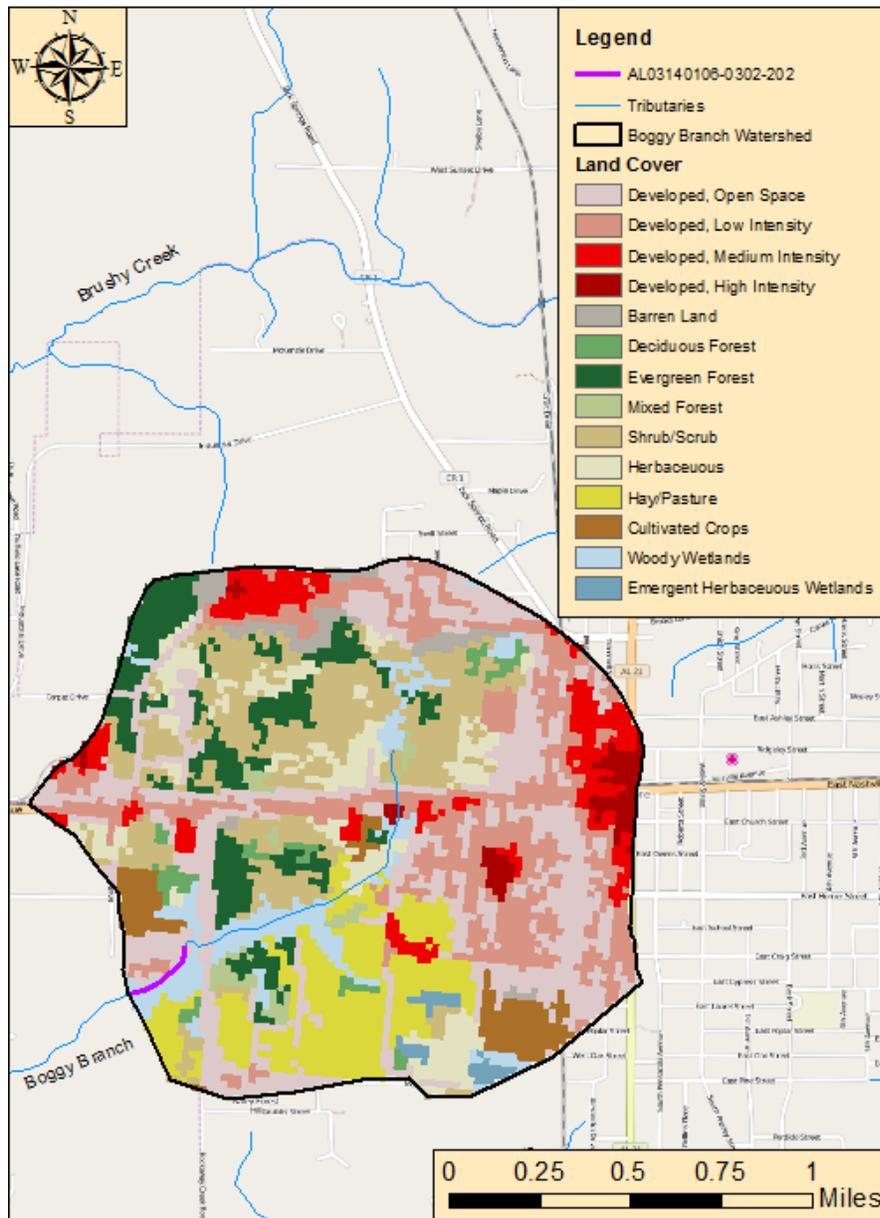
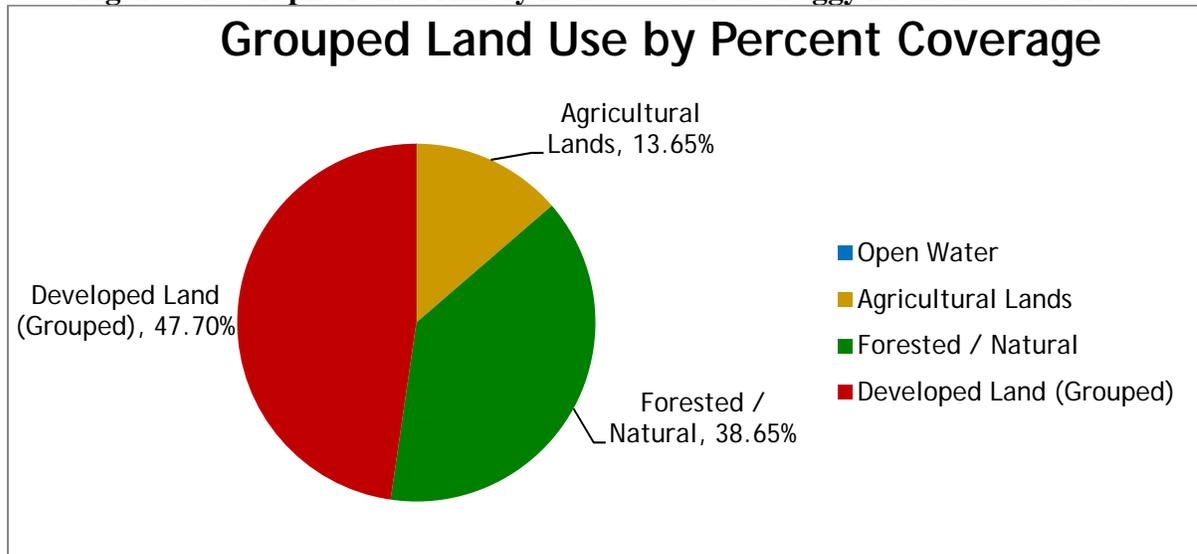


Table 3-2- Land Use Areas for the Boggy Branch Watershed

Class Description	Mi ²	Acres	Percent
Open Water	0.00	0.00	0.00%
Developed, Open Space	0.42	266.43	21.70%
Developed, Low Intensity	0.31	195.71	15.94%
Developed, Medium Intensity	0.11	73.17	5.96%
Developed, High Intensity	0.04	23.57	1.92%
Barren Land	0.04	26.91	2.19%
Deciduous Forest	0.03	18.68	1.52%
Evergreen Forest	0.15	99.19	8.08%
Mixed Forest	0.03	16.68	1.36%
Shrub/Scrub	0.29	182.59	14.87%
Herbaceous	0.13	83.62	6.81%
Hay/Pasture	0.20	126.32	10.29%
Cultivated Crops	0.06	41.37	3.37%
Woody Wetlands	0.10	63.83	5.20%
Emergent Herbaceous Wetlands	0.02	10.01	0.81%
TOTALS →	1.92	1228.06	100.00%
Class Description	Mi ²	Acres	Percent
Open Water	0.00	0.00	0.00%
Agricultural Lands	0.26	167.69	13.65%
Forested / Natural	0.74	474.59	38.65%
Developed Land (Grouped)	0.92	585.79	47.70%
TOTALS →	1.92	1228.06	100.00%

Figure 0-2. Graph of the Primary Land Uses in the Boggy Branch Watershed



4.0 Data Availability and Analysis

As part of ADEM's §303(d) Monitoring Program, Boggy Branch was sampled monthly at station BOB-2 between April 2014 and November 2014. Station location information is provided in Figure 4-1 and Table 4-1.

Figure 4-1 – Sampling Station Location within the Boggy Branch Watershed

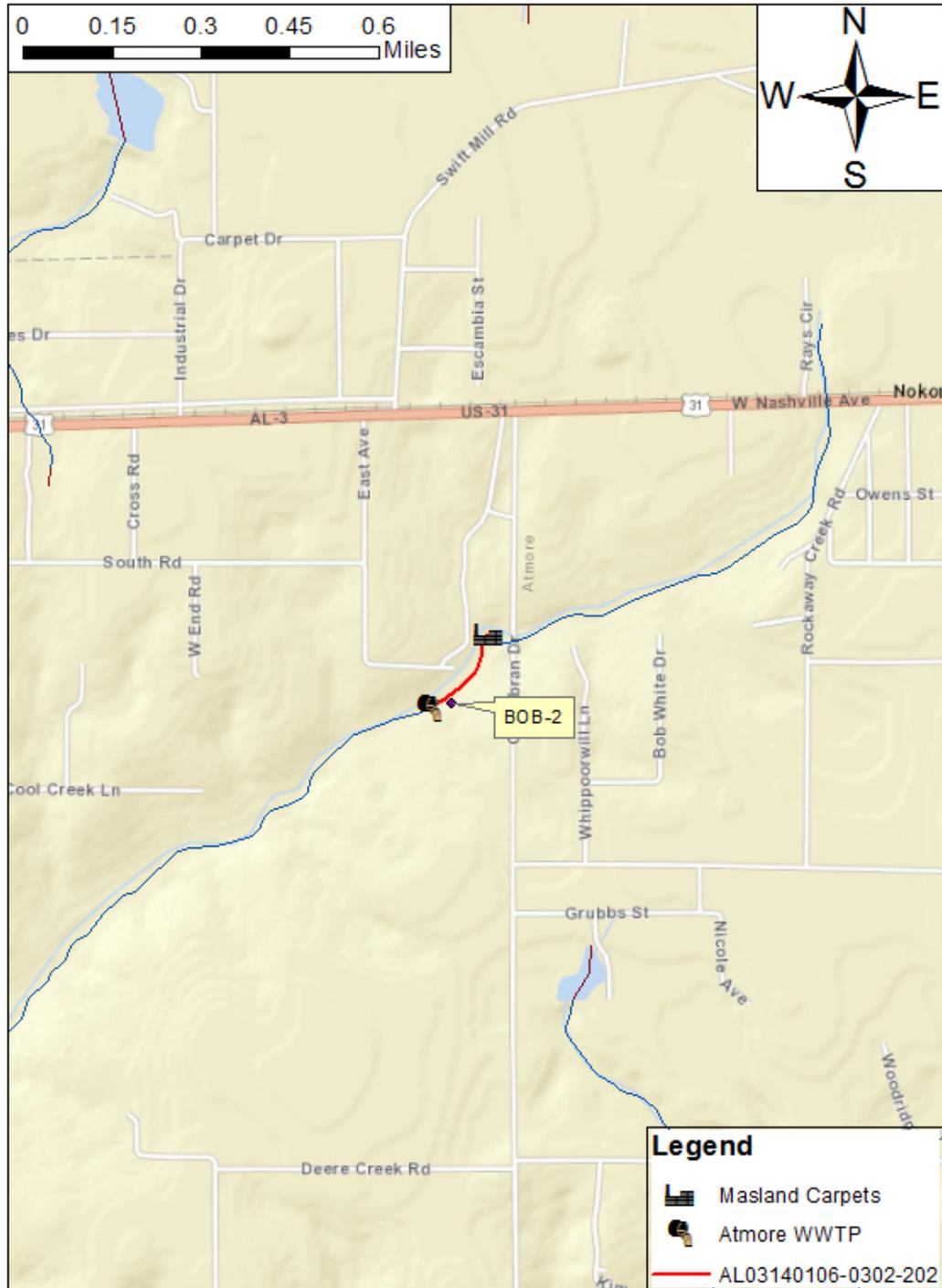


Table 4-1 – Summary of Sampling Stations for Boggy Branch

<i>Waterbody</i>	<i>Station ID</i>	<i>STR</i>	<i>Latitude</i>	<i>Longitude</i>
Boggy Branch	BOB-2	Sec. 25, T01N, R05E	31.01618	-87.5153

The median chlorides concentration obtained from Boggy Branch at station BOB-2 was 15.7 mg/L. This median chlorides value is below the EPA’s recommended chronic chlorides limit of 230 mg/L. Moreover, no single chlorides sample exceeded the EPA’s recommended acute chloride limit of 860 mg/L. Since Boggy Branch's median chlorides concentration is below EPA’s recommended chronic and acute values, the Department believes that there is no impairment on Boggy Branch due to chlorides. Detailed data can be found in the appendix. Statistical data for station BOB-2 is shown below in Table 4-1.

Table 4-1 – Chlorides Statistical Data – ADEM Station BOB-2

Station ID	Minimum	Maximum	Median	Average	Standard Deviation
BOB-2	7.1	26.3	15.7	16.1	7.8

*All values in mg/L

5.0 Conclusions

After assessing all available water quality data for Boggy Branch, ADEM has determined that a water quality impairment due to chlorides no longer exists. As a result, ADEM will not develop a TMDL due to “more recent data,” which is just cause for delisting a waterbody according to Title 40 of the Code of Federal Regulations (CFR), Part 130.7(b)(6)(iv).

6.0 Public Participation

As part of the public participation process, this Delisting Decision (DD) will be placed on public notice and made available for review and comment. The public notice will be prepared and published in the major daily newspapers in Montgomery, Huntsville, Birmingham, and Mobile, as well as submitted to persons who have requested to be on ADEM’s postal and electronic mailing distributions. In addition, the public notice and subject DD will be made available on ADEM’s Website: www.adem.state.al.us. The public can also request paper or electronic copies of the DD by contacting Ms. Kimberly Minton at 334-271-7826 or kminton@adem.state.al.us. The public will be given an opportunity to review the DD and submit comments to the Department in writing. At the end of the public review period, all written comments received during the public notice period will become part of the administrative record. ADEM will consider all comments received by the public prior to finalization of this DD and subsequent submission to EPA Region 4 for final review and approval.

7.0 Appendix

7.1 References

Alabama Department of Environmental Management, 2014 Section §303(d) List.

Alabama's §303(d) Monitoring Program. 2014. ADEM.

Alabama's Trend Station Monitoring Program. 1996-1997. ADEM.

ADEM Administrative Code, 2013. Water Quality Program, Chapter 335-6-10, Water Quality Criteria, and Chapter 335-6-11 Use Classifications for Interstate and Intrastate Waters.

United States Environmental Protection Agency. 1991. Guidance for Water Quality-Based Decisions: The TMDL Process, Office of Water, EPA 440/4-91-001.

Alabama Department of Environmental Management (ADEM). 2014. Alabama's Water Quality Assessment and Listing Methodology.

EPA's National Recommended Water Quality Criteria, 2016. EPA OST.

7.2 Water Quality Data

7.2.1 Chlorides Water Quality Data for Boggy Branch

Station ID	Date	Chloride Result (mg/L)
BOB-2	4/24/2014	26.26
BOB-2	5/22/2014	18.04
BOB-2	6/12/2014	7.09
BOB-2	7/10/2014	23.57
BOB-2	8/21/2014	23.65
BOB-2	9/18/2014	8.25
BOB-2	10/29/2014	13.3
BOB-2	11/19/2014	8.79

7.3 Photographs

7.3.1. Station BOB-2 on Boggy Branch (Looking Upstream)



7.3.2. Station BOB-2 on Boggy Branch (Looking Downstream)

